White Paper on Small and Medium Enterprises in Japan

The Road to Regeneration and the Creation of an Entrepreneurial Society
While the Japanese economy temporarily showed signs of recovery in 2002, evidenced by a return to growth in real GDP and the manufacturing production index, growth again leveled off from the middle of the year. Combined with concerns about the international situation, the economic outlook has again grown cloudy.

Because of protracted deflation and changes in the financial environment, Japan's small and medium enterprises (SMEs) continue to face difficult conditions. With their innovativeness, flexibility and other strengths, however, SMEs have an important role to play in leading the regeneration of the Japanese economy as they take on all kinds of business challenges, displaying entrepreneurship and innovating to meet new market needs and move into new and creative fields of business.

The Japan Small Business Research Institute (JSBRI) is a specialist think tank under the aegis of the Small and Medium Enterprise Agency of the Ministry of Economy, Trade and Industry that undertakes activities such as research on SMEs and provision of support for organizations assisting the development of SMEs at the local level. Because of the importance to SMEs of cultivating international connections, the JSBRI also focuses on activities such as exchanges of information and personnel with related organizations in other countries.

This publication is a complete translation, made by the JSBRI with the approval of the SME Agency, of the Agency's annual report on recent trends among SMEs in Japan entitled The 2003 White Paper on Small and Medium Enterprises in Japan: The Road to Regeneration and the Creation of an Entrepreneurial Society.

I hope that this booklet will help to improve understanding of the conditions facing Japan's SMEs among researchers and others involved with SMEs overseas who have an interest in SME policies and trends in Japan, and that it also makes its own modest contribution to the development of SMEs throughout the world.

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White Paper on Small and Medium Enterprises in Japan
2003

The Road to Regeneration and the Creation of an Entrepreneurial Society

Edited by the SME Agency
Despite showing signs of recovery in some areas, the Japanese economy remained mired in difficulties in fiscal 2002, when the unemployment rate reached a record high and the economic outlook remained cloudy. It was also an extremely difficult year for small and medium enterprises (SMEs). Bankruptcies among SMEs remained high, again exceeding 18,000, as in every year since 2000, and their liquidity and the lending attitudes of financial institutions followed a long-term downward path.

In order to create economic vitality amid such conditions, it is essential to revitalize the SMEs that form the mainstay of the Japanese economy.

To this end, the Ministry of Economy, Trade and Industry (METI) is entirely committed to steadily implementing SME policies that focus on providing a financial safety net for SMEs, supporting the recovery of SMEs, supporting startups and ventures in new fields, and revitalizing city centers and shopping districts so as to support the development of motivated and capable SMEs.

This year’s White Paper on Small and Medium Enterprises in Japan is the fortieth. Over the past 40 years, the Japanese economy has been through various phases: high growth, stable growth after the oil crises, bubble growth, and stagnation after the collapse of the bubble economy. But throughout these various dramatic changes in the economic environment, SMEs have continued to display their unique strengths and make a stable contribution to value added and employment in the economy.

This year's White Paper reaffirms the “strengths” of the SMEs that have underpinned the development of the Japanese economy, and shows clearly that it is SMEs that have the leading contribution to make to economic regeneration. More specifically, it examines how to build a socioeconomic environment that facilitates startups, withdrawals, regeneration and business comebacks by widely surveying bankrupt entrepreneurs and entrepreneurs in industrial clusters in order to identify the specific differences between those who escape bankruptcy and those who do not, and the conditions required for comebacks by entrepreneurs and business reconstruction. It in addition reassesses the role of local finance in SME finance, and identifies the need in finance to look at the “quality” of enterprises without relying on financial data.

I hope that this white paper will be of use to SME entrepreneurs and others involved with SMEs, and further increases understanding of SMEs among the general public, and my sincere thanks goes to the SME entrepreneurs and everyone else whose valuable assistance contributed to its preparation.

Takeo Hiranuma
Minister of Economy, Trade and Industry
May 2003
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1. Under the Small and Medium Enterprise Basic Law, the term “small and medium enterprise” (SME) refers in general to enterprises with capital stock of not in excess of ¥300 million or 300 or fewer regular employees, and sole proprietorships with 300 or fewer employees. However, SMEs in the wholesale industry are defined as enterprises with capital stock not in excess of ¥100 million or 100 or fewer employees, SMEs in the retail industry are defined as enterprises with capital stock not in excess of ¥50 million or 50 or fewer employees, and SMEs in the service industry are defined as enterprises with capital stock not in excess of ¥50 million or 100 or fewer employees. “Small enterprises” are defined as enterprises with 20 or fewer employees. In the commercial and service industries, however, they are defined as enterprises with five or fewer employees. In keeping with the terminology used in the Small and Medium Enterprise Basic Law, the term “employee” (jugyoin) is generally used in this report. Where the term “worker” (jugyosha) is used in some statistics, however, this term is used instead.

2. Business establishments are sometimes regarded as enterprises for the purposes of analyses in this report that make use of statistics based on the number of business establishments. In such cases, SMEs are business establishments that satisfy the above conditions regarding number of employees. In some cases, therefore, the business establishments of large enterprises may be treated as SMEs.

3. This report draws largely on statistical data published by the Japanese Government and Bank of Japan (BOJ). However, use is also made of analyses based on these data and studies conducted by various entities in the private sector. Sources, methods of calculation and other relevant information are specified where data are cited. However, the main sources cited in this report are described briefly below. (Unless otherwise noted below or in the main text, the unit of measurement used in statistical data is the enterprise.)

(1) METI, Census of Manufactures
This survey provides statistics on numbers of business establishments. Surveys conducted in years ending in 0, 3, 5 and 8 are of the total number of business establishments, and surveys in other years are of business establishments and similar entities with at least four workers. Analyses based on these statistics are therefore only of business establishments with four or more workers. In this report, the data on business establishments in each year are concatenated for analysis. It is important to remember, however, that if a business establishment has three workers one year and four the next, it is treated as a new entry in that year. (Conversely, a business establishment that goes from having four workers to three will be treated as having exited.)

(2) METI, Census of Commerce
This survey provides statistics on numbers of business establishments.

(3) METI, Basic Survey of Japanese Business Structure and Activities
As this survey only covers enterprises with 50 or more workers and capital stock of at least ¥30 million, the results do not cover small enterprises and sole proprietorships.

(4) METI/SME Agency, Basic Survey of Commercial and Manufacturing Structure and Activity
This survey covers enterprises with less than 50 workers and capital stock of under ¥30 million. Date on enterprises with 50 or more workers and capital stock of at least ¥30 million covered by METI’s Basic Survey of Japanese Business Structure and Activities are used treating them as though they were covered by the Basic Survey of Commercial and Manufacturing Structure and Activity.

As these statistics do not include sole proprietorships, they do not reveal overall trends among small enterprises. Because of the sample sizes and response rates, moreover, the results concerning small corporations need to be viewed with some latitude. It must also be remembered that the quarterly version does not include corporations with capital stock of less than ¥10 million.
(6) Ministry of Public Management, Home Affairs, Posts and Telecommunications, *Establishment and Enterprise Census of Japan*

This census contains statistics on both business establishments and enterprises. In this report, analyses based on enterprises using these statistics also include sole proprietors (sole proprietorships). However, as statistics on sole proprietorships cannot be compiled by the nayose method of aggregating all returns from those establishments that belong to the same company, the size of sole proprietorships is determined based on the number of workers at its head office or principal place of business. A manufacturing sole proprietorship with 100 workers at its head office and 300 workers at branch offices would therefore be treated as an SME.

4. This report includes analyses of the results of questionnaire surveys of SMEs and other entities conducted by the SME Agency. However, as not all enterprises surveyed responded and the response rate appears to be higher the healthier a company is, the results probably paint a better picture than the reality. In addition, totals cited based on the results of these surveys do not always sum to 100% due to rounding to the first decimal place.

5. There are two problems with trying to determine the general situation in the SME sector using only mean values from statistical data on SMEs. These are as follows:

1) Unlike large enterprises, SMEs exhibit considerable variation. Mean values are not therefore always representative of the typical SME.

2) Statistical data on SMEs may not be distributed symmetrically around the mean, but instead skewed leftwards. In this report, therefore, median, top 25th percentile (first quartile) and bottom 25th percentile (third quartile) as well as mean values are used where necessary to provide a better picture of the typical SME.

6. The universities and institutes of the researchers whose findings (both on Japan and overseas) are cited in this report are those to which the researchers belonged when the results were published.

7. The word “significant” is used in this report to denote a figure considered to be sufficiently meaningful using statistical techniques. The smaller the percentage, the greater the degree of certainty.
PART I

RECENT TRENDS AMONG SMEs
Chapter 1  SME trends after economic bottoming out

Business trends in the SME sector bottomed out in fiscal 2002 but remained weak overall. After deteriorating in 2001, the Japanese economy bottomed out at the beginning of 2002\(^1\), and showed signs of recovery in some areas. Output, which slumped sharply in 2001, grew for three consecutive quarters from January-March 2002 driven by an upturn in exports. Business confidence among enterprises also bottomed out early in 2002 after continuing to severely deteriorate the previous year, and began to rapidly improve from April-June 2002, when real GDP registered its second consecutive quarter of quarter-on-quarter growth. Business conditions also at last bottomed out in the SME sector in early 2002 after a year of continuing to severely deteriorate in 2001, and there emerged signs of an incipient recovery, especially in manufacturing. However, the recovery was lackluster compared with that among large enterprises, and the pace of recovery was relatively weak. Just months later in the second half of 2002, export growth began to slow, and industrial output, which until then had been growing, weakened as the recovery in business trends lost its momentum at the beginning of 2003. Inventories, which had bottomed out, also began to decline again in the second half of the year. Capital investment on the other hand, which had remained sluggish, bottomed out at the end of the year in response to factors such as the recovery in corporate earnings, though the recovery has been somewhat lackluster. Due to factors such as concerns about the global economic outlook, moreover, the economic outlook is growing increasingly opaque.

Section 1 Economic trends in Japan amid continuing uncertainty despite bottoming out

We begin by looking at the key indicators of economic trends in Japan from 2001 to 2002. Fig. 1-1-1(1) shows the trend in real GDP. From this it can be seen that the Japanese economy entered a recession after peaking in October-December 2000\(^2\), and real GDP registered negative growth for three consecutive quarters from April-June 2001 to October-December 2001. An upturn in net exports from the beginning of 2002, however, triggered quarter-on-quarter growth for the first time in four quarters in January-March 2002. Private demand too then began to grow, causing real GDP to register four consecutive quarters of quarter-on-quarter growth up to the last quarter shown. Due in part to progressing inventory adjustment, industrial output bottomed out before starting to grow early in 2002. The manufacturing industrial production index in July-September 2002 recovered beyond its level (96.5 in October-December 1998) immediately prior to the previous business trough (in January-March 1999)\(^3\). Against this backdrop, there have emerged indications that inventories have ceased to decline and have at last bottomed out (Fig. 1-1-2).

In July-September, however, net exports went into decline. Private demand (Fig. 1-1-1(2)), too, slowed at the end of the year, despite growth in areas such as private final consumption expenditure (e.g. personal consumption) continuing from April-June, supporting the recovery in business conditions. As a result, real GDP peaked from July-September quarter. The production index also went into decline again from the autumn. Inventories, too, which had initially shown signs of bottoming out at the beginning of 2002, again exhibited an accelerating downward trend from the autumn. The recovery of the Japanese economy in the first half of 2002 thus gradually weakened and came to a standstill in the latter half of the year. Compounding the increasingly opaque economic outlook are concerns about the global economic outlook. In the following sections, we describe in overview trends in business conditions, output, shipments, inventories, liquidity and capital investment among SMEs under these economic conditions.

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\(^2\) Tentative reference date.
\(^3\) The actual month of the trough was January 1999.
Chapter 1 — SME trends after economic bottoming out

Fig. 1-1-1 Contribution by category to real GDP

(1) Exports and private demand drive real GDP

(2) Weak recovery in capital investment

Gross domestic expenditure
Net exports
Public demand
Private demand

Private demand
Increase in private inventory
Private residential investment
Private final consumption expenditure
Private non-residential investment

Source: Cabinet Office, National Accounts Statistics.

Fig. 1-1-2 Trends in production and inventories (all manufacturers)

Production now weak despite upturn at start of 2002

Inventory
Production

Source: METI, Indices of Industrial Production.
Note: Shaded sections indicate periods of recession.
Section 2 SME trends after economic bottoming-out

1. Improvement in business conditions in manufacturing

After deteriorating throughout 2001, the SME business conditions diffusion index (DI) for all industries (change on previous year in “improved” minus “deteriorated”) bottomed out early in 2002, and began to recover in April-June. Since July-September, however, it has remained level. The DI for large and middle-tier enterprises, on the other hand, increased substantially in April-June, since when it has maintained its upward path (Fig. 1-1-3(3)).

A breakdown of the business conditions DI (change on previous year) by industry (Figs. 1-1-3(2)~(6)) reveals that while business conditions have improved in manufacturing since the April-June quarter, the picture has been quite different in non-manufacturing, where the business conditions DI has remained level or declined in the construction, retailing and service sectors. In fact the only improvement in non-manufacturing was in the wholesale sector, which has close ties with manufacturing. A breakdown by size of enterprise, however, reveals that among both small and medium manufacturers and small and medium wholesalers (whose DI was improving), the pace of the improvement was weak compared with large and middle-tier enterprises, and the gap between enterprises of different sizes is if anything widening.

Fig. 1-1-3 Trends in business conditions DI
Growth in gap in business conditions DI between large/middle-tier enterprises and SMEs in manufacturing and retailing

Sources: BOJ, Short-Term Economic Survey of Enterprises in Japan (large and middle-tier enterprises); SME Agency/JASMEC, Survey of Business Conditions in the Small Business Sector (SMEs).

Notes: 1. “Favorable” minus “unfavorable” for large and middle-tier enterprises.
   “Improved” minus “deteriorated” compared with the same period a year earlier for SMEs.
2. Shaded sections indicate periods of recession.
In non-manufacturing, the gap between enterprises of different sizes has widened rapidly in recent years in retailing. While the business conditions DI (year-on-year change) among large retailers has continued to improve since 1998 and has been positive since April-June 2002, the business conditions DI (year-on-year change) for small and medium retailers has remained depressed since April-June 1999, and the gap between the two is rapidly widening.

Let us turn next to consider changes in the business conditions DI (year-on-year change) for small and medium manufacturers (SMMs) (Fig. 1-1-4(1)). What we find is that conditions have rapidly improved in export-related industries such as the iron/steel and non-ferrous metal, electrical machinery, general machinery and transport machinery industries. Among these, the business conditions DI (year-on-year change) bottomed out most rapidly in the electrical machinery industry, where the DI began to rise in October-December 2001 and continued to rise thereafter for five consecutive quarters up to October-December 2002.

If we examine the change on the previous quarter (seasonally adjusted) in the business conditions DI for small and medium manufacturers in order to look at more recent trends (Fig. 1-1-4(2)), however, we find that the pace of recovery in the DI has peaked in areas of industry such as iron/steel, non-ferrous metals and electrical machinery since exports began to fall off in the July-September quarter. Thus while business conditions may be improving in the small and medium manufacturing sector, the outlook is again growing uncertain.

![Fig. 1-1-4  Trends in business conditions DI by industry (SMMs)](image)

**Year-on-year improvement in business conditions DI continues, but scale of improvement on previous quarter peaks in latest quarter**


Note: "Improved" compared with the same period a year earlier minus "deteriorated" compared with the same period a year earlier.
2. Output remains weak after bottoming out

As we saw in Section 1, the manufacturing industrial production index for enterprises of all sizes began to increase after bottoming out at the end of 2001, recovering at the beginning of 2002 to more than what it was immediately prior to the previous trough in the business cycle. The production index for small and medium manufacturers, however, failed to exceed its level just before the previous trough (93.1 in December 1998), despite rising from the beginning of 2002, and it has remained weak since the autumn (Fig. 1-1-5(1)).

Although inventories seemed to have bottomed out mid-year in both manufacturing as a whole and among small and medium manufacturers, they have fluctuated nervously since the second half of the year (Fig. 1-1-5(2)). Looking at trends in output and inventories in key industries (Fig. 1-1-6), we find that intended inventory accumulation accompanying growth in output occurred in only the two export-related industries of electrical machinery and automobiles/other transport machinery and that no intended inventory accumulation occurred in other industries despite growth in output, reflecting caution among enterprises in other industries regarding the economic outlook. The electrical machinery industry

Fig. 1-1-5 Trends in production and inventories of SMMs

Sources: METI, Indices of Industrial Production; SME Agency, Manufacturing Production Indices by Size of Firm.
Note: Shaded sections indicate periods of recession.
was, as during the economy’s previous expansionary phase, again the engine of output growth. Fig. 1-1-7 shows a breakdown of each industry’s contribution to the rate of growth (change on the previous year) in the production index of small and medium manufacturers. As this shows, the electrical machinery industry, which was the main cause of the sharp drop in output from 2001, was also the main cause of the recovery in output from 2002. The next largest contributions were from chemical and transport machinery manufacturers. Reflecting the depressed state of domestic capital investment up to this point, however, the general machinery industry has made no observable contribution to growth in output.

Fig. 1-1-6 Trends in output and inventories of SMMs in key industries
Intended inventory accumulation among only some manufacturers, such as electrical machinery manufacturers

Source: SME Agency, Manufacturing Production Indices by Size of Firm.
As noted in Section 1, exports have played a major role in the bottoming out of business conditions and following increase in output. Below, therefore, we look at trends in exports among small and medium manufacturers. Fig. 1-1-8(1) shows trends in shipments by small and medium manufacturers for domestic destinations and for export, and from this it can be seen that direct exports are growing rapidly, as during the previous expansionary phase. A breakdown by industry (Fig. 1-1-8(2)) reveals that the electrical machinery, general machinery and transport machinery industries were the main contributors to growth. Leading the surge

**Fig. 1-1-7** Contribution by industry to SMM production index (change from previous year)

Recovery in production driven by electrical machinery industry

![Graph showing contribution by industry to SMM production index](image)

Source: SME Agency, Manufacturing Production Indices by Size of Firm.

Note: The contributions by industry to the production index are calculated as follows:

\[
\text{Contribution to rate of growth (change from previous year) in SMM production index at time } t \text{ of industry } i = (Q_{t}/Q_{t-1} x 100 - 100) x (Q_{t} - Q_{t-1}) x W_{i} / [(Q_{t} - Q_{t-1}) x W]
\]

- \( W_{i} \): Value added weight of industry \( i \)
- \( W \): Value added weight of all SMMs
- \( Q_{t} \): Production index at time \( t \) of industry \( i \)
- \( Q \): Production index at time \( t \) of all SMMs

**Fig. 1-1-8** Trends in shipments of SMMs

Surge in exports at start of 2002

![Graph showing trends in shipments of SMMs](image)

(1) Trends in shipments (SMMs)
Fig. 1-1-9 Export ratios by size of enterprise and main industries

SMMs have high indirect export ratio

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</table>

Note: "Large" denotes large enterprises.

4) The indirect export ratio here means the proportion of the value of output accounted for by the value of output in each category of SME manufacturing arising from total Japanese exports minus the value of direct exports of each industry.

in exports this time round was the electrical machinery industry, which accounted for the majority of the decline in exports in the latter half of 2001. As already observed, however, the gap between the production indices for small and medium manufacturers and for all enterprises is growing, despite the rise in the former from the beginning of 2002. The most likely reason for this is the differing ripple effect on domestic output for export. SME exports consist not only of shipments by SMEs that are exported directly (i.e. direct exports), but also of parts produced by SMEs that are incorporated in products that are exported (i.e. indirect exports), which as a consequence have an impact on SMEs production activities through domestic trade relations. The proportion of domestic output consisting of direct exports (the direct export ratio) is thought to be relatively lower for SMEs than large enterprises. Estimating the direct export ratio based on the SME Agency’s Industry Statistics by Size, we in fact find that the ratio for SMEs is approximately 8%, which is less than half the ratio for large enterprises (21%) (Fig. 1-1-9). If we look at the proportion of output accounted for by indirect exports (the indirect export ratio)4, however, we find that the proportion in the case of SMEs is approximately 11%, and that the indirect exports of SMEs exceed direct exports. If we add together the direct export ratio and indirect export ratio to determine the overall export ratio and compare the resulting overall export ratios of SMEs and large
enterprises, we find that the export ratio for large enterprises is approximately 33.9%, and the export ratio for SMEs is 18.9%. The export ratio for SMEs is thus less by the amount that the direct export ratio is lower. This difference in export ratios would therefore appear to be the chief reason for the growing gap in the production indices at a time when exports are growing overall. If we look, however, at the export ratio in export-related industries such as the iron/steel, electrical machinery, transport machinery and general machinery industries, we find hardly any difference in the export ratios. Over 30% of domestic output consists of direct and indirect exports in the iron/steel, non-ferrous metal, electrical machinery, general machinery and precision equipment industries, and the figure rises to 47% in the transport machinery industry. Exports thus have a by no means negligible impact on small and medium manufacturers in these industries.

### Section 3  Liquidity of SMEs

In this section, we look at trends in the liquidity of SMEs. A breakdown of the recent movements in the financial position DI ("improved" minus "worsened") by size of enterprise (Fig. 1-1-10(1)) shows that the financial position DI for SMEs has continuously worsened since the early 1990s just after the collapse of the bubble economy. In contrast, the financial position DI of large enterprises has recovered substantially since declining, despite a temporary downturn in the early 1990s and between the end of 1997 and 1998 at the time of the financial slump, and has remained almost unchanged throughout the period. Furthermore, the proportion of enterprises that said their financial position was "easy" has, with just two declines excepted, continually exceeded the proportion saying that it was "tight". The financial position DI of SMEs, on the other hand, has been in long-term decline, failing to recover from the slumps of the early 1990s and the financial slump. As a result, the gap between SMEs and large enterprises has rapidly doubled in recent years from just 20 points in 1990 to almost 40 points by the end of 2002. According to the latest data on SME liquidity, the financial position DI for small and medium manufacturers, among whom business conditions have been improving since the start of 2002, has been on the rise since April-June, while in non-manufacturing, where the start of the new year brought no improvement in confidence, the financial position DI has been in decline since July-September (Fig. 1-1-10(2)).

Below, therefore, we look into the reasons and background to this deterioration in the liquidity of SMEs. Fig. 1-1-11 shows a breakdown into sales, profitability and ease of borrowing of the difference on the previous quarter in the financial position DI of SMEs so as to provide some idea of the extent of the impact of each on liquidity. From the figure it can be seen that sales have had the biggest impact in both manufacturing and non-manufacturing. During periods of economic contraction, liquidity deteriorates in response to a decline in sales, transport machinery and general machinery industries, we find hardly any difference in the export ratios. Over 30% of domestic output consists of direct and indirect exports in the iron/steel, non-ferrous metal, electrical machinery, general machinery and precision equipment industries, and the figure rises to 47% in the transport machinery industry. Exports thus have a by no means negligible impact on small and medium manufacturers in these industries.

#### Fig. 1-1-10  Trends in financial position DI

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**Sources:** BOJ, Short-Term Economic Survey of Enterprises in Japan (large enterprises); SME Agency/ JASMEC, Survey of Business Conditions in the Small Business Sector (SMEs).

**Notes:**
1. "Easy" minus "tight" for large enterprises. "Improved" minus "worsened" than the same period a year earlier for SMEs.
2. Shaded sections indicate periods of recession.

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5) As profitability was not found to be a statistically significant factor in non-manufacturing, it was excluded as an explanatory variable.
while in periods of economic expansion, growth in sales causes liquidity to improve. During the financial slump from 1997 to 1998, however, ease of borrowing had a conspicuous impact on both manufacturing and non-manufacturing. The hardening in the lending attitudes of financial institutions concentrated in this period appears to have caused a further deterioration in the liquidity of SMEs, which was already worsening due to the decline in earnings during the economic downturn. This impact was particularly great in non-manufacturing, and caused a deterioration on a par with sales during the financial slump.

Although the financial position DI began to decline again when the economy again went into recession from 2001, the scale of the decline was smaller than during the financial slump. In both manufacturing and non-manufacturing, it can be seen that this was due to the smaller scale of the decline in the borrowing difficulty DI relative to during the financial slump.

Has the borrowing difficulty of SMEs actually improved, then, compared with during the financial slump? Fig. 1-1-11 shows the changes (quarter-on-quarter) in the borrowing difficulty DI for SMEs since 1995 by industry, and from this it can be seen that the DI has again deteriorated since 2000 in both manufacturing and non-manufacturing. The deterioration has been particularly severe in the retail and service sectors, where the DI has fallen below its level during the financial slump, failing to bottom out even since 2002 when the economy entered an expansionary phase.

Fig. 1-1-11  Decomposition analysis of changes in financial position DI ("improved" minus "worsened") of SMEs

Ease of borrowing has major impact in non-manufacturing

(1) Manufacturing

(2) Non-manufacturing


Notes: 1. See Appended Note 1-1-1 regarding estimation results.
2. Explanation of factors
   1) Ease of borrowing: Change from previous quarter in ease of long-term and short-term borrowing DI ("easy" minus "difficult"), with a one-quarter lag for manufacturing.
   2) Sales: Change from previous quarter in sales DI ("increase" minus "decrease").
   3) Profitability: Change from previous quarter in profitability (ordinary profit) DI ("improved" minus "deteriorated"). This factor was not included for non-manufacturing as it was not found to be statistically significant.
In this section, we examine trends in capital investment by small and medium manufacturers in 2002. As we saw in the introduction to this chapter, the recovery in domestic capital investment has remained lackluster since the beginning of 2002. For the Japanese economy, which has at last bottomed out following growth in exports, to get back on the road to sound recovery and achieve sustained growth, there must be a full-fledged recovery in domestic capital investment.

Fig. 1-1-13 shows trends in the production/operating capacity DIs in manufacturing and non-manufacturing according to the Bank of Japan’s (BOJ) Short-Term Economic Survey of Enterprises in Japan (Tankan) (“excessive” minus “insufficient”) and trends in the value of capital investment by size of enterprise.

Looking first at the trend in manufacturing (Fig. 1-1-13(1)), the production/operating capacity DIs of both large enterprises and SMEs have repeatedly moved up and down in step with the business cycle, and have continuously increased since the 1990s following the collapse of the bubble economy. Since 1992 just after the DI began to rise, moreover, the number of enterprises feeling that capacity is “excessive” has continued to slightly exceed the number saying that capacity is “insufficient”.

As the economic slump has continued, then, the sense of overcapacity has spread among enterprises of all sizes and in all industries. As a result, both large enterprises and SMEs have tightly curbed capital investment since the 1990s (Figs. 1-1-13(2), 1-1-13(4)).

If we plot the above trends in capital investment among small and medium manufacturers from the viewpoint of the capital stock cycle (Fig. 1-1-14(1)), it can be seen that a process of stock adjustment occurred between the third quarter of 2001 up to the July-September quarter of 2002 (indicated by the 45˚ downward path of the curve in the figure). Since April-June 2002, when the change in capital stock on the previous year fell below 3%, the scale of the year-on-year decline in capital investment has declined for two consecutive quarters, and stock adjustment among small and medium manufacturers appears to have at last entered its final stages. The curve in the figure, however, has shifted considerably leftwards during the latest phase of stock adjustment, suggesting that the level of capital stock considered appropriate by enterprises has fallen further since 2002.
Chapter 1 — SME trends after economic bottoming out

Fig. 1-1-13 Growth in sense of overcapacity and curbing of capital investment at enterprises

(1) Trends in production/operating capacity DI ("excessive" minus "insufficient") in manufacturing
(2) Trends in capital investment (change from the same period a year earlier) in manufacturing

(3) Trends in production/operating capacity DI ("excessive" minus "insufficient") in non-manufacturing
(4) Trends in capital investment (change from the same period a year earlier) in non-manufacturing

Source: BOJ, Short-Term Economic Survey of Enterprises in Japan.
Notes: 1. The production/operating capacity DI is the simple mean of the DI for two quarters. The DI for the second half of fiscal 2002 is the DI for October-December 2001.
2. The figures for capital investment in fiscal 2002 indicate planned investment.
3. Shaded sections indicate periods of recession.

Fig. 1-1-14 Capital investment and the capital stock cycle
Capital investment in stock adjustment phase in 2002 too

(YoY % change in capital investment)
Fig. 1-1-15 Contributions to SME capital investment according to purpose

Investment in new products, new business and R&D in manufacturing and investment in growth in sales through establishment of new stores in retailing make positive contributions to otherwise poor growth in capital investment.


Note: See Appended Note 1-1-2 regarding the method of calculation.


Note: Amended planned investment for fiscal 2002.
The capital stock of large manufacturers has exhibited negative year-on-year growth since April-June 2002, and the latest figures indicate that existing capacity is being abandoned more rapidly than investment in new capacity (Fig. 1-1-14(2)). Next, we look at trends in capital investment among SMEs by purpose of capital investment. Fig. 1-1-15 shows the percentage point contributions of capital investment by SMEs in each category of industry according to purpose. From this it can be seen that in manufacturing, investment in increasing capacity and investment for all other purposes went into decline in fiscal 2001 as the economy entered a downturn. And according to investment plans for fiscal 2002, investment for most purposes, such as renewal, maintenance and repair investment and labor saving investment, and investment in increasing capacity in particular, is projected to be cut further. In fact, only investment in new products, new business and R&D is projected to begin to grow again in fiscal 2002. The conclusion to be drawn is that an increasing number of small and medium manufacturers are cutting back on forms of capital investment directly related to production capacity, such as investment in increasing capacity, and shifting instead to investment designed to maintain their competitiveness and open up new markets in the future, such as through investment in new products, new business, and R&D. In non-manufacturing, on the other hand, capital investment exhibited negative year-on-year growth in the wholesale sector in fiscal 2001 due chiefly to a downturn in “growth in sales in existing fields of business”. According to investment plans for fiscal 2002, investment for all purposes is set to decline, and so capital investment is projected to drop further. In the retail sector, capital investment registered positive year-on-year growth in fiscal 2001 due principally to “growth in sales due to expansion and improvement of existing stores and warehouses, etc.”. In fiscal 2002, however, the value of capital investment is projected to decline year on year due to a downturn in “increase in sales due to expansion and improvement of existing stores and warehouses”.

Section 5 Employment situation at SMEs

1. Unemployment rate continues to rise

Japan’s unemployment rate rose again from the previous year in 2002, registering a worst-ever annual average of 5.4% (Fig. 1-1-16). A breakdown by age group reveals the unemployment rate to be higher among younger age groups (12.8% for 15~19 year olds and 9.3% for 20~24 year olds) (Fig. 1-1-17).

2. Decline in number of employed accelerates

According to the Ministry of Public Management, Home Affairs, Posts and Telecommunications’ (MPHPT) Labor Force Survey, the number of persons in employment (excepting agriculture and forestry) peaked in 1997, since when it has declined annually. In 2002, the decline accelerated compared with the previous year, falling...
approximately 630,000 from the previous year to 60,630,000 (Fig. 1-1-18). Broken down by number of workers, there was a particularly large increase in the scale of the decrease at large enterprises with 500 or more workers, where employment fell approximately 640,000 from the previous year.

If we look at trends in the number of workers per enterprise by size of capital stock according to the Ministry of Finance’s (MOF) Financial Statements Statistics of Corporations by Industry, we find that the number has declined continuously since 1996 regardless of amount of capital stock, reflecting the severe employment climate (Figs. 1-1-19~20)

3. Mid-career hiring by SMEs depressed

According the Ministry of Health, Labour and Welfare’s (MHLW) Report on Employment Service, the rate of growth in the number of new job offers (excluding new graduates and part-timers) in 2002 was lower than in 2001 at enterprises of all sizes except medium-sized business establishments with 100–499 employees (Fig. 1-1-21). Although growth was negative in the first half of 2001, the scale of the decline gradually shrank, and growth was positive in the second half of the year. At small and medium business establishments, however, the number of new job offers was the same as or less than in the previous year. The actual number of job offers stayed constant overall, reflecting the low level of interest in hiring anyone other than new graduates and part-timers.

4. Decline in over-employment sentiment

The employment DI (“excessive” minus “insufficient”) by size of enterprise according to the BOJ’s Tankan reveals that the sense of over-employment has been falling since the start of 2002 (Fig. 1-1-22).

If we look next at the employee sufficiency DI of SMEs

Source: MPHPT, Labor Force Survey.
Notes: 1. Figures indicate monthly averages in year.
2. Unemployment rate = (unemployed / total labor force) x 100

Source: MPHPT, Labor Force Survey.
Notes: 1. Figures indicate annual averages.
2. The total number of employed person includes government and public sector workers and workers at enterprises of indeterminate size, and so does not equal the combined sum of each size category.
by industry according to the SME Agency and the Japan Small and Medium Enterprise Corporation’s (JASMEC) Survey of Business Conditions in the Small Business Sector, the DI in the retail and service sectors has remained steady at almost zero, while in manufacturing, wholesaling and construction, the sense of over-employment is high though the DI in manufacturing has headed down as confidence has recovered (Fig. 1-1-23). Furthermore, an examination of the trend in the proportion of business establishments adjusting employment in some way (such as by restricting overtime, reallocating staff, cutting or suspending mid-career hiring, seeking volunteers for voluntary retirement, and laying off employees) by size, i.e. number of workers, according the MHLW’s Survey on Labour Economy Trend reveals that the proportion went into decline at establishments of all sizes since the end of 2001 or the beginning of 2002 (Fig. 1-1-24).

At SMEs as well as large enterprises, therefore, the sense of over-employment has eased as business conditions have improved. Nevertheless, the unemployment rate is high, and the employment situation remains severe.

**Fig. 1-1-19** Trend in number of employees per enterprise with capital stock of less than ¥100 million

Number of employees per enterprise declining by the year


**Fig. 1-1-20** Trend in number of employees per enterprise with capital stock of ¥100 million or more

Downward trend in number of employees at enterprises with capital stock of ¥100 million or more as well


**Fig. 1-1-21** Number of new job offers by size (change from previous year, change from same month a year earlier)

Number of new job offers at small and medium business establishments declines from previous year

Note: Excluding new graduates and part-time positions.

**Fig. 1-1-22** Trends in employment DI by size (all industries)

Sense of over-employment declines

Source: BOJ, Short-Term Economic Survey of Enterprises in Japan.
Note: DI = “excessive” - “insufficient”.
1. Number of bankruptcies remains high

Bankruptcies exceeded 19,000 for a second year to reach 19,087 in 2002, the fourth highest number since surveys began in 1952, and the number of bankruptcies among SMEs with capital stock of under ¥100 million remained high, reaching a sixth highest-ever figure of 18,687 (Fig. 1-1-25).

A breakdown by industry reveals conspicuous growth in the number of bankruptcies in the service and “other” sectors (up 9.0% from 3,138 to 3,420). Bankruptcies in construction remained high, accounting for 30% of the total for a fourth consecutive year. The number declined somewhat in other sectors except the wholesale sector (where there was a slight increase of 0.6% from 3,338 to 3,358), and the indications are that bankruptcies have peaked (Fig. 1-1-26).

2. Bankruptcy trends by type

The pattern of bankruptcies by type (Fig. 1-1-27) is characterized by an increase in the number filing for bankruptcy through the courts and a decline in the number whose business with banks has been suspended.

3. Trends in number of bankruptcies by cause

A comparison of the number of bankruptcies by cause in 1983–1985 (when the numbers of bankruptcies were the third, first and sixth highest on record) and 2000–2002 (seventh, second and fourth highest) (Fig. 1-1-29) shows that despite the high proportion of bankruptcies due to slumping sales and cumulative debt in both periods, the proportion is now increasing even more. This is indicative of the large impact of the prolonged slump. Further, although the proportion of bankruptcies due directly to causes such as the reduction or refusal of loans by financial institutions remains small, the proportion is now rising, albeit only slightly, and this trend needs to be closely watched.
Chapter 1 — SME trends after economic bottoming out

Fig. 1-1-25 Trends in number of bankruptcies and total liabilities
Number of bankruptcies remains high


Notes: 1. The number of bankruptcies indicates the number of bankruptcies of enterprises with liabilities of at least ¥10 million. SMEs are defined as sole proprietorships and corporations with capital stock of less than ¥100 million.
2. Data on the number of newly registered insolvencies of business corporations are only available up to 2001.

Fig. 1-1-26 Trends in proportion of bankruptcies by industry
Bankruptcies appear to have peaked in most industries


Note: The number of bankruptcies indicates the number of bankruptcies of enterprises with liabilities of at least ¥10 million.
4. Small-scale bankruptcies and voluntary exits

Although the number of bankruptcies has thus stayed high in recent years, this number only includes bankruptcies of enterprises with total liabilities of at least ¥10 million, and so does not include bankruptcies leaving total liabilities of less than that amount. It also does not include voluntary exits not due to bankruptcy. If we look therefore at changes in the number of self-employed (non-primary industry) in recent years according to the MPHPT’s Labor Force Survey, we find that the number has declined almost continuously in recent years, and that the number of self-employed declined between 2001 and 2002 by around 130,000 (Fig. 1-1-30).

The fact that there were 2,831 large-scale bankruptcies in 2001 considering sole proprietorships with total liabilities of at least ¥10 million alone would suggest that the level of bankruptcies of sole proprietorships with liabilities of under ¥10 million and voluntary exits is just as high. The circumstances of such exits are examined in detail in Part II, Chapter 2.

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6) See Appended Note 1-1-3 regarding the relationship between bankruptcies and exits.

7) “Self-employed (non-primary industry)” here means store proprietors, factory proprietors, privately practicing medical practitioners, authors and housekeepers, etc.
Section 7 SME business conditions by region

1. SME business conditions in provinces

As we have seen up to this point, the situation of SMEs in Japan has grown increasingly opaque. The question we now ask is: Are there any regional differences in trends? To answer this question, we divide Japan into eight regional blocks, and examine business confidence and business trends among SMEs at the regional level.

We start by looking at the business conditions DIs of SMEs by region according to the SME Agency and JASMEC’s Survey of Business Conditions in the Small Business Sector, which are shown in Fig. 1-1-31. Nationally, the DI bottomed out between July-September 2001 and January-March 2002, and improved by a considerable margin overall in April-June. In July-September, however, confidence weakened, and downward pressure increased further in October-December.

The business conditions DIs for the Kinki (-47.2 in October-December 2002) and Tohoku (-46.7) regions were lower than those of other regions, which was...
probably due to the weak business conditions in manufacturing, construction and services compared with other regions (Fig. 1-1-32).

Turning next to look at the unemployment rate by region, shown in Fig. 1-1-33, we find that while unemployment in most regions has fluctuated, unemployment in the Kinki region grew for three consecutive quarters and has remained high despite falling in October-December 2002, reflecting the continued severe employment problems in the region.

Next we look at the bankruptcy occurrence rate, calculated by dividing the number of bankruptcies by the total number of enterprises and shown in Fig. 1-1-34. The bankruptcy occurrence rate exhibits regional variation. In the Tohoku, Chubu and Shikoku regions, the rate rose for three years in succession, but fell in other regions. In the Kinki region, the bankruptcy occurrence rate has, like the unemployment rate, remained high, providing further evidence of the severity of conditions there.

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**Fig. 1-1-32 Contribution by industry to business conditions DI in each region (October-December 2002)**

Manufacturing, construction and services contribute to slump in business conditions in Kinki and Tohoku regions

**Fig. 1-1-33 Trends in unemployment rate by region (January-March 2000 to October-December 2002)**

High unemployment in Hokkaido, Kinki and Kyushu/Okinawa regions

---

2. Differences between urban areas and provincial areas

While the disparity between the cities and the provinces is considered to be problematic, can any differences in business confidence between urban areas and provincial areas actually be observed? To answer this question, we divide the whole of Japan into urban areas (prefectures with ordinance-designated cities, etc.) and provincial areas (prefectures that are not urban areas) and examine trends in the business conditions DI of SMEs in each according to the SME Agency and JASMEC’s Survey of Business Conditions in the Small Business Sector, as shown in Fig. 1-1-35. In industry as a whole, business conditions were better in urban areas in 1990~1991 and 2000~2001, and better in provincial areas in 1991~1996. There was no great disparity at any other times, however, and both have moved approximately in step over the past year.

A breakdown by industry shows that, in recent years, the level has been higher in manufacturing in provincial areas, and higher in urban areas in the wholesale and construction sectors. In the retail and service sectors, no difference can be observed (Fig. 1-1-36).

8) Urban areas consisted of the following 12 prefectures with ordinance-designated cities: Hokkaido, Miyagi, Saitama, Chiba, Kanagawa, Tokyo, Aichi, Kyoto, Hyogo, Osaka, Hiroshima and Fukuoka.
Fig. 1-1-36(1) Trends in business conditions DI for manufacturing in urban areas and provincial areas
DI has tended to be higher in provincial areas over the past year or so

Note: See Fig. 1-1-35.

Fig. 1-1-36(2) Trends in business conditions DI for wholesale sector in urban and provincial areas
DI higher in urban areas in past couple of years

Note: See Fig. 1-1-35.

Fig. 1-1-36(3) Trends in business conditions DI for retail sector in urban and provincial areas
No major difference between urban and provincial areas

Note: See Fig. 1-1-35.

Fig. 1-1-36(4) Trends in business conditions DI for service sector in urban and provincial areas
No major difference between urban and provincial areas

Note: See Fig. 1-1-35.
While there can be seen to be a gap between urban and provincial areas in the wholesale sector, this is most likely due to business conditions being better in urban areas in textile product and apparel-related areas of the wholesale sector (-29.5 in October-December 2002), and worse in provincial areas (-51.6).

Regarding the depressed state of construction in provincial areas, the fact that a larger proportion of construction enterprises identified the downturn in government and public sector demand as a business problem in provincial areas than in urban areas suggests that the fall in public works in recent years is having a major impact (Fig. 1-1-37).

**Section 8  Business trends among small enterprises and subcontractors**

1. **Position of small enterprises**

Small enterprises (enterprises with 20 or fewer employees, or five or fewer employees in the commercial and service sectors) accounted for 87.2% of the total number of enterprises in non-primary industry in 2001. In construction and food services, the respective percentages were 95.0% and 89.2% (Fig. 1-1-38). In terms of number of workers, small enterprises make up only 18.9% of the total in non-primary industry. They do account for a somewhat higher proportion of employment in some industries, however, such as construction (49.4%) and food services (32.3%) (Fig. 1-1-39). Compared with in 1999, small enterprises’ share of the total number of enterprises has stayed virtually unchanged, while the proportion of all employees working at small enterprises has increased somewhat due to payroll cuts by large enterprises. Thus despite some variation between industries, small enterprises play an important role in the Japanese economy.
2. Business conditions among small enterprises

The SME Agency and JASMEC’s Survey of Business Conditions in the Small Business Sector shows that the business conditions DI for small enterprises has generally been lower than that of medium enterprises (i.e. SMEs excluding small enterprises), and that business conditions among small enterprises have remained unchanged even during the current economic recovery. This provides some indication of the severe conditions faced by small enterprises (Fig. 1-1-40).

Fig. 1-1-41 shows the issues cited as the biggest business problems by small enterprises and medium enterprises. From this it can be seen that a greater proportion of medium enterprises than small enterprises cite cyclical problems such as “stagnation of demand”, while more small enterprises than medium enterprises cite structural problems such as “intensification of competition due to entrance of large enterprises”.

Fig. 1-1-38 Proportion of all enterprises that are small enterprises
Proportion of small enterprises remains as high in 2001 as in 1999

Source: MPHPT, Establishment and Enterprise Census of Japan.
Notes: 1. Number of enterprises = number of companies + number of sole proprietorships
2. Small enterprises are enterprises with 20 (5 in commercial and service sectors) or fewer workers.

Fig. 1-1-39 Proportion of all workers employed by enterprises that are employed by small enterprises
Proportion of workers employed by small enterprises almost the same in 2001 as in 1999

Source: MPHPT, Establishment and Enterprise Census of Japan.
Notes: 1. Number of workers indicates the total number of regular workers.
2. Small enterprises are enterprises with 20 (5 in commercial and service sectors) or fewer workers.

Fig. 1-1-40 Trends in business conditions DI of small enterprises and medium enterprises
Conditions harsher for small enterprises in latest two quarters

Note: The business conditions DI is calculated by subtracting the proportion of enterprises that said business conditions had “deteriorated” compared with the same period a year earlier from the proportion that said business conditions had “improved”.

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3. Business trends among subcontractors

According to METI and the SME Agency’s Basic Survey of Commercial and Manufacturing Structure and Activity, 47.9% of all small and medium manufacturers were subcontractors at the time of the 1998 survey. As described in Part II, Chapter 4, a considerable proportion of SMEs in manufacturing were involved in subcontracting business, despite the long-term downward trend since the 1980s (Fig. 1-1-42). Here we examine the level of output of small and medium manufacturers and the quantity of orders received from parent enterprises by subcontractors according to the SME Agency’s Survey of Short-Term Trends among Small and Medium Subcontractors and Manufacturing Production Indices by Size of Firm, shown in Fig. 1-1-43.

This shows that although the quantity of orders received by subcontractors and the production index by size exhibited approximately the same trend, following a downward path from October 2000 to the end of 2001, the quantity of orders received began to grow from February 2002, and recovered to register a decline of 6.9% from the same month a year earlier in January 2003. However, the quantity of orders received by subcontractors differs from the production index in that it always exhibits negative growth on the same month a key factor.

Fig. 1-1-41 Proportional breakdown of factors identified as primary business problems by small enterprises and medium enterprises

Large proportion of small enterprises identify “intensification of competition due to entrance of large enterprise” as problem

Oct. - Dec. 2002

Source: SME Agency and JASMEC, Survey of Business Conditions in the Small Business Sector.
Notes: 1. Proportion of enterprises identifying each item as the primary business problem in October-December 2002.
2. In the construction sector, “stagnation of demand” includes “stagnation of government and public sector demand”.
3. In the retail sector, “intensification of competition due to entry of large enterprises” includes “intensification of competition due to entry of large and medium-sized stores”.
4. In the service sector, “fall or difficulty raising unit price for products (processing) or unit selling price” includes “fall or difficulty raising user fees”.
5. In the service sector, “responding to changes in product and consumer needs” includes “responding to changes in user needs”.
6. “Aging of facilities/stores” includes “shortage or aging of production facilities” in manufacturing, “cramped or aged store or warehouse” in wholesaling and retailing, and “cramped or aged store facilities” in services.
7. “Other” includes “shortage of funds for raw materials”, “difficulty hiring skilled workers” and “deterioration of trading conditions, etc.”.

Fig. 1-1-42 Trend in proportion of small and medium subcontractors (all manufacturing)

Subcontracting business in decline

Note: Small and medium subcontractors are here defined as SMEs (enterprises with less than 300 employees) that manufacture or process parts, products or other goods for corporations or individuals with more capital stock or employees than themselves.
year earlier. This means that the quantity of orders from parent companies is constantly declining, indicating that subcontractors are in an extremely difficult position.

If we look at the business conditions DI of small and medium subcontractors (enterprises with a subcontracting ratio of at least 70%) and small and medium non-subcontractors (enterprises with a subcontracting ratio of 0%) according to the Japan Finance Corporation for Small Business’s Survey of Trends among Small and Medium Enterprises, we find that they both follow a similar trend in that they both peak in mid-2000 and bottom out at the end of 2001. An examination of the DI values at their highest and lowest, however, reveals that whereas the DI of small and medium subcontractors was -50.7% and small and medium non-subcontractors was -34.7% at their lowest, the figures at their peak were 5.4% for small and medium subcontractors and -6.6% for small and medium non-subcontractors. The DI for small and medium subcontractors thus varies more widely, indicating that business conditions among small and medium subcontractors are more sensitive to changes in business trends (Fig. 1-1-44).
Chapter 2 Economic activities of small and medium manufacturers amid deflation

The purpose of this chapter is to provide first of all an overview of enterprises’ activities at a time of deflation, and then to examine trends in output and shipments and the like among small and medium manufacturers. In doing so, we shall show that the productive activities of small and medium manufacturers under deflationary conditions are not uniform but differ considerably according to industry, and consider what path SMEs should take to overcome deflation.

Section 1 Business activities under deflationary conditions

In order to surmount the prolonged deflationary slump, enterprises in Japan have vigorously pressed ahead with measures to cut costs by squeezing raw material and labor costs through rationalization and efficiency improvements. However, there are also many enterprises that end up cutting selling prices by more than they cut costs as a result of prioritizing securing sales volume (Fig. 1-2-1). In the case of enterprises in Japan, lack of competitiveness among enterprises and lack of differentiation of goods and products often make “price” the only means of competition. If a price leader reduces prices, therefore, most other enterprises tend to follow suit (Fig. 1-2-2). As a result, price competition intensifies further. Intensified price competition shorten the time enterprises enjoy the fruits of rationalization and efficiency improvements by forcing them to lower prices further. Even if sales volume increases somewhat as a result of cutting prices, earnings increase little and enterprises have to make further cost reductions. Thus is set in train a vicious circle.

In order for Japanese SMEs to survive in the face of the continuing influx of cheap imports and movement of operations overseas by parent companies, it is important that they strive to rationalize and achieve efficiency improvements by, for example, cutting their workforces. However, there are inevitable limits to what can be achieved by such means, and enterprises need to rethink the traditional prioritization of securing sales volume.

If we look at the relationship between trends in wholesale prices in Japan and the unemployment rate, we

Fig. 1-2-1 Changes in unit price, sales and business costs of enterprises

Enterprises regarding deflation as negative lower prices by more than they cut costs

<table>
<thead>
<tr>
<th>(%)</th>
<th>Unit price</th>
<th>Sales</th>
<th>Business costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>-9.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-4.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Mitsubishi Research Institute, Inc., Questionnaire Survey on Deflation (August 2002).

Fig. 1-2-2 Enterprises’ position on pricing

Largest proportion of enterprises play follow-the-leader

<table>
<thead>
<tr>
<th>(%)</th>
<th>Aggressively lower prices as price leader</th>
<th>Forced to lower prices following market leader</th>
<th>Adopt alternative strategy to lowering prices</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>46.2</td>
<td></td>
<td></td>
<td></td>
<td>35.7</td>
</tr>
<tr>
<td>8.9</td>
<td></td>
<td></td>
<td></td>
<td>7.2</td>
</tr>
</tbody>
</table>

Source: Mitsubishi Research Institute, Inc., Questionnaire Survey on Deflation (August 2002).

9) The survey used for the figure was of listed enterprises, and did not cover SMEs only.
find that the percentage change on the previous quarter in the wholesale price index in the latest quarter is in the right corner of the graph shown. With the gap between supply and demand shrinking only slightly, we cannot expect increase in prices (Fig. 1-2-3). This indicates that even if the volume of sales does increase as a result of a recovery in demand, enterprises will find it hard for the time being to raise the price of goods and products. They will thus have to secure earnings without any prospect of a major increase in either sales volume or selling prices. Under such conditions, it is absolutely vital that enterprises make their goods and products more competitive and avoid all-out price competition by differentiating their goods and products from those of other companies through developing new goods and products and developing goods and products with higher value added. Development costs, inconsiderable burden on enterprises, have to be reduced as well. In the following sections, we shall look first at the question of price indices, and then examine trends in shipments and output in Japanese manufacturing since the 1980s from the point of view of prices and other variables. We shall then show that the impact of deflation varies between industries, and that increasing the value added of the product lineup is the key to surmounting competition in the present deflationary climate.

Section 2 Average prices and price indices

It is an oft-heard complaint nowadays that price trends as depicted by price indices do not match the reality. Questionnaire surveys of enterprises regarding price changes support this, revealing that, although the rate of decline in prices varies considerably according to enterprises’ assessment of deflation, enterprises in all groups complain of price falls exceeding those indicated by price indices (Fig. 1-2-4). In this section, therefore, we examine to what extent prices have fallen over the 15 years since the bubble economy. The problem with deflation is not the absolute level of prices, but the pace of the decline. Fig. 1-2-5 shows a comparison of changes in wholesale prices (manufactured products) with average prices calculated by dividing the value of shipments of manufactured products by the volume of shipments. Doing so, we find that whereas the wholesale price index peaked at 105.2 in 1991 and then declined 9.8 points to 95.4 in 2001, average prices peaked at 106.0 in 1992 before falling 11.6 points to 94.4 in 2001, i.e. falling by more than the wholesale price index. This is potentially due to a number of reasons, chief of

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10) We actually use the geometric mean of the manufactured product average index (calculated by dividing the Census of Manufactures shipment value index by the shipment index of the industrial production index) and wholesale price index (manufactured products) in order to eliminate index bias.
Fig. 1-2-5 Trend in price of manufactured products (estimate, all manufacturers)

Price of manufactured products continues to fall

(1995 average = 100)

90 92 94 96 98 99 00 01


converted to an index using the weighted arithmetic mean with fixed base period. Thus when enterprises repeatedly change their product lineups (from high-end to lower end products, or vice versa) in a comparatively short period, a gap such as that in the figure opens up between the two. Consequently, where measuring the effect of price changes on enterprise earnings using a fixed weight index similarly to the wholesale price index and an index sampling only pure changes in prices of products of the same quality eliminating as far as possible changes in quality, short-term changes in the product lineup of enterprises are not reflected.

What directly impacts on enterprise earnings is not the aggregate of price changes for specific categories of products, but the “average price” based on the overall structure of the product lineup of each enterprise at each point in time. If this can be indexed, therefore, it should be possible to determine the relationship between enterprise earnings and deflation more accurately.

In the next section, we attempt to apply the above approach to analyzing the productive activities of small and medium manufacturers since the bubble economy using average prices. In doing so, we show that average prices are not necessarily falling in all industries, and that in some industries they are in fact rising despite the prevailing deflationary conditions, and that even in industries where average prices are falling, the reasons for their decline differ according to industry. We also show that for small and medium manufacturers, raising the value added of the product lineup is a more effective means of combating deflation than maintaining sales volume and output.

Section 3 Production activities of small and medium manufacturers amid deflation

Fig. 1-2-6(1) shows changes in the value and volume of shipments of small and medium manufacturers every year since 1985. From this it can be seen that average prices leveled off from the start of the bubble period in 1987 after initially falling, and then began to rise. Subsequently, the curve follows a gradually steepening upward course. During the economic bubble period, the rise in average prices caused the value of shipments to continue to rise more rapidly than the volume of shipments 11).

When the bubble economy collapsed early in 1991, however, both the volume and value of shipments went into decline. Since then, the curve has headed leftwards and downward while repeatedly moving to-and-fro due to the business cycle. During this period, average prices generally remained level or declined annually. As a result, the increase in average prices over the seven years from 1986 to 1992 is lost over the next nine years.

The question we must then ask is to what extent average prices impact on movements in the value of shipments. Fig. 1-2-6(2) shows a decomposition analysis of the change in the value of shipments (simple average of the change on the previous year) of small and medium manufacturers due to volume (in this case the shipment index) and price (in this case the average price) dividing the period from 1985 to 2001 into five periods (1985~1987, 1988~1991, 1992~1994, 1995~1997, and 1998~2001) based on the movements of the curve in Fig. 1-2-6(1). This shows that during the bubble economy, price and volume, which had contributed to growth in the value of shipments, both instead began to contribute to the decline during the 1992~1994 period after the

11) When the curve in the graph stays at 45°, there is no change in average prices. When the curve is inclined between 45° and 135°, average prices are rising. When the angle is less than 45° or more than 135°, average prices are falling.
collapse of the bubble economy. In the following period from 1995 to 1997, volume and price both acted as growth factors, as this period subsumed the expansionary phase when the business cycle peaked in the spring of 1997. From 1998 when the value of shipments again began to decline, however, price and volume made a negative contribution to growth. Although this period includes the expansionary cycle when the business cycle peaked in the autumn of 2000, both price and volume again contributed to a decline.

Problematic here is the makeup of average prices. As we saw in Section 2, average prices are calculated by dividing the value of shipments by the volume of shipments, and changes in the product lineup as well as pure changes in prices are included. Changes in the value of shipments thus consist of pure changes in the price of products of the same quality and value added (market factor)\(^\text{12}\), and changes of products with varying quality or value added (product lineup factor). Following this approach, Fig. 1-2-6(3) breaks down the average price of small and medium manufacturers (simple average of the change on the previous year) into market and product lineup factors. From this it is apparent that product lineup factor, which contributed to the increase along with the market factor during the bubble economy period, had a negative effect between 1992 and 1994.

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**Fig. 1-2-6 Trend in the value of shipments of SMMs**

*Average price follows downward trend against backdrop of deflation*

(1) Trend in volume of shipments against value of shipments (1985-2001)

(2) Decomposition analysis of value of shipments (YoY % change)

(3) Decomposition analysis of average price (YoY % change)

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Note: See Appended Note 1-2-1 regarding the methods of calculation of each graph.

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\(^{12}\) Changes in the price of the same product are naturally considerably affected by endogenous factors (such as changes in productivity) as well as exogenous factors (such as market factors). Where rises in earnings as a result of increases in productivity are wholly or partially absorbed by reductions in selling prices, however, productivity increases may be treated as being price falls due to market factors.
after the bubble economy’s collapse. During the period from 1995 to 1997, both the product lineup factor and market factor contributed positively to growth, but from 1998, the contribution of the product lineup factor disappears and the decline in prices is mostly due to the market factor.

Even if market conditions deteriorate, enterprises can keep the price drop to a minimum if they can shift to a product lineup centered around higher value-added products (i.e. by increasing the value added of the product lineup). This should consequently mitigate the effects of the decline in sales volume, and secure earnings. If, however, enterprises shift to a product lineup centered around low value-added products to keep step with the deterioration in the market, they will be unable to maintain average prices, and even if volume sales increase, they will have to cut costs by an equivalent amount in order to generate any increase in earnings.

Having thus examined trends in the value of shipments and output in manufacturing as a whole, we can now pick out several characteristics of trends in individual industries.

Looking first at the textiles industry, which has been hard hit by the surge in cheap imports (Fig. 1-2-7(1)), we find that both the volume and value of shipments have declined sharply from 1992 up to 2001. A breakdown of this decline into volume and price factors (Fig. 1-2-7(2)) reveals that most of this decline is accounted for by volume factor. Price, on the other hand, does not make as large a contribution as would be expected in the years between the collapse of the bubble economy and the

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**Fig. 1-2-7 Trend in value of shipments of small and medium textile manufacturers**

   - Value of shipments declines in tandem with fall in volume of shipments

2. **Decomposition analysis of value of shipments (YoY % change)**
   - Decline in value of shipments due largely to volume factor

3. **Decomposition analysis of average price (YoY % change)**
   - Market factor chief cause of price fall

**Sources:** SME Agency, Manufacturing Production Indices by Size of Firm and Wholesale Price Index by Size; METI, Census of Manufactures (recompiled); BOJ, Monthly Report on the Wholesale Price Indexes.

**Note:** See Appended Note 1-2-1 regarding the methods of calculation of each graph.
present. If we break price movements down into market and product lineup factors (Fig. 1-2-7(3)), we find that the decline in prices after the collapse of the bubble economy is accounted for largely by the market factor, and that the product lineup factor, by contrast, is in fact a contributor to growth. From this it may be seen that textile manufacturers in Japan have succeeded to a degree in limiting the decline in prices by working to increase the value added of their product lineup and avoiding competing directly with cheap imported products.

The electrical machinery industry, on the other hand, contrasts with the textiles industry. Despite rapid growth in the volume of shipments driven by the IT boom, the value of shipments has remained virtually unchanged since the collapse of the bubble economy (Fig. 1-2-8(1)).

The bulk of the negative contribution since the collapse of the bubble economy was the result of price (Fig. 1-2-8(2)). If we break down movements in prices further into separate factors (Fig. 1-2-8(3)), we find that the impact of the market factor, which accounted for most of the decline until then, declined from 1995, and that the product lineup factor, which had until then continued to make a positive contribution to growth, instead made an increasingly negative contribution. Since 1998, the product lineup factor has accounted for the majority of the negative contribution. A likely explanation for this is that the shift to mass production of lower end products amid the growth in demand triggered by the IT boom dragged manufacturers into price competition with manufacturers in countries in Asia and elsewhere. An

**Fig. 1-2-8** Trend in value of shipments of small and medium electrical machinery manufacturers

(1) Trend in volume of shipments against value of shipments (1985–2001)

Value of shipments remains flat despite growth in volume of shipments

(2) Decomposition analysis of value of shipments (YoY % change)

Price fall limits growth in value of shipments

(3) Decomposition analysis of average price (YoY % change)

Product lineup factor chief cause of price fall of late

Sources: SME Agency, Manufacturing Production Indices by Size of Firm and Wholesale Price Index by Size; METI, Census of Manufactures (recompiled); BOJ, Monthly Report on the Wholesale Price Indexes.

Note: See Appended Note 1-2-1 regarding the methods of calculation of each graph.
urgent priority for electrical machinery manufacturers is to escape this price competition by increasing the value added of their product lineups.

Finally, let us look at the precision equipment industry, which is one field of manufacturing industry in which Japanese enterprises have a high level of technological competence and competitiveness in specialist fields, and which has produced the first Nobel laureate in chemistry from the Japanese private sector (Fig. 1-2-9(1)). In this industry, the curve repeatedly moves to-and-fro at an angle of approximately 45° (135°), shifting in the process gradually leftwards and upwards. While the volume and value of shipments repeatedly increase and decrease in line with the business cycle, average prices continue to rise. If we look at the individual factors responsible for the changes in the value of shipments (Fig. 1-2-9(2)), we find that the contribution of the price factor became negative between 1992 and 1994 after the collapse of the bubble economy, and then positive from 1995. From 1998 in particular, when the contribution of the volume factor was negative, the price factor made a positive contribution. The contribution of the volume factor, on the other hand, changed considerably repeatedly, and it can be seen that changes in the value of shipments were due in the main to volume factors.

Turning next to consider the factors behind price changes (Fig. 1-2-9(3)), the contribution of the market factor since 1995 has been relatively small, and price increases have been spearheaded by the product lineup factor. Between 1998 and 2001 in particular, when the market factor made a slight negative contribution, the large positive contribution of the product lineup factor caused prices to rise, indicating that precision equipment manufacturers are shifting to higher value-added lineups that are less vulnerable to the effects of the tone of the market than other industries.

**Fig. 1-2-9** Trend in value of shipments of small and medium precision equipment manufacturers

(1) Trend in volume of shipments against value of shipments (1985–2001)

Average price continues to rise

(2) Decomposition analysis of value of shipments (YoY % change)

Contribution of price factor continues to grow

(3) Decomposition analysis of average price (YoY % change)

Product lineup factor contributes to price rise


**Note:** See Appended Note 1-2-1 regarding the methods of calculation of each graph.
Chapter 3 Trends in SME finance

An examination of trends in the lending attitude of financial institutions according to the BOJ’s Tankan shows that lending attitudes deteriorated rapidly on two occasions: at the time of the collapse of the bubble economy in 1989~1990, and during the financial crisis of 1997~1998. Although lending attitudes subsequently recovered, they are now progressively worsening again (Fig. 1-3-1).

In this environment, outstanding lending to SMEs fell 6.3% from ¥297.5 trillion in March 2002 to ¥277.3 trillion in September 2002, which was more than the decline in lending to large enterprises, which fell by 1.4% over the same period (Fig. 1-3-2).

An examination of the financing patterns of SMEs reveals that SMEs with 100 or fewer employees are dependent on loans for the majority of their financing needs. Ensuring the smooth procurement of funds through means such as loans from financial institutions is thus important for SME business activities.

In this chapter, we analyze trends in the difficult financial environment faced by SMEs from the perspective of both SMEs and financial institutions, and clarify the significance of factors on each side.

Fig. 1-3-1 Lending attitude of financial institutions (SMEs)

Long-term deterioration in lending attitude

Source: BOJ, Short-Term Economic Survey of Enterprises in Japan.
Note: Lending attitude of financial institutions DI = “easy” - “severe”

13) See Part II, Chapter 3 for details.
Borrowing by enterprises can be broadly classified into long-term fund borrowing (such as borrowing for capital investment) and short-term fund borrowing (such as borrowing of operating funds) according to the use and length of the repayment period of such borrowing.

Fig. 1-3-3 shows trends in the outstanding lending of capital investment funds in manufacturing (hereafter “outstanding capital investment lending”) by size of enterprise according to the BOJ’s Loans and Discounts Outstanding by Sector. From this it can be seen that whereas outstanding capital investment lending to large enterprises increased year on year from the end of 1998 to the beginning of 2000, outstanding capital investment lending to SMEs fell consistently.

Next we look at year-on-year changes in outstanding lending other than capital investment lending (hereafter “outstanding operating fund lending”) by size of enterprise in manufacturing, shown in Fig. 1-3-4.

Section 1  Lending attitudes of financial institutions and borrowing policy of SMEs

Borrowing by enterprises can be broadly classified into long-term fund borrowing (such as borrowing for capital investment) and short-term fund borrowing (such as borrowing of operating funds) according to the use and length of the repayment period of such borrowing.

Fig. 1-3-3 shows trends in the outstanding lending of capital investment funds in manufacturing (hereafter “outstanding capital investment lending”) by size of enterprise according to the BOJ’s Loans and Discounts Outstanding by Sector. From this it can be seen that whereas outstanding capital investment lending to large enterprises increased year on year from the end of 1998 to the beginning of 2000, outstanding capital investment lending to SMEs fell consistently.

Next we look at year-on-year changes in outstanding lending other than capital investment lending (hereafter “outstanding operating fund lending”) by size of enterprise in manufacturing, shown in Fig. 1-3-4.

Outstanding operating fund lending to small and medium manufacturers and non-manufacturers began to decline...
from the previous year in around 1996, and, despite growing in 2000, has fallen even more rapidly in manufacturing since the economy entered a downturn. Outstanding operating fund lending to large enterprises, on the other hand, exhibited rapid growth during the recovery phase from 1999. Although year-on-year growth has been negative since 2000, the speed of the decline has eased, unlike the accelerating decline in outstanding lending to SMEs.

Lending to SMEs has thus declined dramatically regardless of use. However, has there arisen a gap between supply and demand due to credit constraint, where the supply of lending for business funds to SMEs is less than demand due to the severe lending attitudes of financial institutions? Or has outstanding lending fallen simply due to a lack of financial demand? In the business sector, and in the real estate, construction and wholesale/retail industries in particular, enterprises bought land during the bubble period by raising funds through debt, such as large-scale borrowing. The decline in land prices, however, has caused the value of assets to decline, in addition to which general prices have continued to fall, increasing the real burden of liabilities\(^{14}\). This problem of debt overhang among enterprises and pressure to adjust balance sheets are what may have depressed demand for funds among enterprises.

If we look then at the borrowing policy over the next year of enterprises according to the SME Agency’s Survey of the Financial Environment (November 2002), we find that the most commonly cited policy is that of “reduction of outstanding borrowing”, cited by 44.5% of all enterprises, and that only 4.9% of enterprises plan to “increase outstanding borrowing” (Fig. 1-3-5). From this it may be seen that SMEs are adopting a cautious approach to borrowing at a time when the financial climate is difficult, and the consequent decline in demand for funds is one reason for the decline in outstanding loans to SMEs. However, this does not mean that the supply of business funding is completely unconstrained. According to the SME Agency’s Survey of the Financial Environment (November 2002), for example, enterprises are more likely to adopt a policy of reducing borrowing if they have been refused a loan by a financial institution in the past (Fig. 1-3-6, Appended Note 1-3-1).

Regarding these findings, it is necessary to bear in mind that it is the size of the burden of debt that affects an enterprise’s borrowing policy and not the lending attitude of financial institutions alone that affects the

\(^{14}\) See Chapter 1, Section 2 of Annual Report on Japanese Economy and Public Finance (Fiscal 2002).
borrowing policy of enterprises, and that even around 40% of enterprises that had never been refused a loan adopted a policy of reducing borrowing. What this means, however, is that there is a tendency for the refusal of lending by financial institutions to reduce demand for borrowing among enterprises. There thus occurs a chain effect where the tight lending attitudes of financial institutions, rather than directly reducing lending, help encourage caution toward borrowing on the side of enterprises, so further reducing lending.

So what is the impact on SMEs in Japan of this chain mechanism amid the present difficult financial environment? In order for the Japanese economy to get on the path to full-fledged recovery, it is necessary to stimulate capital investment, which remains in the doldrums. However, is the restriction of capital investment by SMEs caused simply by the growing feeling of over-capacity spreading among enterprises of all sizes that was described in Chapter 1, Section 4?

Normally when enterprises undertake capital investment, they encounter the financial constraint of how to raise the necessary funds. In addition to “internal funds” (i.e. cash flow), another source of financing is “external funds” in the form, for example, of corporate bonds and bank borrowing. In a perfect market, the existence of opportunity cost should theoretically mean that there is no difference between internal funds and external funds. In reality, however, asymmetry of information and other factors mean that the size of internal funds and ease of raising external funds lead to differences in financing. If we look therefore at this point at the determinants of capital investment in manufacturing using METI’s Basic Survey of Japanese Business Structure and Activities, what we find is that although enterprises are more likely to undertake capital investment the more abundant their cash flow is, the strength of the impact of cash flow varies according to fiscal year, and the impact was greatest in fiscal 1997 (at the time of the financial crisis) and in fiscal 2001 (Fig. 1-3-7, Appended Note 1-3-2). This suggests that among SMEs, which unlike large enterprises lack diverse means of financing, size of cash flow affects the level of an enterprise’s capital investment at times when borrowing becomes difficult. Conversely, at times when borrowing is easier, size of cash flow has less of an impact on capital investment. During slumps when ample cash flow cannot be generated, therefore, enterprises may further restrict capital investment when borrowing becomes difficult more than at other times. The depressed state of capital investment in recent times may thus be due not only to the sense of over-capacity among enterprises, but also to the effects of the difficult financial environment.

Section 2 Changes in the financial environment and trends among financial institutions

As described in the preceding section, outstanding loans to SMEs have declined continuously since 2000, one reason for this being the cautious borrowing policy of SMEs. It was also shown that the tight lending attitude of financial institutions is one factor that has made SMEs adopt a more cautious borrowing policy. However, the actions adopted by financial institutions in response to changes in the financial environment in recent years have also contributed to reducing outstanding loans.

In this section, therefore, we analyze trends among financial institutions in response to changes in the financial environment in recent years, and their impact on SMEs.

1. Trends in lending to SMEs by type of financial institution

Below we examine the contribution to the reduction in outstanding lending to SMEs by type of financial institution. Indexing outstanding lending according to the latest data by type (Fig. 1-3-8) reveals a large fall in lending by leading banks. Most noticeably, whereas
loans from financial institutions other than leading banks grew (if only slightly) in response to demand for funds from SMEs at the end of 2002, the response of the leading banks was cool. If we look next at the contributions of each type of financial institution to percentage changes in loans to SMEs (Fig. 1-3-9), it can be seen that although all types of financial institutions contributed to the decline in outstanding lending since 2001, the leading banks’ contribution to the decline in overall outstanding lending to SMEs was particularly large. The decline in lending by government-affiliated financial institutions15, on the other hand, was small, and remained steady amid the decline in lending by private-sector financial institutions.

If we look then at the value of lending by government-affiliated financial institutions, we find that although the value of capital investment lending declines in line with the decline in all outstanding capital investment lending to SMEs, there is a steady increase in safety-net lending (beginning in December 2000) amid the decline in operating fund lending to SMEs (Figs. 1-3-3-4, 1-3-10).

At a time when many SMEs are facing liquidity problems, therefore, government-affiliated financial institutions are providing an important safety net.

15) In this chapter, “government-affiliated financial institutions” are the Japan Finance Corporation for Small Business, Shoko Chukin Bank and National Life Finance Corporation.
2. Decline in real estate prices and response of financial institutions

The next question we consider is what kinds of lending have fallen as a result of what factors. Fig. 1-3-11 shows trends in the urban land price index and outstanding lending secured by real estate, etc. From this it can be seen that the urban land price index (i.e. land prices) have continued to fall since peaking at 110.4 in 1991, and that outstanding loans secured by real estate, etc. have fallen in tandem. If we examine in this regard what financial institutions consider in particular when assessing whether and how much to lend to SMEs according to the Small Business Institute Japan’s (SBI) Survey of SME Loans, we find that whereas 23.9% of respondents cited “real estate collateral”, a larger proportion (58.2%) cited “guarantee by a credit guarantee corporation”. This suggests that financial institutions are making active use of credit guarantees (Fig. 1-3-12). Other high-ranking items include financial-related indicators such as “ability to repay debt (debt repayment period, etc.)”, “profitability (rate of ordinary profit to sales, etc.)” and “safety (equity ratio, etc.)”. Overall, therefore, it can be seen that there is a tendency to place a greater emphasis on financial security than qualitative information (such as product strength, technological strength, customer base and supply structure)\(^\text{16}\).

Fig. 1-3-11 Trends in the urban land price index and outstanding lending secured by real estate, etc.

Decline in outstanding lending secured by real estate, etc. in tandem with fall in land prices

![Trends in the urban land price index and outstanding lending secured by real estate, etc.](image)

**Fig. 1-3-12 Factors of particular importance when examining SME loan applications**

Many financial institutions attach greater importance to financial factors and provision of guarantees by credit guarantee corporations

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Financial affairs</th>
<th>Security</th>
<th>Qualitative information</th>
<th>Bank relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>64.7</td>
<td>39.7</td>
<td>20.6</td>
<td>8.4</td>
</tr>
<tr>
<td>Size</td>
<td>39.7</td>
<td>39.4</td>
<td>23.9</td>
<td>8.3</td>
</tr>
<tr>
<td>Ability to repay debt (debt repayment period, etc.)</td>
<td>23.9</td>
<td>23.1</td>
<td>22.2</td>
<td>6.4</td>
</tr>
<tr>
<td>Safety (equity ratio, etc.)</td>
<td>58.2</td>
<td>43.6</td>
<td>38.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Profitability (rate of ordinary profit to sales, etc.)</td>
<td>23.1</td>
<td>38.1</td>
<td>38.1</td>
<td>15.3</td>
</tr>
<tr>
<td>Growth (sales growth rate, etc.)</td>
<td>6.5</td>
<td>15.3</td>
<td>15.3</td>
<td>15.3</td>
</tr>
<tr>
<td>Guarantor by a credit guarantee corporation</td>
<td>3.4</td>
<td>6.4</td>
<td>6.4</td>
<td>6.4</td>
</tr>
<tr>
<td>Personal guarantee</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Personality of representative</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Personal assets of representative</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Bankruptcy record of representative</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Business base (customer base, supply structure, etc.)</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
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<td>Business strengths and weaknesses (product/technological strengths)</td>
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<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Frequency and quality of disclosure</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
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<tr>
<td>Assessment of outside organizations</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Length of relationship</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Main bank or not</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Reaction of other banks</td>
<td>9.3</td>
<td>26.0</td>
<td>26.0</td>
<td>26.0</td>
</tr>
</tbody>
</table>


Notes: 1. Proportion of financial institutions that responded that they “particularly stress” that factor.
   2. “Financial institutions” here refers to banks, credit associations and credit cooperatives.

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16) The same survey found that many financial institutions said that they placed greater emphasis on financial indices “ability to repay debt (debt repayment period, etc.)” and “safety (equity ratio, etc.)” and “guarantee by a credit guarantee corporation” than during the bubble period.
3. Impact of non-performing loans

The collapse of the bubble economy left Japan’s financial institutions with a severe non-performing loan (NPL) problem, rendering them incapable of playing their financial intermediary function properly. Regarding the impact of NPLs on SME finance, studies have shown that the relationship between a high NPL rate and low rate of growth in lending to SMEs is statistically significant to a certain degree\(^\text{17}\). Regarding the slump in outstanding loans to SMEs, similar results have been obtained concerning the NPL rate and rate of growth in outstanding lending to SMEs using up-to-date data as well, though it is necessary to bear in mind the impact of factors such as the amortization of NPLs and the cautious lending policy of SMEs (Fig. 1-3-13). Whereas the average NPL rate of banks\(^\text{18}\) was 3.1% in fiscal 1999 and 3.9% in fiscal 2000, it was 4.5% in fiscal 2001. The above results thus indicate that the SME financial environment is deteriorating. Thus although SMEs have grown more cautious regarding borrowing, it is also true that the financial environment currently faced by SMEs is exceedingly difficult. Nevertheless, it is still possible for individual enterprises to successfully raise funds despite this difficult environment provided that they devise appropriate steps. The concrete measures that should be taken by individual enterprises are analyzed in Part II, Chapter 3.

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**Fig. 1-3-13 Relationship between NPL rate of financial institutions and rate of growth in outstanding lending to SMEs**

Negative correlation between NPL rate and growth in outstanding lending to SMEs

![Graph showing negative correlation between NPL rate and rate of growth in outstanding lending to SMEs](image)


Notes:
1. NPL rate = non-performing loans (loans to bankrupt borrowers and past due loans) / total assets
2. Financial institutions that merged or transferred business operations in fiscal 2001 not included.
3. Indicates that the NPL rate at year-end fiscal 2000 affects the rate of growth in lending in fiscal 2001.

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\(^{17}\) See Part II, Chapter 3 Section 2 of 2002 *White Paper on Small and Medium Enterprises in Japan*.

In Part I, we saw that although the Japanese economy showed signs of recovery fueled by exports in the first half of 2002, the recovery rapidly slowed mid-year, and the economy again weakened in the latter half of the year. Unemployment rate is more than 5%, and SME bankruptcies are in excess of 18,000. Share prices are sluggish, and the economic outlook is unclear.

With the Japanese economy in the doldrums, the economic environment faced by SMEs is growing increasingly difficult. In manufacturing, retailing and other sectors, the gap in business conditions between large enterprises and SMEs is widening. The lending attitudes of financial institutions are tight, and outstanding lending to SMEs, particularly by leading banks, continues to fall. The liquidity of SMEs is also falling in the long term, in contrast with that of large enterprises, which is remaining largely stable.

But despite the severity of the economic environment, SME are not weak and in decline. SMEs undertake distinctive business activities in a diverse range of fields, provide diverse employment opportunities, and provide opportunities for individuals to display their abilities in business, thereby forming the mainstay of the Japanese economy. Without these SMEs, the Japanese economy would not have been able to develop. In the future, too, numerous SME entrepreneurs have an important role to play in leading Japan's economic regeneration by innovating in business though innovative activities to improve management and by promoting competition in the marketplace through opening up new fields of business and creating jobs.

In Part II, therefore, we ascertain the “strengths” of the SMEs that have overcome numerous trials and underpinned the development of the Japanese economy, and show clearly how it is SMEs that have the leading role to play in economic regeneration. We then move on to examine what issues must be addressed in order for SMEs to display their strengths and lead the way to the regeneration of the Japanese economy.
PART II

THE REGENERATION OF THE JAPANESE ECONOMY
AND THE ROLE OF SMEs
Chapter 1  The position of SMEs in the Japanese economy and their role in economic regeneration

Section 1  The position of SMEs in the Japanese economy over the long term and the “strengths” of SMEs underlying this position

The 20th century saw the emergence of systems of mass production and the appearance on the economic stage for the first time of large enterprises. Since then, it has appeared at first glance that it is large enterprises that have played the leading role in the economy, and any discussion of the large-scale changes in the economic environment, such as global competition, advances in technology, and the information revolution, has always revolved around the role of these large enterprises. But has the leading role in the economy in actual fact been played by large enterprises?

Take a forest stretching out across the countryside, which viewed from a distance appears to be a single mass of large trees. Once inside the forest, however, one finds that the situation is completely different, and that there is also a diverse abundance of unique flora that is much smaller than the large trees. Together, the large trees and the diverse flora beneath them form an interwoven whole that constitutes the delicate ecosystem of the forest. The same applies to the Japanese economy. Seen from afar, it appears to be the playing field of giants such as large manufacturers, trading houses and financial institutions. Upon entering the economic “forest” and examining the state of the Japanese economy in detail, however, one finds that there exists a diversity of SMEs playing their own unique roles in a variety of fields, and that the Japanese economy is supported by the interaction of large enterprises and SMEs.

Despite this, there is still a strongly held belief that SMEs are weak in comparison with large enterprises and that they are consequently in long-term decline. An examination of long-term past trends, however, reveals that while the industrial structure is changing dramatically, SMEs are not necessarily all in decline, but rather that their position is in fact extremely stable. SMEs have made an outstanding contribution to the growth and development of the Japanese economy, meeting diverse and specialized niches of demand, boldly tackling new challenges and creating new industries, and forming part of a social infrastructure that permits various forms of employment and lifestyles. Given that this year’s report marks the fortieth White Paper on Small and Medium Enterprises in Japan, we begin this chapter by showing that, when viewed from a medium to long-term perspective (over a time span of the past 40 to 50 years), SMEs have played a stable role in the constantly dramatically changing Japanese economy. We move on to examine what factors have enabled them to play such a role. We then proceed to show that SMEs have played a guiding role as pioneers of change in this changing economic environment through, for example, the active introduction of new technologies, and how they have played a significant role in diverse small-lot production, and reaffirm that SMEs are capable of acting as the driving force behind the advancement and development of society and the economy in the future as well.

1. Quantitative expansion and change in industrial structure of the Japanese economy over the long term

Since the Second World War, the Japanese economy has been through a number of phases, beginning with postwar rehabilitation and followed by periods of rapid growth, stable growth after the oil crises, bubble growth, and stagnation after the collapse of the bubble economy. Amid these kaleidoscopic changes in the economic environment, the Japanese economy has, with the exception of the past decade, generally followed an expansionary path. From 1955, when postwar reconstruction had come to a close and the economy was embarking on the road to growth, and the present, the Japanese economy has grown approximately twelve-fold in size (Fig. 2-1-1).

Matching the rapid quantitative growth of the economy, Japan’s industrial structure too has undergone stunning change. At the beginning of the period in 1955, for example, primary industry accounted for around 20% of the Japanese economy in terms of real domestic product, while secondary industry accounted for around 30%. During the so-called high growth period from the later 1950s to the early 1970s, however, both secondary and tertiary industry steadily grew, and secondary industry’s share of the economy grew considerably. During the subsequent stable growth period from the second half of the 1970s to the 1980s, secondary industry’s share of domestic product leveled off, though it continued to grow in terms of real value. In contrast, tertiary industry’s share of domestic product grew strongly as the Japanese economy became increasingly service oriented. This trend became more apparent from the latter half of the 1990s when, at a time when the absolute value of production in both primary and secondary industries fell,
the absolute value of production in tertiary industry grew and its share of the economy increased substantially. The upward trend in the service sector’s share of the economy has thus grown even more pronounced in recent years.

Below we look at the picture in more detail by breaking down manufacturing—the primary force behind the development of the Japanese economy to date—to determine how the state of quantitative expansion and industrial structure have changed.

Looking first at trends in the value of shipments in manufacturing (Fig. 2-1-2), we find that manufacturing expanded rapidly even in comparison with the Japanese economy as a whole, with the real value of shipments growing approximately twenty-fold between 1960 and 1990. Regarding changes within manufacturing, textile’s share fell from around 11% in the 1960s, when it occupied a position of considerable importance, to around 1% in 2000, while the shares of the electrical equipment, transport equipment and machinery manufacturing industries grew by the year. Within manufacturing too, therefore, quantitative growth has been accompanied by major changes in the composition of industry.

The Japanese economy has thus displayed two facets of change over the past four or five decades: dramatic quantitative growth overall, and a transformation in the industrial structure. One would normally expect quantitative and qualitative changes on such a scale to have a major impact on the vicissitudes of the individual enterprises that act as players in the Japanese economy. How then has the position of SMEs in Japan changed amid these changes? Below we examine this point in overview.

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**Fig. 2-1-1 Change in industrial structure of Japanese economy (trends in real domestic production)**

Change in internal structure in tandem with quantitative growth of economy


Notes:

1. Primary industry consists of agriculture, forestry and fisheries. Secondary industry consists of mining, construction and manufacturing. Tertiary industry consists of electricity, gas and water supply, wholesale and retail, finance and insurance, real estate, transport and communications, and services.

2. Figures in parentheses indicate proportion of total.

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**Fig. 2-1-2 Change of industrial structure of manufacturing**

Change in internal structure in tandem with quantitative growth of manufacturing too

source: METI, Census of Manufactures (Report by Industry).
2. Changes in the position of SMEs in the Japanese economy

Below we consider how the position of SMEs has changed amid the long-term expansion and perpetual structural change described in 1.

We begin by breaking down the number of business establishments in non-primary industry as a whole by number of workers. Between 1960 and 2001, establishments with 1~49 workers made up around 98% of the total, and establishments with fewer than 300 made up around 99%. Nearly all establishments during this period were thus small or medium in size (Fig. 2-1-3).

This holds true even if one looks at the number of companies rather than business establishments. Over the same period, companies with fewer than 300 workers comprised approximately 99% of the total (Fig. 2-1-4).

If we look next at long-term changes in the proportion of workers employed at small and medium establishments in non-primary industry, we find that, as in the case of business establishments, the increase in workers at small and medium establishments is greater than the increase in workers at large establishments with 300 or more workers, and that the proportion of workers at all establishments employed at small and medium

![Fig. 2-1-3 Trends in number of business establishments by size of workforce (non-primary industry)](chart)

**Small and medium business establishments account for majority of total**

- 1 ~ 49
- 100 ~ 299
- 300 ~

(10,000 establishments)

![Fig. 2-1-4 Trends in number of companies by size of workforce (non-primary industry)](chart)

**SMEs also account for very large proportion of companies**

- 1 ~ 49
- 100 ~ 299
- 300 ~

(10,000 companies)

Source: MPHPT, Establishment and Enterprise Census of Japan.
Note: Figures in parentheses indicate percentage of total.

![Fig. 2-1-5 Trends in number of workers by size of workforce (non-primary industry)](chart)

**Steady increase in proportion of workers at small and medium establishments with 300 or fewer workers**

- 1 ~ 49
- 100 ~ 299
- 300 ~

(10,000 workers)

Source: MPHPT, Establishment and Enterprise Census of Japan.
Note: Figures in parentheses indicate percentage of total.
establishments is growing, albeit gradually (Fig. 2-1-5). Now let us look at the position of SMEs in terms of their share of value added over the long term. According to the Census of Manufactures (Report by Enterprise)\(^1\), SMEs’ share of value added in manufacturing over a 40-year time span has stayed consistently at around 35%, demonstrating that the position of SMEs in the economy has been extremely stable (Fig. 2-1-6)\(^2\).

If we divide enterprises up further according to size, we find that within the SME sector as well, the shares of value added accounted for by each size category have remained extremely stable over the long term (Fig. 2-1-7). The same trend can be observed among business corporations using the Ministry of Finance’s (MOF) Financial Statements Statistics of Corporations by Industry, Annually. Plotting changes in small and medium corporations’ share of value added in industry as a whole using these statistics (Fig. 2-1-8), it can be seen that, as in the case of small and medium manufacturers, small and medium corporations’ share of value added generated by all corporations has remained steady at around 55~60%.

SMEs have thus occupied a stable position in the economy over the medium and long term, whether measured in terms of number of business establishments, number of workers (indicating their contribution to employment) or value added (indicating their contribution to economic activity). Even if SMEs are subdivided into still smaller categories as shown in Figs. 2-1-3, 2-1-4 and 2-1-5, each category’s share of the number of business establishments, number of workers and value added remains steady over the long term.

As previously mentioned, the Japanese economy was quantitatively completely different in 2001 compared with 1960, having grown twelve-fold in terms of real gross national product and twenty-fold in terms of value of manufacturing shipments. Qualitatively, too, the industrial structure has changed considerably. But despite this, the position of small and medium enterprises (or establishments) when we break industry down by size of enterprise (or establishment) has remained virtually unchanged over the past 40 years. In this respect, SMEs may be described as having continued to play a firm role in the economy without suffering any fundamental threat to their existence at a time of dynamic change in the economic environment as a whole.

As noted at the beginning of this chapter, the belief that SMEs are weak compared with large enterprises and in long-term decline remains deep rooted. As we have seen in detail, however, SMEs have nevertheless occupied a unique position in the economy over the past 40 years, and have not been pushed out by their larger brethren. The qualitative and quantitative economic changes during this time did not impact on the position of SMEs as much as on that of large enterprises. But why was this

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\(^1\) The Census of Manufactures (Report by Enterprise) provides statistics by enterprise on business establishments with 20 or more workers from 1962 to 1996 (four or more workers from 1997). Fig. 2-1-6 summarizes their findings.

\(^2\) Using the Census of Manufactures (Report by Industry), it is possible to discover a similar pattern regarding small and medium establishments’ share of the value added by all manufacturing establishments as well (Fig. 2-1-6).
so? Is there some unique basis to their existence that enables SMEs to withstand such economic changes? Below, we attempt to answer this question by describing in overview the areas in which SMEs can be found by looking at manufacturing, where there is comparatively greater statistical data available.

3. The basis of existence of SMEs

(1) Fields in which SMEs have a presence

If we take manufacturing, in what kinds of fields do we find SMEs compared with large enterprises? Breaking down manufacturing into its constituent major groups (chūbunrui) (Fig. 2-1-9), we find that SMEs account for a comparatively larger proportion of value added in fields of light industry such as foods, textiles, apparel and other textile products, timber and wooden products, furniture and fixtures, publishing, printing and related industries, plastic products, leather tanning, leather products and fur skins, and ceramic, stone and clay.
products, and that they also account for a high proportion of value added in other fields of manufacturing such as metal products, general machinery and precision equipment, and miscellaneous. The above trend can also be verified using MOF’s Financial Statements Statistics of Corporations by Industry, Annually. An overview of small and medium manufacturing corporations’ share of each sector using these statistics reveals that they occupy a more important position in light industry and the metal product, general machinery and miscellaneous categories of manufacturing (Fig. 2-1-10).

What then are the characteristics of fields such as the above in which SMEs occupy a more important position? On the supply side, immediately apparent is the labor-intensive nature of fields such as textiles and foods compared with heavy chemical industries such as the iron/steel, coal and oil industries. Demand is in addition more diverse and subject to constant change due, for example, to changes in consumer tastes. In fields of production of intermediate goods in processing and assembly industries such as the metal product, general machinery and precision equipment industries, the production and processing of the individual parts required for the assembly of finished products occurs in a wide range of industries which, due to the small lot sizes ordered and the frequent changes in lots, share commonalities with fields such as the textile and food industries.

Upon cursory examination, therefore, the fields in which SMEs tend to be more active appear to be typified by labor intensity on the supply side, and by diverse small-lot production subject to fierce change on the demand side. In order to examine these points in a little more detail, below we quantitatively analyze the supply and demand characteristics of the fields in which small enterprises are more active. As in indicator of the presence of such small business establishments, we use the share of the value of shipments. In other words, small establishments’ share increases as market size declines, indicating that, as noted earlier, SMEs occupy a more important position in niche markets.

If we look next at the relation between the share of sub-MES establishments and capital intensity, we discover there to be a negative correlation. This indicates that SMEs occupy a larger share in less capital intensive (i.e. more labor intensive) industries. Moving on to the relation between the share of sub-MES establishments and return on sales, we discover there to be a positive correlation between the two. This suggests that SMEs also play an active role in fields in which return on net sales is high.

If we perform a multiple regression analysis of relations with the share of sub-MES establishments factoring in these indicators along with others simultaneously (Appended Note 2-1-1), we find that in addition to industry size (value of shipments) and capital intensity, which are confirmed in Fig. 2-1-11 as being indices that are significantly related to sub-MES establishments, the standard deviation of the return on total assets (ROA), considered to be an indicator of the scale of the change in returns, is found to be significantly related. This trend is found to be valid in those fields where SMEs occupy a larger share in niche markets.

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4) The minimum efficient scale is defined as the minimum scale of production required to minimize average production cost ( = production cost / production volume). There are a number of ways of measuring the minimum efficient scale, and the one used here is that proposed by Lyons (1980); average number of workers in industry / 0.75.

5) See Appended Note 2-1-1 regarding how these indicators were calculated.
Chapter 1 — The position of SMEs in the Japanese economy and their role in economic regeneration

**Fig. 2-1-11 Characteristics of fields in which SMEs have major presence**

(1) **Relationship between share of sub-MES establishments and value of shipments**

SMEs’ share greater in niche industries with small markets

\[ y = -0.147x + 14.754 \]

AdjR\(^2 \)=0.140

x significant at 1% level

![Graph showing relationship between share of sub-MES establishments and value of shipments](source: METI, Census of Manufactures. Note: See Note 4) and Appended Note 2-1-1 regarding the share of sub-MES establishments.]

(2) **Relationship between share of sub-MES establishments and capital intensity**

SMEs’ share increases as capital intensity decreases

\[ y = -0.002x + 15.761 \]

AdjR\(^2 \)=0.099

x significant at 1% level

![Graph showing relationship between share of sub-MES establishments and capital intensity](source: METI, Census of Manufactures. Notes: 1. See Note 4) and Appended Note 2-1-1 regarding the share of sub-MES establishments. 2. Capital intensity = tangible fixed assets / value of shipments]

(3) **Relationship between share of sub-MES establishments and return on sales**

SMEs’ share increases in all industries as return on sales increases

\[ y = 0.170x + 8.887 \]

AdjR\(^2 \)=0.031

x significant at 1% level

![Graph showing relationship between share of sub-MES establishments and return on sales](source: METI, Census of Manufactures. Notes: 1. See Note 4) and Appended Note 2-1-1 regarding the share of sub-MES establishments. 2. Return on sales = (value added - total cash earnings - depreciation) / value of shipments]

(4) **Relationship between share of sub-MES establishments and standard deviation of ROA**

SMEs’ share increases as standard deviation of ROA (year-to-year variation) increases

\[ y = 0.032x + 12.616 \]

AdjR\(^2 \)<0.002

![Graph showing relationship between share of sub-MES establishments and standard deviation of ROA](source: METI, Census of Manufactures. Notes: 1. See Note 4) and Appended Note 2-1-1 regarding the share of sub-MES establishments. 2. ROA = (value added - total cash earnings) / tangible fixed assets 3. The standard deviation of the ROA expresses the variation in the ROA in the last five years from the fiscal year concerned. 4. A multiple regression analysis factoring in other indicators found there to be a significant positive correlation between the share of sub-MES enterprises and standard deviation of the ROA at the 1% significance level.
the business environment, exhibits a positive correlation with the share of sub-MES establishments. This shows that SMEs have a greater presence in fields in which where is higher risk, such as due to fluctuations in demand.

In addition to the above, advertising intensity and R&D intensity were found to be negatively correlated with the share of sub-MES establishments. This indicates that SMEs face difficulties and large enterprises are in a stronger position in fields that require higher inputs of advertising spending or that require costly facilities for research and development.

It may be concluded from the above that SMEs have a greater presence in fields that, on the demand side, are subject to large changes in the business environment (e.g. niche markets) and that, on the supply side, are less capital intensive. This applies equally to the presence of SMEs and large enterprises in the same industry. Below, therefore, we examine those industries and categories of products in which SMEs have a unique presence alongside large enterprises in the same industry by looking at differences in factors such as the nature of demand.
Electrical audio equipment manufacturing  
The main products currently made in the audio industry are general-purpose systems such as mini stereo systems ("mini-compos"). Such products being general-purpose in nature, the market is amenable to mass production and mass marketing. The industry is therefore normally considered as one in which large enterprises are the main players, as they can reap the advantages economies of scale and pump large quantities of low-priced products onto the market. Within the industry, however, SMEs too play an active role specializing in high-end audio equipment and parts. Rather than dealing in the lower-end products that are the domain of large enterprises, such manufacturers seek to differentiate themselves from major manufacturers by focusing on making products to meet users’ tastes following a policy of pursuing quality instead of quantity. As high-end audio equipment occupies a small share of the market as a whole, large enterprises do not enter the field, leaving it open to SMEs. SMEs engaged in this field win the long-term support of users by maintaining a consistent approach and policy to product development. In this truly niche market, they do not have to compete with large enterprises, instead specializing in their own field and maximizing their own latent capabilities.

Industrial sewing machine manufacturing  
Industrial sewing machines make up the most important element of the production equipment used in garment factories, and come in a host of types, with more than 3,000 types currently estimated to be in use. In fact, there is virtually a different type of industrial sewing machine for each process. Almost 70% of the production process is performed by all-purpose lockstitch and overlock sewing machines, with the remaining 30% of the work being performed by several hundred to several thousand types of special-purpose sewing machines.

In the market for lockstitch and overlock sewing machines, which are used extremely frequently for long periods, resulting in a large market and standardized technology, a handful of large enterprises occupy an oligopolistic position. In the market for special-purpose machines of diverse specifications for each category of product, however, large numbers of SMEs have carved out their own niche markets.

Telescope manufacturers  
In the telescope manufacturing industry, too, a division of labor occurs along the lines of enterprise size. An examination of the value of shipments of telescopes divided up according to enterprise size in terms of number of workers shows that the market is polarized between small and medium establishments with fewer than 50 workers, which account for around 35%, and large establishments with 300 or more workers, which account for around 52%. On closer inspection, it is apparent that the products made by large enterprises consist largely of general-purpose products, such as binoculars for bird watching and other leisure pursuits, and products for commercial use, such as for ships and surveying. In fact, large enterprises account for 70~80% of the market for general-purpose and commercial telescopes. SMEs, on the other hand, have a large share of the market for special-purpose products, such as astronomical telescopes. By its very nature, the manufacture of astronomical telescopes requires special techniques to manufacture parts such as lenses, and a range of products varying in terms of the magnification and effective diameter required for each object of observation is required, while actual demand is not especially great. These products are thus an

Case 1-1: Examples of the division of labor between large enterprises and SMEs according to differences in the nature of demand in the same industry and product category

In order to meet the needs of the apparel market, characterized as it is by the use of various primary and subsidiary materials and by rapid design changes, the market for special-purpose sewing machines has subdivided into a number of extremely narrow niche markets, with manufacturers specializing in the manufacture of specific types of machine, such as dedicated covering machines, embroidery machines, machines equipped to prevent sewing slippages, and quilting machines. Most special-purpose machines, moreover, are capable of substituting for skilled labor, and their use in many cases enables work to be performed by unskilled workers as or more productively than by skilled labor. With Japan’s apparel manufacturers turning increasingly to a strategy of producing a wider range of products in small quantities, requiring greater skilled labor at a time when they are finding it more difficult to find such labor, they are dependent to a large degree on the technological expertise of the many small and medium manufacturers of special-purpose sewing machines that meet the highly specific needs of users in finely subdivided niche markets.
excellent example of a product suited to low-volume production of a wide variety of products in which SMEs excel. To date, therefore, no large enterprises have entered the market, and SMEs have maintained their presence for a considerable period. It is thus one example of market for high value-added products that SMEs can produce as well as large enterprises by leveraging their strengths to the full.

Musical instrument manufacturing
In terms of share of shipments, the musical instrument industry’s development has to date centered around pianos. More recently, electronic instruments such as electronic organs, electronic pianos, electronic keyboards and keyboard synthesizers have also become key products. However, production of pianos and electronic instruments is dominated by large enterprises, such as general instrument manufacturers and electronic instrument manufacturers, under near oligopolistic conditions. Production of pianos and electronic instruments requires assembly lines and production facilities of a certain level and large amounts of advance investment to develop electronic technologies, leaving little room for SMEs.

Within the industry, however, there is also a market for diverse small-lot production of products such as guitars, electric guitars and wind instruments. This market, though not large given that it is only around a quarter of the size of the piano and electronic instrument markets, has been entered by a considerable number of specialized small and medium manufacturers. Within the wind instruments category there are woodwind and brass instruments of a wide range of kinds, such as flutes, clarinets, saxophones and trumpets, and the demand for each individual type of instrument is not great. Even guitars, to pick just one example, differ in timbre and design according to individual tastes. This field therefore requires craftsmanship capable of meeting specific needs, making it the ideal market for SMEs with speed and flexibility. There are, for example, just a handful of enterprises in the whole world that make concert harps, and small and medium manufacturers are in some cases the only businesses making a product in Japan. Although certainly not very large, the musical instrument industry makes an important cultural contribution, and its continued development would be inconceivable without the involvement of SMEs.

Adhesive manufacturing
The materials that need to be joined together by adhesives are of all kinds, such as metals, wood and plastics, and the adhesives used to join them are consequently of a variety of types. The units of consumption are often small, as in the case of instant adhesives, only a few drops of which need to be applied. Nevertheless, the high level of demand for urea resin, melamine resin and phenolic resin adhesives, which are used primarily in plywood, allows economies of scale to function, putting large enterprises in an overwhelmingly superior position in this market. Hot melt and epoxy resin adhesives, on the other hand, are used for a wide range of users in products such as packaging, bookbinding, carpentry, automobiles, electrical products and hygiene products, making it necessary to meet a wide range of highly specific demands. The market for such adhesives is thus well suited to SMEs. The market for cyanoacrylate adhesive, which though used in small quantities due to having instant adhesive properties has a higher unit price than other products, has also attracted conspicuous activity among SMEs.

The adhesives market thus consists of a considerable number of types of product, allowing for the successful horizontal division of labor between large enterprises and SMEs corresponding to the respective properties of demand.

Medical equipment manufacturing
The medical equipment market is now attracting strong interest as a growth industry due both to population aging and advances in medical technology. As the manufacture of equipment such as artificial organs, X-ray machines and nuclear magnetic resonance spectrometers requires considerable capital and large numbers of development staff, it is a difficult market for SMEs to enter, and is consequently dominated by large enterprises.

In new fields relating, for example, to data processing for diagnostic image processing, on the other hand, there can be found SMEs that manufacture some products using computer technology, due in part to the development of new products in this field being more software dependent. Therapeutic systems, such as high-frequency therapy and hyperthermia systems and low-frequency electric and static therapy systems, and the parts required for them also need to be manufactured in a variety of types and in small volumes in order to meet the diverse range of needs that exist, and so are mostly made only by SMEs. Each SME has maintained its own share by, for example, developing such products in close contact with users.

In the medical equipment industry too, therefore, large enterprises and SMEs have each succeeded in carving out their own separate niches, and the growth potential of this industry will keep trends among SMEs under the spotlight.
In addition to the above, SMEs have succeeded in leveraging their strengths and playing an active role in industries and types of business such as the following.

**Robot manufacturing**
Large enterprises: robots for which a certain level of demand is projected, e.g. robots for production lines in the automobile, electronics and electrical machinery industries (welding, painting, fabrication, mounting, etc.)

SMEs: special-purpose robots made for research use, research robots and robot parts, etc.

**Waste disposal equipment manufacturing**
Large enterprises: large-scale equipment for local government waste disposal sites (large-sized waste processors, sludge processors, etc.)

SMEs: recycling equipment for recycling by various processing methods (PET bottle/container compacters, kitchen refuse processors, etc.)
SMEs and large enterprises have thus formed a labor-dividing relationship corresponding to the nature of the demand faced. These characteristics of SMEs and large enterprises are also observable from the results of questionnaire surveys of SMEs. For if we look at the lifecycle of products and services produced by size (number of workers) of enterprise according to the SME Agency’s Fact-finding Survey on Business Management Strategy, we find a higher proportion with a lifecycle of under one year and between one to three years the smaller an enterprise is, showing that the lifecycle is shorter (Fig. 2-1-12). This is a reflection of factors such as the more frequently changing needs of the products and services provided by SMEs compared with those provided by large enterprises. Likewise, an examination of changes in lot orders received (production and supply) per order of products and services provided by enterprises in each size category between 1998 and 2002 reveals the proportion of enterprises saying that lot size per order has decreased to be greater as size of workforce declines (Fig. 2-1-13). SMEs are thus actively meeting narrower fields of demand than large enterprises.

SMEs also appear to be aware of the importance to their survival of exploiting the above niche structure. If one breaks down the products handled by enterprises according to number of workers based on data from the Fact-finding Survey on Structural Changes of Machinery and Metal Industries conducted by the Shoko Research Institute (2000), for example, one finds that the proportion of enterprises engaged primarily in diverse small-lot production is greater the fewer workers an enterprise has. Conversely, the greater the number of workers is, the larger in general is the proportion of enterprises engaged primarily in mass production (Fig. 2-1-14).

From the above findings, it may be concluded that although the fields in which SMEs are most active are those characterized on the supply side by low capital intensity and on the demand side by demand for diverse small-lot production and sharp changes in demand, these characteristics of supply and demand are intimately interrelated. Thus where demand is not diverse and lot sizes are large and stable over time, product standardization is possible and the capital-labor ratio can be increased in pursuit of economies of scale. Where demand is for small lots and there are fine differences in the nature of demand, however, product standardization and the pursuit of economies of scale are difficult. In such fields, SMEs are able to make the most of their flexibility and adaptability because of their small structure, and so continue to play their own unique part.

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**Fig. 2-1-12** Product and service lifecycles of enterprises by size of workforce

Product/service lifecycle decreases as size of workforce falls

<table>
<thead>
<tr>
<th>(No. of workers)</th>
<th>1 year or under</th>
<th>Over 1 year to 3 years or under</th>
<th>Over 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0~20</td>
<td>22.2</td>
<td>30.7</td>
<td>46.1</td>
</tr>
<tr>
<td>21~50</td>
<td>18.3</td>
<td>24.2</td>
<td>57.0</td>
</tr>
<tr>
<td>51~100</td>
<td>17.6</td>
<td>26.6</td>
<td>55.8</td>
</tr>
<tr>
<td>101~300</td>
<td>17.2</td>
<td>27.4</td>
<td>55.4</td>
</tr>
<tr>
<td>301~</td>
<td>15.8</td>
<td>27.4</td>
<td>56.8</td>
</tr>
</tbody>
</table>


**Fig. 2-1-13** Change in lot size per order by size of workforce

Increase in proportion of enterprises reporting that lot size per order decreased as size of workforce falls

<table>
<thead>
<tr>
<th>(No. of workers)</th>
<th>Increased</th>
<th>No change</th>
<th>Decreased</th>
</tr>
</thead>
<tbody>
<tr>
<td>0~20</td>
<td>28.2</td>
<td>65.3</td>
<td>6.5</td>
</tr>
<tr>
<td>21~50</td>
<td>28.2</td>
<td>65.3</td>
<td>6.5</td>
</tr>
<tr>
<td>51~100</td>
<td>27.6</td>
<td>62.3</td>
<td>10.1</td>
</tr>
<tr>
<td>101~300</td>
<td>26.6</td>
<td>63.2</td>
<td>10.2</td>
</tr>
<tr>
<td>301~</td>
<td>18.3</td>
<td>71.0</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Niche structure of SME and large enterprise markets

As we have seen, SMEs and large enterprises each appear to engage in fields according to their size. Assuming this to be the case, this should mean that SMEs and large enterprises are not in a directly competitive relationship.

In fact, approximately 68% of small and medium manufacturers identify SMEs and approximately 26% identify large enterprises as their competitors according to the SME Agency’s Fact-finding Survey on Business Management Strategy in 2002 (Fig. 2-1-15). According to the SME Agency’s Survey of Small and Medium Enterprise Business Activities in 1984, which contained a similar question, approximately 70% of SMEs identified SMEs and approximately 20% identified large enterprises as their principal competitors. These proportions are almost the same as in 2002, despite the passage of almost 20 years.

In other words, rather than competing against each other in the same market, large enterprises and SMEs each have their own separate niches within the same market. This “niche” theory is not new. In Europe and North America, scholars such as the distinguished economist Porter noted the existence of this phenomenon in the 1980s. Porter and others argued that SMEs seek to survive by taking advantage of their flexibility and maneuverability and finding “strategic niches” that large enterprises cannot enter. If SMEs exist alongside large enterprises in their own niches in this way, then SMEs’ profitability should be uncorrelated with that of large enterprises. To confirm whether this is indeed the case, let us turn below to focus on the return on sales of small and medium establishments and large establishments.

We begin by plotting the return on sales of large establishments and small and medium establishments in each major industry group (chubunrui) from 1985 to 2000 as shown in Fig. 2-1-16. Doing so, we find there to be a certain correlation in the respective returns on sales of small and medium establishments and large establishments. Thus in industries where profits are higher for large establishments, the profits of small and medium establishments are also higher, indicating that large establishments and small and medium establishments are active in meeting similar demand. If a large establishment and a small or medium establishment

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**Fig. 2-1-14 Characteristics of products produced by size of workforce**

Proportion of enterprises engaged primarily in diverse small-lot production increases as size of workforce falls

<table>
<thead>
<tr>
<th>(No. of workers)</th>
<th>Mainly mass production</th>
<th>Mainly diverse small-lot production</th>
<th>Mainly production of prototypes</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>23.4</td>
<td>13.3</td>
<td>0.0</td>
</tr>
<tr>
<td>51~100</td>
<td>28.6</td>
<td>10.2</td>
<td>0.0</td>
</tr>
<tr>
<td>101~300</td>
<td>35.8</td>
<td>7.9</td>
<td>0.0</td>
</tr>
<tr>
<td>&gt;301</td>
<td>55.9</td>
<td>2.9</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: Shoko Research Institute/Shoko Chukin Bank, The Sixth Fact-finding Survey on Structural Changes of Machinery and Metal Industries.

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**Fig. 2-1-15 Main competitors of SMEs (manufacturing)**

SMEs active in different fields to large enterprises

<table>
<thead>
<tr>
<th>Year</th>
<th>SMEs</th>
<th>Large Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>70.0</td>
<td>19.8</td>
</tr>
<tr>
<td>02</td>
<td>67.9</td>
<td>25.8</td>
</tr>
</tbody>
</table>


Note: Although respondents were given a choice of multiple responses, responses such as “other” and “no competitors” were excluded from the above results.

---

were to manufacture the same iron, for example, the returns on sales of the two should exhibit similar variations in line with demand for iron. Breaking industry down further into groups (shobunrui) and industries (saibunrui), however, reveals that the correlation between the returns on sales of small and medium establishments and large establishments falls as the category of industry is narrowed, i.e. the correlation coefficient between the two is less for groups than major groups, and less for industries than groups. What we find if we divide industry into narrower categories, therefore, is that the profitability of small and medium establishments is not always higher in industries in which the profits of large establishments are greater. If SMEs and large enterprises form their own parallel niches in their own fields of activity corresponding to the nature of each industry, then one would not expect the earnings of SMEs and large enterprises, which are the outcome of their respective economic activities, to be correlated, and the above results bear this out(7).

SMEs and large enterprises thus form a “niche structure” in which each specializes in its own field of strength rather than competing with the other. And this field of diverse small-lot production for which SMEs are responsible in this niche structure always exist. Indeed, if diverse small-lot production grows as national income increases, then SMEs’ presence will increase even further. This is why SMEs have maintained a stable presence throughout the long period since the Second World War.

Fig. 2-1-16 Correlation of rates of profit of small and medium establishments and large establishments
Correlation of rates of profit of small and medium establishments and large establishments decreases as industry is divided into smaller categories

(1) Correlation chart for major groups
(2) Correlation chart for groups
(3) Correlation chart for industries

Source: METI, Census of Manufactures.
Note: Return on sales = (value added - total cash earnings - depreciation) / value of shipments

7) Thurik et al. (1988) note that the rates of profit of SMEs and large enterprises are not always correlated when industries are more narrowly defined.
Section 2 SME dynamism

As shown in Section 1, SMEs and large enterprises have each engaged in economic activities leveraging their respective strengths through, for example, SMEs concentrating mainly on diverse small-lot production, where they can make the most of the flexibility and mobility that characterize SMEs, and large enterprises taking advantage of economies of scale by focusing on fields such as mass production.

While appearing to live a precarious existence in the economic forest, quietly seeking out ways to survive in the shadows of the giant trees, they in fact occupy a similar position to that of the small organisms that, alongside the large trees, support the ecosystem of a real forest. The relationship is thus one where SMEs basically coexist with large enterprises, the two competing and complementing one another in a niche structure.

What is necessary to remember, however, is that although enterprises of different sizes occupy coexisting niches, this does not mean that individual SMEs and large enterprises always follow this pattern and that their existence is guaranteed for perpetuity.

If one looks at a forest at any given moment in time, for example, the young trees appear to occupy a vulnerable existence in the shadows of the large trees. The young trees looked at each point in time, however, are not actually the same trees. A young tree at one point in time may be in the prime of life 10 years later, with young trees growing in its shadows. 30 years later, the young trees are large trees that appear to be the stars of the forest, but beneath them grow young trees that were once small saplings and new seedlings that will at some point take their place.

The same phenomenon occurs in the case of SMEs and large enterprises. Without a structure allowing a procession of smaller enterprises to emerge as challengers to their larger brethren—growing SMEs in the case of large enterprises and new entrants in the case of SMEs—individual SMEs would remain stuck in their narrow niches.

If we look at changes over time in the relationship between SMEs and large enterprises, moreover, we encounter a problem that surpasses that of biological dynamic change. This resides in the fact that the size of individual enterprises is constantly changing. This is because it is perfectly possible to imagine the scenario of a once large enterprise becoming an SME as a result of downsizing and entering a field that is traditionally the domain of existing SMEs and overwhelming them.

Changes in technology also affect the relationship between SMEs and large enterprises. What then is the state of movement between enterprises of different sizes under such complex conditions? In this section, we focus on the dynamic aspects of the SME sector, such as movement between different size categories, and examine by what mechanism the growth of SMEs occurs in this context.

1. Trends in changes in size of enterprises

Below we focus on the movement of individual enterprises, focusing on the extent to which business establishments belonging to a certain size category (in terms of number of workers) at a given point in time subsequently increase or decrease in size. Using recompiled data from METI’s Census of Manufactures, we look at the rate of growth in the number of workers in each category of enterprise, broken down according to size in 1985, after a period of three years (1988), eight years (1993), 14 years (1999) and 16 years (2001). What we find is that in all cases—(1) 1985 to 1988, (2) 1985 to 1993, (3) 1985 to 1998 and (4) 1985 to 2001—growth is more likely to be positive the smaller the enterprise is, i.e. the proportion expanding in size tends to increase (Fig. 2.1-17).

As the observation period lengthens—from (1) 1985 to 1988 to (2) 1985 to 1993, (3) 1985 to 1998, and (4) 1985 to 2001—moreover, the proportions registering positive growth of 50-under 100% and at least 100% and the proportion registering negative growth of -100-under -50% increase in all size groups. The variation in rates of growth thus increases as the observation period lengthens.

If there exists a tendency to “revert to average” in the sense that an establishment that achieves comparatively high growth in a certain period then rebounds and registers low growth in the next period, then this variation in rates of growth would not be expected to increase. Put another way, the extension of the observation period throws into relief those enterprises that grow, and those that fail to grow and go into decline. And quite a few of those that do go into decline are forced to withdraw by exiting or through bankruptcy.

Narrowing our focus to manufacturing establishments with four or more workers, we find that there were around 440,000 in 1985 and 320,000 in 2001 according to METI’s Census of Manufactures. Of those in existence in 1985, around 280,000, or 64%, had exited by 2001, and approximately 85% of those that exited had...
Fig. 2-1-17  Trends in size changes by size of workforce
The smaller the workforce, the larger the proportion of enterprises increasing in size.

Source: Recompiled from METI, Census of Manufactures.  
Note: Rate of growth in number of workers from 1985 to 1988 by size of workforce in 1985.
between four and 20 workers in 1985. At the same time, however, there were around 160,000 establishments in 2001 that were not in existence in 1985, accounting for around 50% of the establishments in 2001.

That then is the state of change along the time axis in relations between SMEs and large enterprises in existence at a given point in time. Returning to the analogy of the forest, the situation may be summarized as follows:

1. Small trees (small and medium establishments) grow more quickly than large trees (large establishments).
2. Small trees (small and medium establishments) are more likely to die (have a higher withdrawal rate) than large trees (large establishments).
3. Only a small fraction of small trees (small and medium establishments) become large trees (large establishments).
4. New small trees (small and medium establishments) are constantly being born.

As confirmed in Section 1, underlying the medium to long-term stability of the position of SMEs is the dynamism, i.e. the growth and decline, of individual enterprises described above. In aggregate, these movements of individual enterprises establish the position of SMEs as a group.

### 2. Mechanism of growth of SMEs

In 1., we outlined the situation vis-à-vis the movement in size of business establishments. It was shown that a larger proportion of small and medium establishments than large establishments increase in scale, i.e. grow, and that SMEs lead a more dynamic existence than large enterprises. Viewed as a group as described in Section 1, on the other hand, SMEs have up until now occupied a stable position in niche structures alongside large enterprises. From this it can be seen that SMEs have what may be described as conflicting characteristics in that they achieve growth at the same time as exhibiting stability. Given the above, how then may we describe the image of SMEs? In short, SMEs are dynamic entities that on the one hand grow, and on the other hand move into fields suited to their size. In other words, growing SMEs are constantly changing their field of activity to larger markets of a size suited to their stature during the growth process.

This we may posit as a hypothesis regarding the growth of SMEs. In reality, however, are the growth and movement in size of SMEs related to entry into new fields? Below we seek to answer this question using statistical data.

In order to do so, let us examine the performance of enterprises that developed new products, this being one form of entry into new fields, according to the SME Agency’s Fact-finding Survey on Business Management Strategy. Fig. 2-1-18 shows the rates of growth in the number of workers of enterprises that developed new products broken down by size of enterprise (in terms of number of workers). From this it can be seen that in all size categories, enterprises that engage in development of new products perform better than the average rate of growth in number of workers in the size category to which they belong. As size declines, moreover, the scale of the deviation between the two increases. Thus while for a large enterprise it is possible to achieve growth through, for example, further expansion of scale of mass production of standardized goods, innovation in the form of activities such as the development of new products is a highly significant source of growth for SMEs. Further, a multiple regression analysis of the relationship between enterprise growth indices, such as the rate of growth in sales and rate of growth in number of workers,

![Fig. 2-1-18 Effect on growth of engaging in development of new products](image)

Enterprises that engage in development of new products have higher rates of growth in number of workers, and proportion increases as size decreases.

Notes:
1. Difference between mean rate of growth in number of workers of enterprises that engaged in development of new products in each size category and mean rate of growth of number of workers of each size category overall.
2. The rate of growth in the number of workers is in terms of the change from 1998 to 2002.

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10) That only some small and medium establishments grow to become large establishments does not mean that most small and medium establishments stagnate. A high proportion of surviving small and medium establishments in fact grow, e.g. by expanding in scale.
with development or otherwise of new products reveals that there is a significant positive correlation between the development of new products from 1998 and 2002 and both the rates of growth in sales and number of workers over the same period (Appendix Note 2-1-2). Entry into new fields of activity through activities such as the development of new products is thus intimately related to enterprise growth. This is indicative of both the importance to SMEs of cultivating their ability to shift into new fields, and the importance of policies to develop the environment to facilitate such shifts.

Section 3 Internal structure and business strategies of SMEs leading change in economic structure

Thus far we have summarized the state of growth of individual SMEs and shown that the source of the strength of those SMEs that achieve strong growth is their ability as enterprises to tackle new fields through the development of new products in the marketplace. What then are the characteristics of SMEs that prove especially able to maximally utilize this strength? One might easily surmise that they would be characterized by, among other things, having a high level of technological expertise and promising customers. Even in the absence of any major difference in technological expertise or customers, however, it is possible for differences in performance to arise between enterprises due to the management structure responsible for decision-making in an enterprise and the management position thus determined. Although various indicators of the importance of technological expertise have traditionally been used in examining the performance of SMEs, insufficient attention has been paid to those aspects relating to the basis of business management. However, these aspects are among those most familiar to entrepreneurs and easiest to tackle in pursuit of growth, and analyzing the relationship between these aspects and performance offers an effective means of improving the management of individual SMEs.

In this chapter, we analyze the “strengths” of the management organization of growth enterprises in order to provide management pointers for SMEs. We then proceed to identify the strategies pursued by SMEs and the characteristics of their accompanying actions, and pick out from among them the factors that determine whether or not an SME is able to maximally utilize its strengths.

1. SME management

In the case of organizationally small SMEs, the attributes of their managers are ordinarily considered to have a major impact on performance. Apart from the very smallest enterprises, however, SMEs are managed by a management team rather than management being entirely dominated by a single individual. We start, therefore, by looking at the characteristics of such management teams, and how they impact on enterprise performance.

(1) Impact of structure and kinship level of management of SMEs

Almost all enterprises when just started up are “family-run” enterprises run by the founder and members of his/her family. As they succeed and grow in size, they divide into family-run enterprises whose management is made up of parents, siblings and relatives, and non-family-run enterprises whose management at that stage consists of members who are not relatives. Are there any differences in business performance to be observed between the two? Non-family-run enterprises should appoint a wider range of people of ability, irrespective of kinship, than family-run enterprises. If this is so, non-family-run enterprises may perform better than family-run enterprises. On the other hand, the appointment of people from outside the family circle to the management of a hitherto family-run enterprise could lead to a loss of the sense of self-ownership that is particularly strong at SMEs, leading to a loss in incentive to improve performance. What then in reality is the impact on SME performance of the kinship level of management?

In answering this question, a number of approaches may be adopted to determining the kinship level, or the level of family interest, in management. The first is to focus on the representative of the enterprise himself/herself and adopt as an indicator whether the previous representative and present representative are related. The second approach is to adopt as a benchmark of the kinship level of a company the proportion of directors on the board of directors who are related to the representative (hereafter called the “board kin ratio”). The third approach is to adopt as a benchmark of the kinship level of a company the shareholding ratio of relatives of the representative (hereafter called the “kin shareholding ratio”). Fig. 2-1-

11) According to a survey of SMEs in France cited in OECD (2002) regarding the basis of growth enterprises, 80% of enterprises identified expanding the scope of products and services and 75% identified provision of new products and services, but only 40% said natural market growth. This provides further evidence that enterprise growth and innovation are related.

12) Family members are roughly defined here as blood relatives within the sixth degree and relatives by marriage within the third degree.
19 shows the kinship level by size of enterprise according from the first perspective. As can be seen, the proportion of related managers after the first handover is extremely high among small enterprises. Is there any difference in performance, then, between family-run enterprises and non-family-run enterprises?

To answer this question, we look first of all at the relationship between enterprise performance and kinship level (where kinship level is defined in terms of whether the previous representative and the present representative are related) using METI’s Basic Survey of Japanese Business Structure and Activities and the SME Agency’s Fact-finding Survey on Business Management Strategy (November 2002) (Fig. 2-1-20, Appendix Note 2-1-3).

As the figure shows, enterprises whose previous and present representative are related exhibit a negative effect on the rate of growth in the number of workers (2000~2002). If kinship level is expressed in terms of the board kin ratio, there is likewise a negative correlation with the rate of growth in the number of workers (Appended Note 2-1-4) and, although not statistically significant, a negative correlation with the kin shareholding ratio (Appended Note 2-1-5). The kinship level of the representative and board kin ratio are also found to have a negative impact on the rate of growth in sales (2000~2002).

It is safe to conclude that the greater the kinship level is, the poorer is enterprise performance measured in terms of rate of growth. This supports the hypothesis that the potential for appointment of people of ability is less and performance poorer the higher that the kinship level is.

According to the Fact-finding Survey on Business Management Strategy, approximately 70% of SMEs are family-run enterprises in the sense that their previous representative and current representative are related. The results of our analysis suggest, however, that in order to grow as an enterprise, it is necessary for an enterprise to at some point become non-family-run.

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13) The kinship level is determined by whether the manager is of the same family as the founder in 2000 at the start of the observation period.
14) According to the Fact-finding Survey on Business Management Strategy, 76% of the 5,025 enterprises surveyed in 2002 had undergone a handover of authority from the founder. Of this number, only 39% were non-family-run enterprises, and 70% of enterprises overall continued to be run by a relative of the founder.
Case 1-2  Vitalization of internal organization through employee shareholding scheme

Based in Aichi Prefecture, A Ltd. is a manufacturer of labor-saving equipment and robot peripherals with 102 employees. From the late 1960s, it manufactured primarily parts for special-purpose machine tools used by automakers. In the late 1980s, the company was hit hard by the reduction in capital investment in the automobile industry due to the appreciation of the yen, which caused orders to plummet and pushed the company to the verge of bankruptcy.

Employee shareholding scheme
It was in these circumstances that B, then an executive director, took over the management of the company from the owner-president and became representative director in October 1987. As the new president, B moved the company out of its core business of manufacturing parts for machine tools into the production of printer parts, and set about rebuilding the company’s management. A Ltd. was at the time wholly family owned. As a result of the inheritance of shares from the owning family combined with the establishment of an employee holding association and a capital increase (from ¥31,000,000 to ¥50,000,000), a new multiple shareholding structure was largely put in place by 1991. Under the new arrangement, the owner’s family, directors and the employee holding association each held one third of the company’s shares.

The successful transition to this multiple shareholding arrangement was due to (1) the transformation of the makeup of the board of directors as a result of the appointment to the board of employees in place of retiring directors who were members of the owning family, and (2) the shared desire of most of the directors and employees to rebuild the company and their agreement to become shareholders in a company laden with debt and with no prospect of receipt of dividends (directors were required to hold shares and employees of section chief level and above were requested to become shareholders).

Effects of multiple shareholding arrangement
The new arrangement strengthened directors and employees’ awareness of the company being their own company and boosted employee morale. It also secured the confidence of employees in B and the rest of upper management for having demonstrated leadership and steadily rebuilt the company’s management.

Important matters are considered at monthly meetings of the board of directors and management information communicated to all employees (as employees are able to participate in general shareholders’ meetings through the employee holding association), but final decisions are taken by the president. Speed of decision-making thus does not present a problem.

As the company is at last in the position to pay dividends, its goal now is to focus on updating plant, training human resources, and improving employee welfare.
(2) Impact on enterprises of the presence of outside directors

Reducing the degree of family control over an enterprise’s management is thus an effective way for SMEs to achieve growth. Another way of introducing “new blood” is by appointing people from outside as directors rather than by elevating employees from within the company to management positions. However, is the appointment of such directors an effective means of improving performance?

Fig. 2-1-21 shows the situation regarding the appointment of outsiders to the board of directors, and from this it can be seen that only 40% of all enterprises do so. A breakdown by size of enterprises shows that this proportion is lower the smaller an enterprise is.

What then is the impact on enterprise performance of the appointment of outside directors? Use of outside directors is positively correlated with rate of growth in sales (2000~2002), which is an indicator of growth in performance (Fig. 2-1-22, Appended Note 2-1-6). Although not statistically significant, there was also found to be a positive correlation with rate of growth in number of workers.

These results hold true even taking into consideration variables such as enterprise size and enterprise age, which are the variables usually used to explain enterprise growth. They are also theoretically compatible with our observational findings concerning the poorer performance of family-run enterprises described above.

The appointment of outside directors at SMEs may therefore be concluded to be important in that it raises management efficiency through the appointment of capable outside human resources. The problem is how to recruit people capable of serving as such directors. This requires greater mobility of human resources qualified to act as outside directors and the establishment of a human resource market.

(3) The presence of right-hand men in SMEs

Up to this point regarding the management of SMEs, we have focused on whether people of ability are able to participate in management from the point of view of their background prior to joining the management team. Next, however, we turn our focus to look at the people who assist and share the functions of managers (i.e. managers’ “right-hand men”), and examine the relationship between their presence and enterprise performance.

If we begin by looking at Fig. 2-1-23, which shows the proportion of enterprises with people within the enterprise who could be described as “right-hand men”, and capable of giving advice on management-related problems, we can see that such people are present in

![Fig. 2-1-21 Appointment of outsiders to board of directors](image)


Fig. 2-1-22 Impact of appointment of outside directors on rate of growth in number of workers (by enterprise size)

Use of outside human resources has major effect at small enterprises

![Fig. 2-1-22 Impact of appointment of outside directors on rate of growth in number of workers (by enterprise size)](image)


15) Enterprises were asked the number of directors (except auditors) appointed from outside. Even if appointed from outside, persons with management experience or experience of working for 10 or more years continuously at the enterprise concerned were treated as being appointed from among employees and excluded.

16) That the introduction of outside managers is one characteristic of rapidly growing enterprises has been noted in studies in a number of other countries as well, and our findings accord with these (Wynarczyk et al. (1993)).

17) Survey respondents were asked “Is there anyone who could be described as a ‘right-hand man’ capable of giving advice on company management-related problems?”
more than seven out of 10 enterprises, or 73.9%, overall. The most important areas of business for which “right-hand men” are responsible, shown in Fig. 2-1-24, are 1) sales and marketing (36.6%), 2) finance and accounting (28.9%), and 3) production and manufacturing (19.2%). Broken down by size, the proportional importance of “right-hand men” in finance and accounting is lower at smaller enterprises.

What then is the relationship between the presence of “right-hand men” and enterprise performance? As is apparent from Fig. 2-1-25 and Appended Note 2-1-7, there exists a positive correlation between the presence of “right-hand men” and the rates of growth in number of workers and sales. Hence enterprises with “right-hand men” simultaneously exhibit greater growth. A breakdown by size as in Fig. 2-1-23 shows that the larger enterprise size is, the higher is the proportion of enterprises with “right-hand men”. This means that the larger the enterprise, the greater the need for the presence of a “right-hand man”. Thus if a small SME is to become a bigger enterprise, i.e. if they seek growth, one necessary requirement is the use of “right-hand men”.

2. Internal strength of SMEs and enterprise performance

(1) Decision-making structure of SMEs
The impact on the direction of the enterprise as a whole of decision-making by managers is regarded as being considerably higher at SMEs than large enterprises. There is therefore thought to be little need for adjustment of decision-making at SMEs, and this is regarded as one characteristic of SMEs. If we examine the actual managerial decision-making...
processes used at enterprises (Fig. 2-1-26), what we find is that while “consensus orientated” processes are found more widely the larger an enterprise is, a higher proportion of enterprises with fewer than five workers “respect the opinion of the representative without consensus building” (20.1%), thus confirming the widely held belief that everything depends on the decision-making of entrepreneurs at small enterprises. Even among “consensus oriented” enterprises, the proportion that “continue consensus building until both parties are satisfied” is higher among larger enterprises.

The question we must then consider is whether differences in the decision-making processes at each enterprise affect enterprise performance. The conventional view is that the speed of decision-making due to the leadership of entrepreneurs is a strength of SMEs, but is this actually the case?

What we find taking into consideration enterprise attributes such as enterprise size is that there is a stronger positive correlation with rate of growth in number of workers and rate of growth in sales among enterprises that “continue consensus building until both parties are satisfied” than among enterprises that “do not consensus build” (Fig. 2-1-27, Appended Note 2-1-8). Where attributes such as size of enterprise are taken into consideration, therefore, enterprises that place a greater emphasis on consensus building tend to grow and register increases in sales.

This finding raises the question of wherein lies the organizational strength of SMEs in terms of the oft-noted decision-making structure. While it is easy to imagine the presence of leaders with leadership in strong organizations, what we mean here by leadership is certainly not arbitrary decision-making, but rather the ability to put projects into action by securing the consent of concerned parties (by influencing them and listening to their views) and building a consensus with workers and others regarding the enterprise’s objectives. Such a decision-making process motivates employees, increases incentive, and as a result changes the perception of the organization as a strength.

**Fig. 2-1-26 Decision-making process of entrepreneurs**

<table>
<thead>
<tr>
<th>(No. of workers)</th>
<th>Respect opinion of interested parties without consensus building</th>
<th>Continue consensus building until both parties are satisfied</th>
<th>Respect opinion of representative director where no agreement is reached even after attempt at consensus building</th>
<th>Respect opinion of interested parties where no agreement is reached even after attempt at consensus building</th>
</tr>
</thead>
<tbody>
<tr>
<td>All enterprises</td>
<td>11.9</td>
<td>24.6</td>
<td>44.6</td>
<td>14.1</td>
</tr>
<tr>
<td>0 ~ 5</td>
<td>13.7</td>
<td>25.6</td>
<td>46.6</td>
<td>12.1</td>
</tr>
<tr>
<td>6 ~ 20</td>
<td>10.5</td>
<td>23.4</td>
<td>48.1</td>
<td>15.0</td>
</tr>
<tr>
<td>21 ~ 50</td>
<td>11.7</td>
<td>23.2</td>
<td>49.9</td>
<td>12.2</td>
</tr>
<tr>
<td>51 ~ 100</td>
<td>12.0</td>
<td>22.6</td>
<td>50.9</td>
<td>14.5</td>
</tr>
<tr>
<td>101 ~ 300</td>
<td>11.6</td>
<td>26.7</td>
<td>54.9</td>
<td>15.1</td>
</tr>
<tr>
<td>301 ~</td>
<td>13.7</td>
<td>30.8</td>
<td>55.8</td>
<td>10.7</td>
</tr>
</tbody>
</table>


**Fig. 2-1-27 Decision-making of representative director and rate of growth in number of workers**

Enterprises of entrepreneurs who emphasize consensus building register more growth

**Fig. 2-1-28**

<table>
<thead>
<tr>
<th>Rate of growth in number of workers (deviation from mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-0.2)</td>
</tr>
<tr>
<td>(-7.2)</td>
</tr>
<tr>
<td>(-8.2)</td>
</tr>
</tbody>
</table>

**Source:** SME Agency, Fact-finding Survey on Business Management Strategy (November 2002).

**Note:** Deviation from overall mean (simple sum) of rates of growth in number of workers. Actual rates of growth indicated in parentheses.

19) “Consensus orientated” enterprises are those that selected “respect the opinions of interested parties where no agreement is reached even after some attempt at consensus building”, “respect opinion of representative where no agreement is reached even after some attempt at consensus building” or “continue consensus building until both parties are satisfied”.

20) Enterprises that “do not consensus build” are enterprises that “respect the opinions of interested parties without consensus building” or “respect the opinion of the representative without consensus building”.

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Most enterprises, particularly if they are of a certain size, have a written business philosophy that describes their basic business goals. Are these business philosophies no more than a formulaic expression of an enterprise’s ideals with no bearing on its actual management and having no impact on its actual business performance, or is the adoption of an explicit business philosophy related to an enterprise’s special character and culture, thus impacting on performance? Below, therefore, we look at whether having a business philosophy is a potential strength of the SMEs that we have looked at up to this point.

As Fig. 2-1-28 shows, the majority of enterprises have a business philosophy that is designed primarily for stakeholders of one form or another, such as customers, shareholders and employees. For example, 78.4% of enterprises have a business philosophy “for customers”, 74.6% “for the development and perpetual growth of the company”, and 69.6% “for employees and their families”. If we divide these business philosophies into 1) stakeholder-oriented philosophies and 2) social-contribution-oriented philosophies, we find that 98% of respondents had stakeholder-oriented philosophies, 49% had social-contribution-oriented philosophies, and 47.4% had a combination of both. Virtually all enterprises therefore have stakeholder-oriented philosophies, and half of these also have social-contribution-oriented philosophies. Only 1.6% have just a social-contribution-oriented philosophy.

Let us then look at the impact of these business philosophies on an enterprise’s direction by examining the correlation with enterprise performance (Fig. 2-1-29, Appended Note 2-1-9). What we find is that whereas having a stakeholder-oriented philosophy but not a social-contribution-oriented philosophy has a negative effect on the rate of growth in number of workers, having a social-contribution-oriented philosophy is positively correlated with the rate of growth in sales. This suggests that enterprises exhibiting growth have social-contribution-oriented philosophies.

Considering that the basic goal of enterprises is the pursuit of profit, the finding that a customer/shareholder/employee-orientation alone is not related to enterprise performance would appear somewhat difficult to explain. It is, however, quite conceivable that there are limits to how far an enterprise, as a group of people, can be
motivated by the profit motive alone. This would suggest that adopting a loftier goal beyond simply the profit of the enterprise as a shared goal can potentially serve as an organizational strength for SMEs seeking to develop.

(3) Innovativeness of products and services provided by SMEs

In the preceding sections we have summarized the organizational strengths of SMEs. If an SME entrepreneur is to formulate a strategy for growth, it is essential that he/she determine his/her enterprise’s strengths in relation to the competition. Are enterprises aware of what strengths they have compared with their competitors? The strengths that enterprises identify themselves as having compared with their competitors are in 1) technology and development (21.4%), 2) marketing and services (20.7%), and 3) plant (10.1%), as shown in Fig. 2-1-30. A breakdown by size in terms of number of workers reveals an increase with size in the proportion identifying “technology and development”, “plant”, “product planning”, “organization and human resources” and “financial standing” as strengths. The proportion saying “marketing and services”, on the other hand, is inversely proportional to size, and is greater the smaller the enterprise is. This indicates that while there is still some gap in technological and developmental expertise between SMEs and large enterprises, SMEs seek to plug this gap through marketing strength, suggesting that intangible resources such as speed, maneuverability and human attraction are at the source of the vitality of SMEs.

Next we examine how strong SMEs feel their own products and services are, and whether they best utilize their strengths as enterprises. In order to do so, we adopt as one indicator the “innovativeness”21 of SMEs’ core products and services and look at the extent to which this impacts on an enterprise internally (Fig. 2-1-31).

According to the graph, the innovativeness of their core products or services were described as 1) new for the target market by 55.3%, 2) new for the company by 29.1%, 3) new for Japan by 9.2%, and 4) new for the world by 6.4%. Broken down by number of workers, it can be seen that innovativeness increases with size. Where advanced innovativeness (new for the world or new for Japan) is concerned, however, the proportions

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21) In the survey cited here, respondents were asked to choose one out of the following to describe the innovativeness of their core products and services: 1) new for the world, 2) new for Japan, 3) new for the target market, 4) new for the company.
are equal among both small enterprises and large enterprises. The question then is: Does innovativeness translate directly into better performance?

An analysis of the correlation between innovativeness and enterprise performance (Fig. 2-1-32, Appended Note 2-1-10) reveals that rather than greater innovativeness always translating into better performance, innovation that is “new for the market” has the most impact on profitability.

An examination of the relationship between share of sales and the innovativeness of products and services (Fig. 2-1-33) likewise reveals that 56.0% of enterprises with the top share of sales have products or services that are “new for the market”, which suggests that the hypothesis that the leader in the marketplace requires outstanding technologies and products is lacking in explanatory power.

How can this be explained? According to a survey entitled A Survey of the Management of Top Share Enterprises of market leaders in Higashiosaka conducted by the Higashiosaka Chamber of Commerce and Industry, the largest proportion of respondents (46.4%) said that the technologies behind their market-leading products were “not especially advanced but difficult for other companies to copy”, and approximately 86% said

![Fig. 2-1-32 Innovativeness of products/services and operating profit to total assets](image)

**High level of innovativeness not essential to better performance**

![Fig. 2-1-33 Share of sales and innovativeness](image)

**Market leaders do not necessarily need to be highly innovative.**

![Fig. 2-1-34 Technological level of market-leading products](image)

**Most enterprises’ technology is “not especially advanced”**


Note: Results of a questionnaire survey of 119 market-leading enterprises in Higashiosaka City (respondents: 84, response rate: 70.6%).
that their technologies were “not easy for other companies to copy”. Thus the technologies of the majority of the enterprises surveyed were standard technologies of a not especially advanced level (Fig. 2-1-34), indicating that the technology required to produce market-leading products does not necessarily have to be advanced or original.

What this means is enterprises do not have to concentrate excessively on advanced technologies and high quality, but that it is instead more important to determine the level of one’s own products and endeavor to find the best way of making them appear most attractive to the market. Enterprises must therefore constantly keep their eyes on the market and make every possible effort to make their products and services better suited to it.
C Ltd. is a long-established miso and soy sauce maker in Oita Prefecture with 135 employees. In recent years, it has also begun manufacturing seasonings. One such seasoning launched 15 years ago by the company was a fresh tasting Japanese-style dressing that large enterprises could not replicate. This was made by a unique manufacturing method using raw onions chopped by hand and un-heat-treated *kiage* soy sauce. The company currently has 6–7% of the market nationwide, and 80% of its sales are outside the Kyushu region. Seasonings have thus become one of C Ltd.’s core products alongside miso and soy sauce.

**Development of new products and marketing techniques**

Consumer tastes and demand for miso and soy sauce change only gradually. Consumer demand for dressings, on the other hand, changes swiftly, and failure to maintain a full lineup and constantly introduce new products can result in a 20–30% drop in sales and removal from the shelves in no time. As there is no regional variation in tastes, unlike with miso and soy sauce, moreover, it is impossible to adopt a strategy of specializing in special products for specific regions.

C Ltd. develops up to 200 types of new dressing a year including dressings for trade use (around 80 types are for home use). As there are around 1,700 items in its catalog (including around 800 for home use), the number of new products released each year is equivalent to around one tenth of the total. While some are developed from scratch, some are developed based on other makers’ products (those that are tasty but do not sell) and products developed by C Ltd. in the past that failed to sell.

As the development of new products does not entail a great deal of cost, the marketing method that the company uses is to actually release a new product to test consumers’ reaction. If the response is poor, it is often largely remedied by changing the design or delaying its release onto the market. President D also busily visits 500 corporate customers each year. This is because experience has taught it that straightforward marketing legwork of this kind is a vital source of information for the development of new products.

**Case 1-3 Using marketing to make the most of traditional brewing technology**

**Strategy of differentiation to stay ahead of major manufacturers**

Niche business, such as the development of products to fill the gap between soy sauce and *ponzu*, is one of C Ltd.’s fortes. When new products sell well and the market grows, however, leading manufacturers commonly take an interest and develop similar products that are some 20% cheaper than those offered by C Ltd. C Ltd.’s response in such cases is generally to develop another product designed to fill the gap between that product and *ponzu*. C Ltd. must constantly develop new products using original techniques that cannot easily be replicated by its competitors. Instead of developing products in a completely different field, it competes against its competitors by developing products derived from earlier products based on its unique brewing techniques and skilful marketing.

Although commercials featuring popular overseas actors help, it is not easy to quickly acquire the name recognition and brand strength to compete with leading manufacturers. C Ltd.’s products have acquired a reputation for their taste and freshness among consumers. C Ltd. values this reputation, and believes there to be no alternative but to take the time to develop products whose taste major makers cannot replicate and to place its faith in the strength of its products. By further refining its own brewing techniques, procuring better materials and manufacturing its products in as fresh a state as possible (producing dressings using *kiage* soy sauce requires that a company be located near the place of production as in the case of C Ltd.), C Ltd. seeks to differentiate its products from those of major manufacturers.

Sales of dressings are growing, and sales of miso and soy sauce are also rising in the Tokyo and Osaka regions as a result of the increase in its name recognition. C Ltd.’s aim is to grow sales further by carefully nurturing its relations with individual stores and building up its brand recognition. Another goal is to develop another core product to go with dressings.
3. SME marketing activities and the effect on enterprise performance

As was shown in 2.(3), products’ suitability for their markets is more important than their innovativeness to enterprises’ performance. Activities to increase products’ market “fitness” in the broad sense may be described as “marketing”. Below, therefore, we look at the marketing activities of SMEs.

To determine the state of SMEs’ marketing activities, we begin by examining the stance of enterprises toward marketing. As Fig. 2-1-35 shows, the majority of enterprises have a positive stance toward marketing: 65.7% intend to enhance their activities in the future, 24.7% intend to maintain activities at their present level, 7.5% do not engage in marketing, and 1.2% intend to scale back their marketing activities. Among smaller enterprises, however, the stance is more negative: 44.8% intend to maintain activities at their present level, and 36.1% intend to enhance their activities in the future.

Let us turn next to consider the content of SMEs’ marketing activities (Fig. 2-1-36). Doing so, we find a positive emphasis on activities that focus on face-to-face communications, such as “intimate information sharing with customers”, “introductions” and “approaching of potential enterprises and customers.”

Fig. 2-1-35 Stance regarding future marketing activities
SMEs too have positive marketing stance

![Intend to expand activities in future](65.7) 0.8
![Intend to maintain activities at present level](36.1) 1.3
![Intend to reduce activities](62.8) 0.9
![Not engaged in marketing](69.0) 0.6
![Other](72.6) 0.5

(No. of workers)

All enterprises

0 ~ 5

6 ~ 20

21 ~ 50

51 ~ 100

101 ~ 300

301 ~

0 20 40 60 80 100 (%)


Fig. 2-1-36 Sales promotion methods by customer attributes
Strong emphasis on face-to-face communication in sales promotion by SMEs

![Introductions](34.8) 87.8 97.7
![Intimate information sharing with customers](34.8) 66.7
![Approaching of potential enterprises and customers](32.6) 50.0
![Mass media](29.4) 40.0
![Direct mail](29.2) 30.0
![Websites](28.2) 20.0
![Trade/specialist journals](28.2) 10.0
![Trade fairs and product exhibitions](28.2) 0.0

(%) 100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0.0

Introductions Intimate information sharing with customers Approaching of potential enterprises and customers Mass media Direct mail Websites Trade/specialist journals Trade fairs and product exhibitions

potential enterprises and customers”. This tendency is particularly strong among enterprises that sell to business establishments and enterprises. Enterprises that sell to individual consumers are characterized by their use of media such as “mass media” and “direct mail”.

How then does a positive stance toward marketing impact on SMEs’ performance? An examination of the performance of enterprises that “intend to expand marketing activities” reveals there to be a statistically significant positive correlation with the rate of growth in number of workers, which means that a positive stance toward marketing is related to enterprise growth (Fig. 2-1-37, Appended Note 2-1-11).

As Appended Note 2-1-12 demonstrates, moreover, a positive approach to marketing has a statistically significant positive effect on the probability of product development and improvement activities leading to successful commercialization, which is strongly indicative of the importance of marketing in enterprises’ activities. This tendency is also apparent from Fig. 2-1-38. Among enterprises that have changed product categories, 70% “intend to expand marketing activities”, indicating that a positive stance toward marketing contributes to successful product category transitions.

As one concrete goal of the marketing activities undertaken by enterprises is to differentiate themselves from their competitors, we look next at the relationship between differentiation strategies and enterprise performance.

Fig. 2-1-37 Marketing stance and rate of growth in number of workers
Especially strong correlation with marketing stance at SMEs

![Graph showing the correlation between marketing stance and rate of growth in number of workers at SMEs. The graph displays a strong positive correlation, with the rate of growth in number of workers significantly higher for enterprises that intend to expand marketing activities.]


Fig. 2-1-38 Marketing stance of enterprises that changed product categories
Enterprises with more positive marketing stance change product categories

![Graph showing the marketing stance of enterprises that changed product categories. The graph indicates that enterprises with a more positive marketing stance are more likely to change their product categories.]


Fig. 2-1-39 Strategies for maintaining superiority over rivals by customer attributes
Majority pursue strategy of differentiation, but relatively large proportion of enterprises handling intermediate goods pursue cost superiority

![Graph showing the strategies for maintaining superiority over rivals by customer attributes. The graph indicates that the majority of enterprises pursue a strategy of differentiation, but a relatively large proportion of enterprises handling intermediate goods pursue cost superiority.]

Regarding firstly whether an enterprise chooses to compete with its competitors through cost superiority or quality differentiation, 27.2% of enterprises overall adopt a “strategy of achieving cost superiority” and 72.8% choose a “strategy of differentiation of products and services, etc.” (Fig. 2-1-39). Thus around seven out of 10 enterprises overall adopt a strategy of differentiating their products or services. If we look, however, at the strategies adopted according to the attributes of the customers catered to, we discover that a relatively higher proportion of enterprises that sell (intermediate goods) to business establishments and enterprises choose a strategy of cost superiority (30.3%).

Is the adoption of a differentiation strategy effective? To answer this question, we look at the impact of such a strategy on the profit ratios of enterprises. As Fig. 2-1-40 clearly shows, enterprises that pursue differentiation exhibit better performance in terms of a higher profit ratio (operating income to net sales) than enterprises that pursue cost superiority. A breakdown by customer attributes likewise shows that enterprises that pursue differentiation earn higher profits.

Enterprises also undertake advertising activities in the interests of differentiation, but how do such activities impact on enterprise performance? As Fig. 2-1-41 shows, enterprises that spend on advertising have a greater profitability than enterprises that do not. Almost the same findings are obtained even when factors other than enterprise size and advertising activities that have an impact on enterprise profit ratio are taken into consideration. Thus if we look at the correlation between advertising intensity and enterprise profitability (in terms of operating profit to total assets and operating profit to net sales) (Appended Note 2-1-13), we find there to be a statistically significant positive correlation. The impact of advertising spending on enterprise performance has been the subject of numerous studies, and these too have found there to be a positive correlation with enterprise performance. Like these studies, these results indicate that the pursuit of differentiation by enterprises and advertising activities have an impact on enterprises’ profitability. This would appear to be an incentive for smaller enterprises with a negative stance toward marketing, as shown in Fig. 2-1-35.

As the following case demonstrates, differentiation activities that make use of branding are also effective for SMEs.

Up to this point, we have confirmed that how well an enterprise takes advantage of the characteristics of a product, i.e. how well suited a product is to its market, has a more positive impact on performance than the innovativeness of the product itself. This lends significance to the steady, straightforward marketing activities of SMEs, and indicates that the face-to-face communication undertaken by SMEs is a strength.

**Fig. 2-1-40** Differentiation activity and profit ratio

**Differentiation activity has positive effect on operating income to sales**

![Fig. 2-1-40](image)


**Fig. 2-1-41** Relationship between advertising activity (spending on advertising) and enterprise profit ratio

**Business activity aimed at achieving differentiation has positive effect on profit ratio**

![Fig. 2-1-41](image)


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22) Nagashima (2001) confirms there to be a positive correlation between the advertising intensity and operating income to net sales of enterprises listed on the Tokyo Stock Exchange. In the same study, Nagashima also conducted a Granger Test of causality, finding that there to be causality in the direction of advertising spending to performance at one third of enterprises and causality in the reverse direction at one third of enterprises. From this he concludes, “The argument that advertising spending simply follows performance is not generally applicable”.

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Case 1-4 Differentiation with a view to establishment of value-adding structure

E Ltd. is a manufacturer of worsted and knitted products based in Yamagata Prefecture with 83 employees. In the spinning segment, it used to manufacture only products (yarn) in the comparatively low-priced volume market, and in the knitted segment, too, it used to manufacture mass-produced goods. The shift of the apparel makers that constituted its customers to China, however, led to a precipitous and critical fall in orders.

Creating value added
President F and executive director G (eldest son of the E Ltd.’s representative director) set about developing special-purpose yarns and achieving their long-held ambition of creating the company’s own brand of products to avoid being caught up in cheap price competition in order to overcome the company’s difficulties. Although the company had begun development of special-purpose yarn in the spinning segment several years previously, it was unable to produce original products using the same yarn spinning machinery as other companies. Instead of using efficient new types of machinery capable of high-speed mass production, the company therefore found and modified some old-style machinery that, though slow and incapable of production in large volumes, made products more carefully. By combining this old low-tech machinery with high technology, the company succeeded in making yarns with a completely new texture and yarns made from materials that could not be used in the past, such as splashed yarns made from sheep’s wool and yarns combining washi and acrylic yarn. E Ltd.’s original yarns attracted attention in Japan at the Trade Fair of Total Fabrics and Textile Goods, and orders from apparel and knitwear makers are increasing.

In order to establish its own brand, the company decided to showcase its products at overseas exhibitions. If it had attempted to sell its own brand directly to retailers in Japan, it would have ended up in competition with the apparel makers with which it had traditionally done business. Furthermore, the own brand of a small maker such as E Ltd. would simply have been regarded as a brand whose direct production by the manufacturer allowed it to be made more cheaply. This would have lead simply to its products going cheap, and have caused unnecessary problems for its customers (apparel makers). E Ltd. might in addition have found itself incapable of making a profit. Thus even if it made high-end products, it would find it difficult to gain the recognition of Japanese consumers, who tend to be highly brand conscious.

In order to sell its high value-added own-brand products, therefore, it decided it that it needed to demonstrate its presence overseas.

Effects of own-brand range
The company therefore exhibited 21 items of its own-brand high-end ladies’ knitwear, made from special yarn, at a general textile exhibition held in New York in May 2001. Its unconventional “Japanese” sense made it a hit, earning it orders for 150 units from 17 companies. Due partly to these products also being featured on a local television station, they sold out in retail stores, and four times as many orders were received at the following year’s exhibition. The company also exhibited at the Fashion Coterie in New York, where the very highest end goods are exhibited, winning orders from 40 companies. The high reputation of the company’s own brand overseas has had a positive effect on its other business. Its traditional business with apparel makers has grown, and its profitability is recovering. In the spinning (yarn) segment as well, sales of E Ltd.’s original yarn (such as orders for yarn used to make famous French brand-name products) are increasing dramatically, making up for the slump in ordinary products (yarn). The success of the company’s own brand has also increased employees’ morale and revitalized the company internally as also impossible to ignore.

Brand and pricing policy
The company’s own-brand products are priced by executive director G and his wife, who assess the designs and value added (irrespective of manufacturing cost). They are normally priced at a higher level than that at which they are sold to apparel makers, and the company has no intention of selling them off cheap in order to maintain the level of its products and confidence in its brand.

The brand is targeted at middle-aged women and designed to suit actual consumer tastes. However, the company is expanding its range and makes another “antenna” brand that is more fashionable and features more adventurous designs. By having two brands, the company aims to achieve the twin goals of pursuing fashionable, innovative designs and achieving a high reputation at exhibitions and other events overseas, and to produce products that actually sell.
In Sections 1 and 2, we verified the role that has been played by SMEs in the past in the development of the Japanese economy from the perspective of the complementary coexistence in parallel niches of SMEs and large enterprises, and movements in the size of SMEs. In Section 3, we then focused mainly on the organizational and decision-making structure of individual SMEs in order to determine by what strategies growth SMEs achieve growth. The dynamic activity of SMEs as a whole examined thus far will assume ever increasing importance if the Japanese economy is to overcome its present malaise, aptly described as the “Japanese disease”, and get on the path to fresh growth and development. In the final section of this chapter, therefore, we consider the enormous importance of the growth of SMEs to the revitalization of the Japanese economy from the perspective of their contribution to job creation, the creation of innovation, and contribution to local communities, and show that the growth of SMEs is essential to Japan’s economic regeneration.

### 1. Growth of SMEs and job creation

The dynamism of SMEs and entry of new entries described in Section 2 provide enormous employment opportunities through their expansion in size. Let us begin this section, then, by confirming the conspicuous role of SMEs and new entries in job creation.

Let us look at the job change situation at business establishments in the period from 1996 to 2001. Classifying each establishment as a continuing establishment, new establishment or closed establishment, it becomes apparent that job creation at new establishments is strikingly large. At continuing establishments, meanwhile, a breakdown by number of workers shows that the job creation rate is larger the smaller the size category (Fig. 2-1-42). From the point of view of job creation, then, new enterprises and SMEs make a major contribution to the Japanese economy.

### Fig. 2-1-42  Job change situation at establishments from 1996 to 2001

#### (1) Short-term job change situation at establishments (continuing, new, closed)

New establishments have large impact on job creation

<table>
<thead>
<tr>
<th>Size of Workforce</th>
<th>Continuing Establishments</th>
<th>New Establishments</th>
<th>Closed Establishments</th>
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</thead>
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<tr>
<td>Creation Rate</td>
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<td>Decrease</td>
</tr>
<tr>
<td>Destruction Rate</td>
<td>19.2%</td>
<td>Increase</td>
<td>Decrease</td>
</tr>
<tr>
<td>Net Change</td>
<td>12.0%</td>
<td>Increase</td>
<td>Decrease</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of Workforce</th>
<th>Creation Rate</th>
<th>Destruction Rate</th>
<th>Net Change</th>
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</thead>
<tbody>
<tr>
<td>1~5</td>
<td>20.7%</td>
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<td>7.8%</td>
</tr>
<tr>
<td>6~20</td>
<td>20.0%</td>
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<td>7.7%</td>
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<td>19.3%</td>
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<td>301~</td>
<td>14.9%</td>
<td>11.3%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).

Notes:
1. Continuing establishments are establishments that are traceable in both the 1996 and 2001 surveys.
2. New establishments are establishments not in existence at the time of the 1996 survey but existing at the time of the 2001 survey.
3. Closed establishments are establishments existing at the time of the 1996 survey but not in existence at the time of the 2001 survey.
4. The creation (destruction) rate is found by dividing the total number of jobs created (destroyed) by the total number of workers at the beginning of the period (1996) at each class of establishment.
2. SME growth and innovation creation

As observed in Section 2, the growth of SMEs is intimately related to entry into new fields. Enterprises thus entering new fields do not succeed by simply copying businesses already in that field (i.e. “dead copying” an existing business), but instead need to differentiate themselves in some way from other enterprises. Entry into new fields therefore needs to be accompanied by innovation, and SMEs lead innovation of this kind.

According to the United States’ The State of Small Business: A Report of the President, for example, 8,074 innovations in 362 industries were observed in a survey of 46 technology, engineering and business newspapers, of which it was estimated that SMEs were responsible for 55% (Fig. 2-1-43).

In Japan, too, an examination of total factor productivity (TFP) of SMEs and large enterprises in manufacturing from 1995 to 2001 according to METI’s Basic Survey of Japanese Business Structure and Activities reveals the average for SMEs to be higher than that of large enterprises, indicating that SMEs have innovated and developed their own technologies (Fig. 2-1-44). Thus SMEs generate innovation as they grow.

A great many goods and products that are now commonplace were in fact the result of innovation by SMEs (Case 1-5).

In this way, innovation generated in association with the growth of SMEs has resulted in convenient products that are now everyday necessities. We have thus benefited from the growth of SMEs, and there is therefore a strong need for such activities to increase further in the future.

Fig. 2-1-44 Comparison of TFP growth rates of SMEs and large enterprises

SMEs have higher TFP growth rate than large enterprises

In this way, innovation generated in association with the growth of SMEs has resulted in convenient products that are now everyday necessities. We have thus benefited from the growth of SMEs, and there is therefore a strong need for such activities to increase further in the future.

3. Contribution to the local community: SMEs as community businesses

Attention has recently focused on SMEs as “community businesses” that tackle local problems in specific regions, becoming part of the local social architecture allowing various forms of employment and lifestyles (Column 1).
### Case 1-5 SMEs and innovation

#### Shredders

F, who worked at a copier dealer, came to realize in the course of visiting numerous companies that it inevitably became increasingly difficult to find storage space as confidential documents accumulated in offices. Although F subsequently launched G Ltd., which sold developing fluid, he began to wonder whether it might not be possible to develop a product that would solve this problem of how to dispose of documents. It was from a noodle-making machine that he got the idea of cutting documents into thin noodle-like strips to make them illegible, and he applied this principle to developing and launching a shredder in 1960. To begin with, the device was regarded as no more than a machine for cutting paper, and sales were poor. With the arrival of the IT revolution and the transformation of corporate awareness of the importance of data management, however, demand for shredders grew and unit sales began to increase. Although other companies then began manufacturing similar devices, G Ltd. built up a regional sales network and steadily sought to expand sales. At present there is firm demand for shredders not only as a means of data management, but also for their role in recycling.

#### Propelling pencils

K, who ran a metal processing business in the Taisho period (1912–1926), received an order to process products for revolving-type propelling pencils from a stationery maker. As propelling pencils were in the main too impractical to use at the time due to problems regarding performance (primarily their ease of use and durability), K decided to manufacture them himself. In order to make a more practical pencil, he made all kinds of innovations, such as using nickel to make the pencil more robust and rust resistant, and redesigning the internal design by modifying the shaft propelling the lead to enable maximum use of the lead and allow it to fall off naturally when finished. The result was the establishment of a stationery factory and a completely new type of propelling pencil capable of standing up to practical use. The new pencil was immediately launched. Because of propelling pencils’ traditional image of being difficult to use, however, there was little demand for the product itself. When K’s propelling pencil attracted interest and began to sell because of its quality overseas, where there was a product shortage, orders in Japan began to grow and it gradually began to build up a reputation. Never satisfied with the status quo, K continued to make improvements, constantly developing technologies such as the now widely used “knock mechanism” that allows the lead to be propelled by a single touch, resulting in a world-beating product. The propelling pencil is a prime example of the successful product of the unceasing efforts of one SME.

There are countless other examples of now familiar entertainments and services that were the product of innovation by SMEs, such as the karaoke machine (which appeared in 1971) and general security services (which appeared in 1961). Overseas, too, all kinds of products now essential to present-day society, such as the personal computer and air-conditioner, came from SMEs.

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As the name “lost decade” suggests, the Japanese economy has been and remains in the doldrums since the 1990s. As the high rates of regional unemployment suggest, the provinces, too, are generally in economic difficulties, and local administrations are shackled in what measures they can take due to financial difficulties caused by the decline in tax revenues brought on by the economic slump. Amid these circumstances, there have begun to emerge people from various backgrounds and positions taking action to revitalize their communities by solving local problems themselves. These ventures have come to be recognized as “community businesses”. Similar action has been taken in the past by business ventures and local resident-led NPOs. A major characteristic of these community businesses, however, is that they undertake such activities on an economically independent footing, earn a profit insofar as necessary to continue in business, and are capable of expanding in the event of growth in demand for their business activities. Whereas the principal objective of local resident-led NPO’s is to achieve a particular social mission on a non-profit footing, community businesses’ aim is to form a part of the local economic architecture as well as to achieve their social mission, and they do not always limit themselves to non-profit activities. Unlike ordinary enterprises, though, they do not put the pursuit of profit above all else, and do not have as an aim going public in the future like a business venture. Community businesses offer new lifestyles to local residents by making the most of regions’ distinguishing features, revitalizing communication among residents in a locality, and taking active steps to employ, for example, elderly persons and women. Through such means they aim to establish a presence as part of the social architecture of a region*. Examples of such activities are especially prevalent in the U.S. and U.K.

From the later 1960s, the U.K. suffered a period of economic decline known in Japan as the “English disease”. In order to overcome this critical situation, the Thatcher government formed in 1979 pursued an aggressive policy of financial reconstruction and economic reform in order to achieve “small government” through privatization of state-owned enterprises and reform of the social security system. During this time, there emerged moves by local residents to tackle local problems that central government was no longer able to address. As a result of regional economic decline, the former flourishing shipbuilding city of Glasgow in Scotland fell into a state in which jobs could not be found, and there was a shortage of basic goods and services, such as a lack of daily necessities and food. A number of enterprises were therefore established by local residents, who adopted a membership-based structure of ownership, in order to undertake necessary services in the region. These enterprises were typically run by a board of directors composed largely of people chosen from among the local community in order to create jobs locally, with profits being reinvested in the region. Examples of such enterprises include the Cottier Theatre, which runs theaters, restaurants and café bars, the Possil Community Business, which owns interior furnishing, cleaning and security companies, and Govan Workspace Ltd., which provides enterprise support for small businesses by operating shared offices. Another example of such projects is a car repair and recycling project for assisting the unemployed and providing employment for people with disabilities in Slough, Berkshire. This was the result of a proposal by the Berkshire council, and makes use of central government funding.

In the U.S., in practically all cities now a variety of activities are undertaken utilizing federal subsidies, preferential tax treatment and state or local government support in order to achieve regional revitalization by providing housing, encouraging the development of commerce and industry, and developing employment. California’s world-renowned Silicon Valley, too, was once a region in economic decline from the later 1980s to the early 1990s. What set everything in motion was the commercialization of information technology by academics at universities in the region working in collaboration with local citizen entrepreneurs. Full backup was subsequently provided by local citizens, the infrastructure for local information network developed, and countless local ventures and projects were established, transforming the region into a major cluster crowded with enterprises at the cutting edge of IT and providing a supreme example of how local resident led activities led to massive regional revitalization.

While not on the scale of the U.S. and U.K., community businesses are also sprouting up in Japan. One leading example is a regional project in Nagahama City, Shiga Prefecture, which has been in the doldrums since the appearance of large suburban shopping centers from the 1970s. Local residents bought local buildings of historical
interest, and used them to launch a glassware business. This neighborhood redevelopment project was an outstanding success, and the number of visitors to the area has grown around twenty-fold in 10 years from the latter half of the 1980s.

As economic globalization progresses further, regions will likely find it impossible to overcome their difficulties unless they create the conditions to take advantage of their local features and strengths. The decline in the number of younger workers due to population aging is also expected to sap regional vitality, and this and other regional problems will have a wide-ranging impact, not only on the economy but also on ordinary people’s lives. Business activities that tap the knowledge of local residents who are thoroughly familiar with the local situation will be extremely effective for overcoming such problems. In the future, SMEs thus have an important contribution to make in their role as community businesses as well.

* The British small business researcher D.J. Storey, for example, noted that local community enterprises (business organizations operated in the interests of the development of the local economy and owned by the local community, having a different corporate status to joint-stock corporations) provide people with the least prospect of reemployment with occupational experience (Storey (1994)).
Section 5 Tasks to address to enable Japan’s economic regeneration among SMEs

In the preceding sections, we considered the question of exactly what kind of existence is led by SMEs, and examined in detail the position and role of SMEs in the dramatically changing Japanese economy. What we observed was that, despite the major changes in the economic structure in the past, SMEs have been an active presence in fields of diverse small-lot production and violently fluctuating demand. We have, we hope, eradicated any lingering perception of SMEs as being frail compared with large enterprises.

Focusing on developments at individual SMEs, we saw that more SMEs achieve high growth than large enterprises, the proportion that grow is large, and that they lead a dynamic existence. Those achieving particularly strong growth are motivated SMEs that are constantly seeking out new challenges, such as the development of new products, without resting on their laurels. Based on this evidence, we would say in response to the question raised in the opening paragraph that SMEs lead an existence that is at the same time dynamic and static.

For Japan, the 21st century ushered in continued economic difficulties. In order to overcome these difficulties and regenerate the Japanese economy, it is necessary to build a socioeconomic system that makes maximum use of SMEs’ traditional latent capabilities.

As has been repeatedly noted in every year’s White Paper on Small and Medium Enterprises in Japan, the chief task to be addressed given the presently low entry rate and rising number of bankruptcies to enable SMEs to fulfill this role is the development of a socioeconomic system that enables a high level of startups and facilitates regeneration and comebacks in the event of withdrawals. The second challenge is to build a system that gives SMEs smooth access to funds at a time of change in the financial system in the face of the collapse of land collateral-based lending. And the third challenge is for SMEs to continue to press ahead with steady business innovation in the face of intensifying competition engendered by growing economic globalization.

These issues we look at in the following chapters. In Chapter 2, we turn our attention to the entry (startup) of SMEs, which may be described as the source of the dynamism of SMEs, and withdrawals (exits and bankruptcies), which represent the other side of the coin to regeneration. Regarding startups, we take advantage of the release at the end of last year of the Establishment and Enterprise Census of Japan to examine the current state of startups. Going one step further than last year’s White Paper on Small and Medium Enterprises in Japan, however, we examine withdrawals in greater detail by looking into the subsequent activities of bankrupt enterprises and the requirements for the revival and comeback of businesses and entrepreneurs.

In Chapter 3, we look at the smooth supply of funds that is important to maintaining the “strengths” of SMEs, and examine what shape SME financing should take given the changes in the financial environment. Regarding finance, we take a close look at the characteristics of SME finance that differ from financing for large enterprises, and look at what measures SMEs can take to raise funds in the future. We also identify what is required of financial institutions in order to facilitate SME finance.

In Chapter 4, we analyze the impact on SMEs of business innovation activities undertaken by enterprises together instead of acting alone, which was considered in comparatively little detail in last year’s White Paper on Small and Medium Enterprises in Japan. We consider the subcontracting relations (vertical collaborative networks) that have sustained the Japanese economy to date, and the collaborative business activities (horizontal collaborative networks) of SMEs that have developed among SMEs in recent years, such as joint research activities, industry-university collaboration, cross-industry cooperation, and consider what form collaboration should take with external organizations effective for SMEs.
Chapter 2 Revitalization of entries and facilitation of withdrawals, regeneration and comebacks

Section 1 Depressed state of entries in Japan

During the high growth period, entry and withdrawal activity was high. The entry of new enterprises into the economy is a source of job creation and innovation, and at the same time provides citizens with opportunities for self-fulfillment as individuals. A high level of freedom regarding such entries into the market supports the activities of SMEs and contributes to the development of the Japanese economy, and the level of activity must be raised if the Japanese economy is to be revitalized. In order to achieve this, we need to consider why entries are in the doldrums, and how this problem can be resolved. We start by looking in this and the following section at the problem of SME entries from the point of view of a free entry environment.

1. Long-term trends in the entry rate

We begin by confirming trends in recent years in the entry rate. Long-term trends in the entry rate for Japan as a whole can be determined from the Ministry of Public Management, Home Affairs, Posts and Telecommunications’ (MPHPT) Establishment and Enterprise Census of Japan. Calculated based on number of business establishments according to this survey, the entry rate during the high growth period in the 1960s was high, but began to fall at the start of the 1980s, and had slumped to below the 4% mark according to the latest survey of the period 1999~2001 (Fig. 2-2-1). The entry rate for enterprises, too, began to decline from the 1980s, remaining since at the 2~3% mark (Fig. 2-2-2). If we pick out sole proprietorships and business companies from among enterprises, we find that the entry rate for sole proprietorships and the entry rate for business companies have both been in decline since 1981, and the results are similar for the latest survey period from 1999 to 2001 (Figs. 2-2-3~4).

Fig. 2-2-1 Trends in entry and exit rates on number of establishments (non-primary industry, annual averages)

Entry rate lower than during high growth period

Source: MPHPT, Establishment and Enterprise Census of Japan.
Notes: 1. Entries and exit of business establishments, including openings and closures due to opening, closure and movement of branch and factories.
3. See Appended Note 2-2-1 regarding the method of calculation of the entry and exit rates.
To overcome this problem, let us look at the entry rate for business establishments according the MHLW’s Annual Report on Employment Insurance Programs, the results of which are published annually. Using this report, it is possible to determine the number of business establishments newly covered by employment insurance and the number ceasing to exist for employment insurance purposes in the fiscal year concerned. If the former are regarded as newly established establishments and the latter are regarded as exiting establishments, it is then possible to calculate the entry and exit rate\(^1\). Doing so, we find that the entry rate trended upward in fiscal 1999 and 2000, but the trend in the long term over the period of a decade is downward (Fig. 2-2-5).

\(\text{Fig. 2-2-2 Trends in entry and exit rates based on number of enterprises (non-primary industry, annual averages)}\)

Entry rate declines from 1980s

\[
\begin{array}{ccc}
75-78 & 78-81 & 81-86 \\
5.9 & 4.3 & 4.0 \\
3.8 & 3.5 & 3.2 \\
2.7 & 3.2 & 3.1 \\
1.0 & 1.0 & 1.0 \\
\end{array}
\]

Entry rate

\[
\begin{array}{ccc}
75-78 & 78-81 & 81-86 \\
5.9 & 4.3 & 4.0 \\
3.8 & 3.5 & 3.2 \\
2.7 & 3.2 & 3.1 \\
1.0 & 1.0 & 1.0 \\
\end{array}
\]

Exit rate

Source: MPHPT, Establishment and Enterprise Census of Japan.

2. See Appended Note 2-2-1 regarding the method of calculation of the entry and exit rates.

\(\text{Fig. 2-2-3 Trends in entry and exit rates based on number of sole proprietorships (non-primary industry, annual averages)}\)

Entry rate declines from 1980s

\[
\begin{array}{ccc}
75-78 & 78-81 & 81-86 \\
6.2 & 4.1 & 4.6 \\
6.0 & 4.5 & 4.3 \\
3.9 & 3.9 & 3.9 \\
3.7 & 3.5 & 3.2 \\
\end{array}
\]

Entry rate

\[
\begin{array}{ccc}
75-78 & 78-81 & 81-86 \\
6.2 & 4.1 & 4.6 \\
6.0 & 4.5 & 4.3 \\
3.9 & 3.9 & 3.9 \\
3.7 & 3.5 & 3.2 \\
\end{array}
\]

Exit rate

Source: MPHPT, Establishment and Enterprise Census of Japan.

2. See Appended Note 2-2-1 regarding the method of calculation of the entry and exit rates.

\(^1\) It is also necessary to remember, however, that the number of entries calculated in this manner also includes existing establishments that employ employees for the first time.
The annual entry rate for companies can also be calculated from the number of newly registered incorporations and number of companies filing tax returns according to the Ministry of Justice’s (MOJ) Annual Report of Statistics on Civil Affairs, Litigation and Civil Liberties and the National Tax Agency’s National Tax Agency Annual Statistics Report. Doing so, we find that the entry rate for companies has been in long-term decline since the high growth period (Fig. 2-2-6). Whichever of the above three methods are used then, the entry rate for Japan as a whole appears almost certainly to be following a long-term downward trend.

2. Long-term trends in entry rate by industry

In the preceding paragraphs, we saw how the entry rate for Japan as a whole is in long-term decline. Below, we turn to look at whether there are any differences between individual industries in trends in the entry rate. We look first at trends in the entry rates in key industries using the MPHPT’s Establishment and Enterprise Census of Japan again. What we discover is that whereas the entry rate has continued to drop rapidly in manufacturing since the latter half of the 1960s, the entry rate stayed approximately constant in the wholesale,

Fig. 2-2-4  Trends in entry and exit rates based on number of business companies (non-primary industry, annual averages)

Entry rate begins to decline from beginning of 1990s

Source: MPHPT, Establishment and Enterprise Census of Japan.
2. See Appended Note 2-2-1 regarding the method of calculation of the entry and exit rates.

Fig. 2-2-5  Trends in entry and exit rates based on number of establishments with employees

Entry rate declines to 4% level from start of 1990s

Notes: 1. Entry rate = number of establishments newly covered by employment insurance in fiscal year concerned / number of establishments covered by employment insurance at end of previous fiscal year x 100 (%)
2. Exit rate = number of establishments that cease to be covered by employment insurance in fiscal year concerned / number of establishments covered by employment insurance at end of previous fiscal year x 100 (%)
3. Establishments covered by employment insurance are establishments established under Article 5 of the Employment Insurance Law and Article 4 of the Law on Collection of Labor Insurance Premiums.
retail and service sectors of non-manufacturing until the beginning of the 1980s. While the entry rate subsequently slumped in the wholesale sector, it fell only slightly in retailing since the 1980s, indicating the presence of differences according to industry. But while there are differences in the downward trend in the entry rate depending on industry, the overall trend in all industries is downward (Fig. 2-2-7).

**Fig. 2-2-6** Trends in number of incorporation registrations and company entry and exit rates
Decline in entry rate since collapse of bubble

![Graph showing trends in number of incorporation registrations and company entry and exit rates.](image)


**Notes:**
2. The numbers of companies in 1963 and 1964 are estimates based on the National Tax Agency’s Results of the Corporation Sample Survey. The number of companies from 1967 includes associations.
3. Company entry rate = number of incorporation registrations / number of companies in previous year x 100 (%)
4. Company exit rate = company entry rate - rate of increase (%)

**Fig. 2-2-7** Trends in entry and exit rates by industry (based on number of establishments, annual average)
Conspicuous decline in entry rate for manufacturing compared with high growth period

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<tr>
<td></td>
<td>Exit rate</td>
<td>2.1</td>
<td>3.3</td>
<td>3.6</td>
<td>3.2</td>
<td>4.0</td>
<td>4.0</td>
<td>3.4</td>
<td>6.4</td>
<td>4.3</td>
<td>4.6</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td>Entry rate</td>
<td>6.3</td>
<td>6.7</td>
<td>6.1</td>
<td>6.1</td>
<td>6.4</td>
<td>5.3</td>
<td>4.9</td>
<td>4.7</td>
<td>5.0</td>
<td>3.8</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Exit rate</td>
<td>3.8</td>
<td>4.0</td>
<td>3.8</td>
<td>3.3</td>
<td>3.1</td>
<td>3.2</td>
<td>3.6</td>
<td>2.9</td>
<td>4.2</td>
<td>2.8</td>
<td>4.8</td>
</tr>
</tbody>
</table>

**Source:** MPHPT, Establishment and Enterprise Census of Japan.

**Notes:**
1. Entries and exit of business establishments, including openings and closures due to opening, closure and movement of branches and factories.
3. See Appendixed Note 2-2-1 regarding the method of calculation of the entry and exit rates.
4. Classification of industries as of 2001 according to MPHPT, Japan Standard Industrial Classification (revised October 1993).
3. Present entry situation

The entry rate is thus in long-term decline, creating a problem for the Japanese economy that is now attracting considerable attention. As the MPHPT’s Establishment and Enterprise Census of Japan for 2001 was published at the end of last year, we look below in more detail at the latest snapshot of the entry situation taken in 2001, which is the latest year for which data are available.

(1) Entry rate by industry

Clearly apparent from our examination of the long-term trends in the entry rates in key industries is that trends vary according to industry. Let us therefore take a more detailed look at the situation regarding the entry rate in individual industries in 2001.

Broken down by industry, the entry rate was highest at 6.9% in the food services industry, followed by the finance and insurance, transport and communications, and service industries (Fig. 2-2-8). In mining and manufacturing, on the other hand, the entry rate was at the 1% mark. There was thus considerable variation according to industry.

A breakdown of industry into groups reveals there to be extremely high entry rates in industries such as “services incidental to telecommunications” (61.7%), “computer programming and other” (27.9%), and “welfare services for the aged” (25.4%) (Fig. 2-2-9(1)~(2)). In “secondhand stores, n.e.c.”, “living-related and personal services, n.e.c.” and “miscellaneous professional services”, there can be seen to be large numbers of new entrants entering the field unfettered by existing industry boundaries. These industries are those growing in response to the socioeconomic trend of growing social interest in issues such as the spread of IT, population aging, and recycling issues, reflecting strong entry activity in response to the needs of the times.

(2) Entry rates by region

But while as we have seen there is considerable variation in the entry rate according to industry, does there exist any regional variation? Examining first of all the figures by prefecture based on the MPHPT’s Establishment and Enterprise Census of Japan, we find that the entry rate was higher than in other regions in major urban areas such as Tokyo and Osaka, and that in non-urban prefectures, the entry rates were lower overall (Fig. 2-2-10).

Breaking the figures down further into individual municipalities, we find that whereas the municipalities with the highest entry rates are among Tokyo’s 23 wards, the cities of Oita, Suita, Sendai and Naha also have high entry rates (Fig. 2-2-11).

---

2) E.g. cellular phone agent outlets.
3) E.g. recycling shops.
4) It is impossible to make generalizations regarding the reasons for high entry rates. In the case of these three cities, the high entry rates are likely due to the following:
- Sendai: An increase in restaurant entries as a result of the redevelopment of the area around Sendai Station.
- Suita: Movement from Osaka City and entries in the Esaka region, which is well connected transport-wise and where rents are lower.
- Oita: More rapid turnover of businesses as a result of the entry of commercial complexes, etc.
Fig. 2-2-9 (1) Top 10 industries with highest entry rates (group classification, annual averages, 1999–2001)

High entry rates in industries affected by adoption of IT and population aging

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. The data from 1999 and 2001 are concatenated, and establishments found not to exist in 1999 but to exist in 2001 treated as new establishments.
2. Entry rate = annual average number of entries of establishments / number of establishments at time of 1999 survey x 100 (%)
3. Only industries with 10,000 or more establishments at the time of the 2001 survey were included.
4. Industries classified according to MPHPT, Japan Standard Industrial Classification (revised October 1993).

(2) Description of industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services incidental to telecommunications</td>
<td>Mobile wireless centers (see note), etc.</td>
</tr>
<tr>
<td>Computer programming and other</td>
<td>Software development under contract, packaged software, etc.</td>
</tr>
<tr>
<td>Welfare services for the aged</td>
<td>Nursing homes and day care centers for the aged, etc.</td>
</tr>
<tr>
<td>Secondhand stores, n.e.c.</td>
<td>Secondhand clothing retailing, secondhand furniture retailing, etc.</td>
</tr>
<tr>
<td>Living-related and personal services, n.e.c.</td>
<td>Food piecework processing, marriage counseling centers, tourism information services, chauffeur services, etc.</td>
</tr>
<tr>
<td>Business services, n.e.c.</td>
<td>Displays, signs, temporary services, etc.</td>
</tr>
<tr>
<td>Design</td>
<td>Industrial design agencies, interior design agencies, etc.</td>
</tr>
<tr>
<td>Miscellaneous professional services</td>
<td>Certified social insurance labor consultant offices, business consultation services, real estate evaluators, etc.</td>
</tr>
<tr>
<td>Food retailing</td>
<td>Food stores, groceries/general stores</td>
</tr>
<tr>
<td>Insurance brokers and agents</td>
<td>Life insurance agencies, fire insurance agencies, automobile insurance agencies, etc.</td>
</tr>
</tbody>
</table>

Source: MPHPT, Japan Standard Industrial Classification (revised October 1993).
Note: E.g. cellular phone agents, etc.

Fig. 2-2-10 Entry rates by prefecture (non-primary industry, annual averages, 1999–2001)

High entry rates in major urban areas such as Tokyo and Osaka

Source: MPHPT, Establishment and Enterprise Census of Japan.
Note: Entry rate = annual average number of entries of establishments / number of establishments in 1999 x 100 (%)

Fig. 2-2-11 Top 10 municipalities with highest entry rates (annual averages, 1999–2001)

Wards of Tokyo among top positions

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. The data from 1999 and 2001 are concatenated, and establishments found not to exist in 1999 but to exist in 2001 treated as new establishments.
2. Entry rate = annual average number of entries of establishments / number of establishments at time of 1999 survey x 100 (%)
3. Only municipalities with 10,000 or more establishments at the time of the 2001 survey were included.
(3) Present image of newly established enterprises

Having thus looked at entry rates by industry and region, we look next at what newly established enterprises are really like.

We begin by looking at newly established enterprises according to management organization (Fig. 2-2-12). Doing so, we find that almost all new entries take the form of sole proprietorships (86% of the total in non-primary industry), and that this figure rises to over 95% if we include limited liability companies (yugen gaisha). A breakdown by industry reveals that while in the food service industry almost all new entries are sole proprietorships, almost 20% of new entries in the wholesale industry are joint-stock companies.

Data on the capital stock of new business companies also reveals a conspicuous prevalence of small business companies: over 70% of business companies in non-primary industry as a whole have capital stock of less than ¥10 million, and almost all have less than ¥50 million, and in the retail and food service industries, over 80% of business companies have under ¥10 million (Fig. 2-2-13).

Furthermore, if look at the number of regular employees at newly established enterprises, we find the approximately 60% of the total in non-manufacturing have one or zero regular employees, almost 90% have five or fewer, and the average is 3.3 (Fig. 2-2-14).

Newly established enterprises thus tend to belong to the smallest category in terms of size, and consist to a large degree of sole proprietorships.

Section 2 Reasons behind the decline in the entry rate

As seen in Section 1, new entries have remained in the doldrums since the beginning of the 21st century as well. What, then, is required in order to overcome this situation? In this section, we examine the causes of the decline in the entry rate by analyzing the relationship between the entry rate and the ratio of self-employed income to employee income.

(1) Employer to employee income ratio by industry

In Section 1, it was observed that the entry rate is on a long-term downward trend. Here we ask why the entry rate has continued to fall. To answer this question, we consider what may affect the level of the entry rate of the economy as a whole.

Fig. 2-2-12 Business structure of new enterprises by industry

Sole proprietorships account for large proportion of new enterprises in almost all industries

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. Enterprises = sole proprietorships + business companies
2. Establishments (including branches) not in existence at the time of the July 1999 survey for sole proprietorships, and business companies incorporated and registered in or after July 1999 for companies and partnerships.
3. Business structure at the time of the October 2001 survey. This is not necessarily the same as the business structure at time of entry.
4. Industries classified according to MPHPT, Japan Standard Industrial Classification (revised October 1993).

5) Not including sole proprietors and salaried directors, etc.
6) Annual income of self-employed divided by annual income of employees.
Fig. 2-2-13 Capital of new enterprises (business companies only) by industry
Majority of new enterprises in almost all industries have less than ¥10 million in capital stock

![Capital of new enterprises (business companies only) by industry](image)

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. Business companies incorporated and registered in or after July 1999.
2. Capital stock at the time of the October 2001 survey. This is not necessarily the same as capital stock at time of entry.
3. Industries classified according to MPHPT, Japan Standard Industrial Classification (revised October 1993).

Fig. 2-2-14 Number of regular employees of new enterprises by industry
Large majority have one or zero regular employees

![Number of regular employees of new enterprises by industry](image)

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. Enterprises = sole proprietorships + business companies
2. Establishments (including branches) not in existence at the time of the July 1999 survey for sole proprietorships, and business companies incorporated and registered in or after July 1999 for companies and partnerships.
3. Number of regular employees does not include sole proprietors and salaried directors, etc.
4. Number of regular employees at the time of the October 2001 survey. This is not necessarily the same as the number at time of entry.
5. Industries classified according to MPHPT, Japan Standard Industrial Classification (revised October 1993).
One of the most likely factors determining the entry rate is the real GDP growth rate. This is because the economic environment for starting a business is good when the real GDP growth rate is high, causing entries to increase. Assuming that being self-employed is more profitable than being employed, then a high employer-to-employee income ratio should also have an effect on the entry rate in that it would increase entries.

In order to test these hypotheses, we look at the relationship with the real GDP growth rate and employer to employee income ratio based on the company entry rate calculated using the MOJ’s Annual Report of Statistics on Civil Affairs, Litigation and Civil Liberties and the National Tax Agency’s National Tax Agency Annual Statistics Report.

What we find is a positive correlation with both variables (Figs. 2-2-15-16). The long-term downward trend in the real GDP growth rate since the 1970s signifies a decline in business opportunities, which is one reason for the decline in the entry rate. Regarding the employer to employee income ratio, on the other hand, it can be seen from Fig. 2-2-17 that the ratio of the annual income of the self-employed to the annual income of employees has continued to fall since the start of the 1970s. This means that being self-employed has become financially less attractive than being employed, and this too has contributed to the recent decline in the entry rate compared with during the high growth period.

Where then does this situation arise? In order to find some clues to the answer to this question, we begin by looking at the employer to employee income ratio by industry.

Examining trends in the employer to employee income ratios in manufacturing, wholesaling/retailing, food services and services, it can be seen that whereas there is a clear downward trend in manufacturing, there is no clear downward trend in services (Fig. 2-2-18).

While it was noted in Section 1 that the downward movement of the entry rate was more marked in

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7) The relationship between the entry rate and the relative incomes of the self-employed and employed has been observed in Japan by Genda (1998) and Murakami (1998). In studies of entries in Europe and North America, connecting the two has if anything been the norm, and Lucas (1978) modeled the relationship from the point of view of the decline in self-employed in the U.S. Devine (1994) argues that the increase in the female entrepreneur rate from 1975 to 1985 in the U.S. is due to the increase in the employer to employee income ratio during this period.
manufacturing than other sectors of industry (Fig. 2-2-7), an examination of the relationship between the entry rate by industry and the employer to employee income ratio of that industry reveals a positive correlation (Figs. 2-2-19(1)~(3)), indicating that the decline in the entry rate in each industry is related to the employer to employee income ratio in that industry.

From this examination of trends in the employer to employee income ratio in each industry, it may be concluded that the epicenter, as it were, of the downward drift in the employer to employee income ratio is in manufacturing. This raises the question of what has caused this occur in manufacturing. One possible explanation is that

**Fig. 2-2-17 Trend in employer to employee income ratio**

Employer to employee income ratio continues to decline further from beginning of 1990s

![Graph showing trend in employer to employee income ratio](image)

**Fig. 2-2-18 Trends in employer to employee income ratio by industry**

Decline in employer to employee income ratio in manufacturing continues from start of 1990s

![Graph showing trends in employer to employee income ratio by industry](image)

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8) The entry rate used is here is based on the MHLW’s *Annual Report on Employment Insurance Programs* in order to calculate the entry rate for each industry each year. The entry rates shown in Figs. 2-2-15~16, however, are based on the MOJ’s *Annual Report of Statistics on Civil Affairs, Litigation and Civil Liberties* and the National Tax Agency’s *National Tax Agency Annual Statistics Report*. 

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Notes: 1. Employer to employee income ratio = annual income of self-employed persons / annual income of employed persons weighted according to the number of enterprises in manufacturing, wholesaling/retailing, food services and services.
2. The annual income of self-employed persons is the weighted average of the operating profit of sole proprietorships weighted according to the number of enterprises in manufacturing, wholesaling/retailing, food services and services.
3. The annual income of employed persons is the weighted average of total cash earnings (based on annual earnings at establishments with 30 or more regular workers) weighted according to the number of employees in manufacturing, wholesaling/retailing, food services and services.
manufacturing is more sensitive than other industries to the effects of economic globalization, and the intensification of overseas competition faced by SMEs has caused earnings to slump and self-employed incomes consequently to fall. At the present point in time, however, it is difficult to pinpoint the cause of the decline to this factor alone.

Whatever the cause, the environment for new entries is deteriorating and at the heart of the deterioration is manufacturing, and this is clearly one cause of the decline in the overall entry rate. In order to raise the entry rate, therefore, it is necessary to develop an environment in which choosing to become an entrepreneur and starting up in business is more profitable than being an employee through, among other things, providing support for business innovation.

(2) Number of would-be entrepreneurs and proportion of total

Above we looked at the medium to long-term deterioration in the startup environment for SMEs from the perspective of the declining attractiveness of choosing to be self-employed as opposed to employed. As is also clear from Fig. 2-2-18, the employer to employee income ratio was below 1 in the wholesale/retail, food service and service sectors as well as manufacturing according to up-to-date data. In other words, the average annual income of self-employed

Fig. 2-2-19 (1) Relationship between entry rate and employer to employee income ratio (manufacturing)

Entry rate rises as employer to employee income ratio increases


Note: Employer to employee income ratio = annual income of self-employed persons / annual income of employed persons

Fig. 2-2-19 (2) Relationship between entry rate and employer to employee income ratio (wholesaling/retailing, food services)

Entry rate rises as employer to employee income ratio increases


Note: Employer to employee income ratio = annual income of self-employed persons / annual income of employed persons

Fig. 2-2-19 (3) Relationship between entry rate and employer to employee income ratio (services)

Entry rate rises as employer to employee income ratio increases


Note: Employer to employee income ratio = annual income of self-employed persons / annual income of employed persons
persons is lower than that of employed persons in each industry. At first glance, this would appear to suggest that it does not pay anyone to become self-employed (i.e. enter business). However, the annual income of the self-employed and the annual income of the employed, respectively the numerator and denominator for calculating the employer to employee income ratio, are nothing more than averages for all self-employed persons and all employed persons. Thus even if the employer to employee income ratio were to fall below 1, it would still be possible in individual situations for an employed person to believe that he or she could increase his or her earnings by becoming self-employed, and the expected employer to employee income ratio would in such a case be greater than 1. Some such people would consequently become would-be entrepreneurs.

It is possible to calculate approximately how many would-be entrepreneurs there are in Japan using the MPHPT’s Employment Status Survey. What this shows is that the number of would-be entrepreneurs has consistently exceeded one million since 1977, and that there were 1.24 million would-be entrepreneurs in Japan according to the latest survey in 1997 (Fig. 2-2-20). These figures indicate that despite the deterioration in the startup environment, the number of would-be entrepreneurs has remained firm.

In terms of their proportion of the working population, however, the number of would-be entrepreneurs by no means high. For according to the MPHPT’s Employment Status Survey, approximately only one in 54 of Japan’s working population of 67 million in 1997 wanted to start up in business. From an international research as well, Japan has one of the lowest rates of people considering forming startups in the future. According to a 2001 survey conducted for the Global Entrepreneurship Monitor (GEM) research program launched in 1999 by researchers at Babson College in the U.S. and the London Business School, the proportion of respondents who responded in the affirmative to the question “Do you plan to start up in business within the next six months?” was 4.3% in Japan, placing Japan 22nd out of the 29 countries surveyed (Fig. 2-2-21(1)). The International Society Survey Programme (ISSP) undertaken jointly by research organizations in a number of countries in 1997 also showed the proportion of would-be entrepreneurs to be comparatively low in Japan, with Japan coming 23rd out of 23 in terms of the proportion of respondents who answered “self-employed” to the question “If you were working and could choose between two types of jobs, which would you prefer to be: employed or self-employed?” (i.e. the potential self-employed rate) (Fig. 2-2-21(2)).

On the basis of this evidence, it would be hard to describe Japan as a country in which entrepreneurism runs deep.

(3) Would-be entrepreneur rate by age and background

Thus while Japan has over 1.2 million would-be entrepreneurs, this is not terribly high by international standards. Phrased in these terms, this would appear to support the theory that the Japanese as a people favor the group and stability. Even in Japan both before and after the Second World War, however, there has been a constant stream of creative enterprises that have grown

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**Fig. 2-2-20  Changes in number of entrepreneurs and would-be entrepreneurs**

Number of would-be entrepreneurs has constantly exceeded one million since 1977

![Graph showing changes in number of entrepreneurs and would-be entrepreneurs](image)

**Source:** MPHPT, Employment Status Survey.

**Notes:**
1. “Would-be entrepreneurs” are defined as persons in employment (including employees, self-employed persons and family workers) wishing to change jobs who said that they wanted to work for themselves.
2. “Persons preparing for startup” are defined as would-be entrepreneurs preparing for startup.
3. “Entrepreneurs” are defined as those who changed jobs or were newly employed in the past year and are presently self-employed (including piece-workers working from home and those engaged in agriculture, forestry and fishery).
into global enterprises, and the fact that Japan has a low would-be entrepreneur rate certainly does not mean that Japan is lacking in entrepreneurism.

So what kinds of factors affect the would-be entrepreneur rate? To answer this question, we focus below on male regular employees, who are comparatively homogeneous in nature and mode of employment, and examine the differences due to age in the would-be entrepreneur rate (i.e. the proportion of regular employees who are would-be entrepreneurs)\(^9\).

A breakdown of the would-be entrepreneur ratio by age reveals the ratio to be high among those aged under 30 and in their thirties, but to fall progressively in each older age group\(^{10}\) (Fig. 2-2-22).

This trend is the same even taking into consideration the attributes of entrepreneurs (personal income, marital status, educational background and industry) (Appended Note 2-2-2).

Why then is the would-be entrepreneur rate higher for younger age groups, and why does it decline with age? Whether a regular employee seeks to start up in business could be explained by a variety of factors, such as satisfaction with one’s present job and the possibility of future loss of employment. If, however, the entry rate is affected by whether entering business is profitable as shown in (1), then an important factor in this respect too should be the comparative levels of annual income from being self-employed and annual income as an employee. If we compare the distributions of the annual incomes of

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**Fig. 2-2-21 International comparison of potential entrepreneur rate**

**Japanese would-be entrepreneur rate not high by international comparison**

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion planning startup (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mexico</td>
<td>12.7</td>
</tr>
<tr>
<td>2. New Zealand</td>
<td>9.3</td>
</tr>
<tr>
<td>3. Brazil</td>
<td>9.2</td>
</tr>
<tr>
<td>4. Australia</td>
<td>9.0</td>
</tr>
<tr>
<td>5. United States</td>
<td>6.2</td>
</tr>
<tr>
<td>6. Argentina</td>
<td>8.0</td>
</tr>
<tr>
<td>7. Italy</td>
<td>7.8</td>
</tr>
<tr>
<td>8. Hungary</td>
<td>7.6</td>
</tr>
<tr>
<td>9. India</td>
<td>7.6</td>
</tr>
<tr>
<td>10. South Korea</td>
<td>7.7</td>
</tr>
<tr>
<td>11. Poland</td>
<td>7.4</td>
</tr>
<tr>
<td>12. Ireland</td>
<td>7.3</td>
</tr>
<tr>
<td>13. South Africa</td>
<td>7.2</td>
</tr>
<tr>
<td>14. Canada</td>
<td>7.0</td>
</tr>
<tr>
<td>15. France</td>
<td>6.4</td>
</tr>
<tr>
<td>16. Finland</td>
<td>6.0</td>
</tr>
<tr>
<td>17. Norway</td>
<td>5.7</td>
</tr>
<tr>
<td>18. Spain</td>
<td>5.6</td>
</tr>
<tr>
<td>19. Denmark</td>
<td>5.3</td>
</tr>
<tr>
<td>20. United Kingdom</td>
<td>4.9</td>
</tr>
<tr>
<td>21. Germany</td>
<td>4.8</td>
</tr>
<tr>
<td>22. Japan</td>
<td>4.3</td>
</tr>
<tr>
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<td>4.2</td>
</tr>
<tr>
<td>24. Portugal</td>
<td>3.9</td>
</tr>
<tr>
<td>25. Russia</td>
<td>3.7</td>
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<tr>
<td>26. Singapore</td>
<td>3.5</td>
</tr>
<tr>
<td>27. Belgium</td>
<td>3.4</td>
</tr>
<tr>
<td>28. Netherlands</td>
<td>2.6</td>
</tr>
<tr>
<td>29. Israel</td>
<td>1.2</td>
</tr>
</tbody>
</table>

**Fig. 2-2-22 (Would-be) entrepreneur rate and startup attainment rate (males by age)**

Proportion of persons wanting to start up in business greater among younger age groups, but more fail to achieve startup

<table>
<thead>
<tr>
<th>Age</th>
<th>Entrepreneur rate (%)</th>
<th>Would-be entrepreneur rate (%)</th>
<th>Startup attainment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 or under</td>
<td>5.8</td>
<td>0.23</td>
<td>2.81</td>
</tr>
<tr>
<td>Thirties</td>
<td>9.8</td>
<td>0.39</td>
<td>3.97</td>
</tr>
<tr>
<td>Forties</td>
<td>2.4</td>
<td>0.42</td>
<td>0.37</td>
</tr>
<tr>
<td>Fifties</td>
<td>1.8</td>
<td>0.21</td>
<td>0.37</td>
</tr>
<tr>
<td>60 or over</td>
<td>1.2</td>
<td>0.18</td>
<td>0.09</td>
</tr>
</tbody>
</table>


Notes:
1. Entrepreneurs here include only persons who were previously regular employees, and would-be entrepreneurs include only persons who are currently regular employees.
2. \(\text{(Would-be entrepreneur rate} \times 100)\)
3. \(\text{Startup attainment rate} = \text{number of would-be entrepreneurs} \times 100\) %

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\(^9\) The analysis was limited to regular employees for the following reasons: 1) employed persons and non-employed persons/students become (or seek to become) self-employed by different mechanisms, as employed persons must relinquish their position to do so; 2) among employed persons, startups by regular employees are different from startups of other patterns; and 3) there are a considerable number of such people.

\(^{10}\) The increase in the proportion of would-be entrepreneurs (potential entrepreneurs) the younger the age group is a phenomenon found in other countries as well as Japan. Blanchflower, Oswald and Stutzer (2001) found in their international survey of 21 countries that 1) younger people and 2) males were more likely to be would-be entrepreneurs.
regular employees and the self-employed according to age, we find that the self-employed are more likely to belong to a higher income group than regular employees in the under-30 age group (Fig. 2-2-23). From age 30 to 60 or above, on the other hand, regular employees tend to have higher annual incomes than the self-employed. What this means in general is that there is greater potential for someone aged under 30 to earn more as self-employed than as a regular employee, while anyone older is more likely to earn more as a regular employee than as self-employed. This is one reason for the difference in the would-be entrepreneur rate according to age group.\(^\text{11}\)

We have already seen how the relative incomes of the self-employed and employed impact on the macro entry rate. As we have seen, the considerable significance of the income (part of the opportunity cost) sacrificed as a result of startup as a major determinant of whether a person intends to start up in business may also apply to whether individuals want to start up in business. Assuming this to be the case, ways of reducing the opportunity cost of startups need to be examined in order to raise Japan’s low would-be entrepreneur rate and increase the entry rate (Column 2).

Given that Japan’s working population will grow increasingly middle and old-aged in the future, this means that, assuming other conditions remain the same, there will be an increase in the number of people for whom startups do not pay, creating a problem requiring urgent attention.

**Fig. 2-2-23** Comparison of annual incomes of regular employees and self-employed persons (males by age)

Proportion of high income earners greater among self-employed than regular employees in 29 or under age group

![Comparison of annual incomes of regular employees and self-employed persons (males by age)](image)


Note: Self-employed persons include both those with and without employees.

\(^{11}\) Although the income gap between employed and self-employed persons is greater among those in their thirties than those under 30, the would-be entrepreneur rates are almost the same. This may be because it takes some time for people to become aware of the comparative income situation.
Unlike in Japan, there was in general little awareness of the SME sector as an issue in Parliament or elsewhere in the U.K. until the late 1960s. While in the 1970s interest in SMEs increased slightly as a result, among other things, of the report of the Bolton Commission, it was not until Margaret Thatcher came to power in 1979 that a full-fledged policy on SMEs was developed. The Thatcher government hoped that SMEs would serve to absorb unemployment at a time when the unemployment rate was in double figures, a situation known in Japan as the “English disease”.

The centerpiece of the Thatcher Government’s SME policy was the Enterprise Allowance Scheme (EAS). This scheme was launched on an experimental basis in 1982, and was adopted nationwide in 1983. Its aim was to provide assistance to those currently unemployed in order to encourage them to start up in business.

To qualify under the EAS, applicants needed 1) to be aged at least 18 and under 65, 2) to have been unemployed for at least eight weeks and in receipt of unemployment benefit or income support, 3) to be engaged in business full-time (at least 36 hours a week), 4) to raise business capital of at least 1,000 pounds independently, and 5) to engage in business approved by the Manpower Services Commission. Anyone satisfying these conditions and starting up in business with the approval of the Manpower Services Commission received 40 pounds per week for one year.

The objective of this policy was to eliminate the anomaly of an unemployed person who entered business having less income after entry than before entry due to losing unemployment benefit, and to thereby encourage entries by unemployed people. In this sense, it reduced the opportunity cost of entry and was economically rational.

The number of unemployed persons who became self-employed under the EAS grew by the year, and exceeded 100,000 in 1987–1988. (Fig. 1). The scheme may thus be described as a success from the point of view of users. From a policy perspective, however, there were a number of problems, the first being that around 11~16% of enterprises that received grants ended in failure (i.e. withdrew) within the year (Fig. 1). Out of 100 new entries in any given year, moreover, the number of survivors was 87 after one year and 50 after three years. The survival rate was therefore relatively low. Thus while the “number” of enterprises receiving funds under the EAS increased, the “quality” of enterprises appeared to decline.

A second problem was that two out of three new enterprises established under the EAS employed no one, and a mere 4% of enterprises accounted for 60% of total job creation. The provision of grants was also not rational from the point of view of job creation. In other words, not a few entries would have been formed even if use of the EAS had not been possible.

In terms of cost, however, the scheme was not entirely inefficient, for, given the resulting job creation and reduction in unemployment, the scheme is reported to have saved 2,000 pounds per person.

While the EAS has come in for varied criticism, the fact remains that it has resulted in an increase in the number of entries, and British society appears to have become firmly entrepreneurial in nature. With the upturn in business conditions, the EAS was subsequently transformed in 1991 into the Business Start-up Scheme (BSUS), and since March 1995 there has in practice been no business startup policy for the unemployed.

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**Column 2**

**Measures to reduce the opportunity cost of entries: The Enterprise Allowance Scheme (EAS) of the Thatcher Government in the U.K.**

Unlike in Japan, there was in general little awareness of the SME sector as an issue in Parliament or elsewhere in the U.K. until the late 1960s. While in the 1970s interest in SMEs increased slightly as a result, among other things, of the report of the Bolton Commission, it was not until Margaret Thatcher came to power in 1979 that a full-fledged policy on SMEs was developed. The Thatcher government hoped that SMEs would serve to absorb unemployment at a time when the unemployment rate was in double figures, a situation known in Japan as the “English disease”.

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(4) The low startup attainment rate in younger age groups and its causes

As described above, the would-be entrepreneur rate falls with age. As is also apparent from Fig. 2-2-22, the startup attainment rate, which is calculated by dividing the number of startup entrepreneurs by the number of would-be entrepreneurs, falls as age decreases. Why then are would-be entrepreneurs less likely to actually start up in business the younger they are? In younger age groups, what factors lead someone who is currently a would-be entrepreneur to not establish a startup? In other words, what are the constraints on establishing startups? The answer is clear from a follow-up questionnaire survey of those who complete the Japan Chamber of Commerce and Industry and Central Federation of Societies of Commerce and Industry’s startup class.12) People who finish this startup class are clearly aware of startups. If we therefore regard those who finish the startup class as being would-be entrepreneurs and look at the problems that confront them during startup preparation phase, it is apparent that the younger the age group is, the larger the proportion of would-be entrepreneurs who encounter “financing related” problems (Fig. 2-2-24). There is also an albeit weak tendency for a higher proportion in younger age groups to encounter the problem of “shortage of technical or specialist knowledge”. In contrast, there is no significant difference due to age in the other problems faced by would-be entrepreneurs. The top four problems are as follows:

- **Financing related**
- **Marketing related (sales, suppliers, development of customers)**
- **Shortage of technical or specialist knowledge**
- **Recruitment of human resources (staff and partners)**

### Fig. 2-2-24  Startup problems encountered by would-be entrepreneurs (by age)

**Financing difficulties greater among younger age groups**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Financing related</th>
<th>Marketing related</th>
<th>Shortage of technical or specialist knowledge</th>
<th>Recruitment of human resources (staff and partners)</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 or under</td>
<td>69.2</td>
<td>34.6</td>
<td>34.6</td>
<td>30.9</td>
</tr>
<tr>
<td>Thirties</td>
<td>57.3</td>
<td>37.6</td>
<td>31.3</td>
<td>29.0</td>
</tr>
<tr>
<td>Forties</td>
<td>52.4</td>
<td>38.1</td>
<td>31.3</td>
<td>26.4</td>
</tr>
<tr>
<td>Fifties</td>
<td>39.6</td>
<td>39.6</td>
<td>22.6</td>
<td>26.4</td>
</tr>
<tr>
<td>60 or over</td>
<td>38.1</td>
<td>38.1</td>
<td>31.3</td>
<td>26.4</td>
</tr>
</tbody>
</table>


Notes: 1. Top four problems identified only by persons preparing for startup at the time of the survey.
2. Totals exceed 100 due to multiple responses.

12) This is a class organized by the Japan Chamber of Commerce and Industry and Central Federation of Societies of Commerce and Industry to teach people interested in starting up in business startup know-how. Launched in 1999, 19,335 people had taken the class by the end of March 2002. A sample of people who do not achieve startup despite being would-be entrepreneurs was selected using questionnaire data from this survey due to the lack of any suitable alternative data.

13) Questionnaires were sent to 6,450 people who had completed the startup class, and responses received from 1,869, giving a response rate of 29.0%.
(“marketing related (sales, suppliers, development of customers)” and “recruitment of human resources (staff and partners)”).

Regarding the problem of funding, as younger people are likely to have fewer assets to offer as security and are also lacking in social standing compared with middle-aged and older people, the problem of shortage of funding may be concentrated in younger age groups. In contrast, there is a strong likelihood that older people aged 60 or over would be able to use sources of funding such as their retirement pay to start up in business.

The problem of the financial constraints faced by younger age groups, which have a higher would-be entrepreneur rate, needs to be eliminated and the lack of technical and specialist knowledge also remedied in order to stimulate startups.

Arrangements also need to be put in place to enable more positive support to be provided to would-be entrepreneurs to help with marketing (sales, suppliers, development of customers) and recruitment of human resources.

In order to eliminate the financial constraints faced prior to startup, the National Life Finance Corporation established a scheme called the New Startup Loan Program in January 2002. This scheme is a lending program for proving unsecured, non-guaranteed loans (personal guarantees are not required either) to startup entrepreneurs, and use of the program is growing strongly, providing evidence of the fact that financial constraints act as a barrier to entry.

Furthermore, in order to assist SMEs facing a shortage of technical and other knowledge, the SME Agency is taking action to give SMEs access to the human resources they need, such as by sending retired experts from enterprises and other organizations to recently established enterprises.

In closing, we describe the case of a female entrepreneur in her thirties who made use of the New Startup Loan Program to avoid the problem of financial constraints before startup.

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Due to the limitations of the data, only data on individuals were aggregated. However, persons in their twenties and thirties combined accounted for approximately half of the total.
A Ltd. is an information service provider with three employees that was started up in Tokyo in January 2002, making use of startup support measures. It is currently utilizing an incubation facility in Tokyo.

**Reason for startup**
After graduating from a women’s junior college in 1990, the president was employed in a clerical position at a computer manufacturer. She subsequently changed jobs and started editing information and street fashion magazines. She also became involved in the launch of a women’s magazine at a marketing company. She became a freelance in 1998, and concluded a contract with a manufacturer as a marketing planner and established an “OL” (“office lady” as women clerical workers are known in Japan) marketing organization. This was broken up in February 2001 due to a change in the company’s policy, however, and so A Ltd.’s president decided to make use of this organization to go into business.

**Events leading up to startup**
Although having decided to start up in business, she knew absolutely nothing about the procedure for establishing a company. She therefore started gathering information and making preparations. She began by studying about personal computers, and actively took part in the startup class and female entrepreneur seminar to build up her knowledge. She learnt a great deal on the startup class, whose curriculum incorporates basic training in everything from establishing a company to accounts and financing.

Regarding the problem of financing, she consulted the chamber of commerce and industry, which suggested that she make use of the National Life Finance Corporation’s New Startup Loan Program. Due to the difficulty of finding a guarantor for the enterprise immediately after startup, she found the unsecured, no-guarantor-required aspects of the system enormously valuable. Regarding the startup costs, ¥5 million she raised herself and ¥2.5 million was provided by the National Life Finance Corporation.

Having learnt how to track down all kinds of information as a result of her long involvement in editing work, the president found out for herself about the existence of a rent-free incubation facility in Tokyo, and moved in.

**Line of business**
A Ltd. is involved in a type of marketing activity that utilizes women aged between 20 and 34, who have the most purchasing power and are registered as members. The company is contracted by companies involved in fashionable brands at home and abroad, cosmetics, restaurants, entertainment and similar fields, and members are asked for their honest views on particular themes, which are fed back to the client to assist in product development and the like. The company currently takes on around one case per month, a typical case consisting of having 10 members invited free of charge to a fashionable restaurant for a marketing meeting there in exchange for publishing the restaurant on its website.

As the president does not believe it is possible to beat the major information service providers in terms of quantity, she decided to focus overwhelmingly on offering superior quality. The company has a membership of around 300 women, who consist mainly of OLs working in and around the Marunouchi and Ginza districts of Tokyo. Members receive goods and services from clients, and the company puts considerable effort into maintaining the motivation of members in intangible ways, such as by sending handwritten birthday cards to members from the president.

**Startup points**
The president believes there to be three keys to successful startups. These are that (1) one should be interested in the startup’s line of business, (2) one should be good in that line of business, and (3) one should make an active effort to make one’s presence felt. If one likes and is good at one’s business, then one can persevere through all sorts of difficulties, and unless one has the self-confidence to make one’s presence felt, employees will not follow one.

As she says in her own words, “Even ordinary OLs like I used to be can start up in business if they can satisfy these three key points”, and she now considers her mission to be conveying this belief to would-be women entrepreneurs through, among other things, participating as a panelist at female entrepreneur seminars.
Section 3 Cutting the socioeconomic cost of withdrawals, and the recovery and comeback of enterprises and entrepreneurs

Because of the protracted economic slump in Japan and factors such as the aging of the business people who entered business immediately after the Second World War, withdrawals from the marketplace in the form of exits and bankruptcies have been high in recent years. Such bankruptcies and exits have a serious impact on the people involved with enterprises, such as entrepreneurs and employees, and should ideally be avoided. Where their avoidance is not possible due to various circumstances, ways must be considered of minimizing the impact on entrepreneurs and employees and switching the business resources of bankrupt enterprises to other economic activities. So what does this require? With bankruptcies of enterprises now such a problem and interest in facilitating the recovery and comeback of enterprises, effective industrial policy requires that this question be answered. Due in part to the difficulty of conducting surveys in this field, however, little progress has yet to be made.

In this section, therefore, we examine in detail the actual state of exits and bankruptcies in Japan, and in addition the actual state of recoveries and comebacks from exits and bankruptcies.

1. Trends in exits and bankruptcies

(1) Trends in exits and bankruptcies
As Figs. 2-2-1 to 2-2-4 show, the exit rate in Japan has exceeded the entry rate in recent years. According to the Establishment and Enterprise Census of Japan produced by the Statistics Bureau of the MPHPT, the average annual number of exits of enterprises from 1999 to 2001 was 222,772 (Appended Note 2-2-1).

Bankruptcies have also been high in recent years (Fig. 2-2-25), and bankruptcies with total liabilities of at least ¥10 million came to 19,087 in 2002 according to a survey conducted by Tokyo Shoko Research, Ltd., their fourth highest level since the Second World War (see Part I for details).

(2) Taxonomy of exiting and continuing entrepreneurs
These, then, are the overall trends in withdrawals from the marketplace due to exits and bankruptcies. In practice, however, withdrawals are due to a greater diversity of circumstances than is the case with startups. Exiting entrepreneurs may be entrepreneurs running one-man businesses who close down due to old age or to spend the rest of their years in quiet retirement, or they may be entrepreneurs who close down to start up a new business having decided that their existing business has no future. By way of contrast, there are also entrepreneurs who are forced to withdraw the marketplace due to business not going well and having their bank transactions suspended. Exiting entrepreneurs thus consist of both entrepreneurs with a positive interest in staying in business, and those with a negative interest in doing so. Continuing entrepreneurs similarly consist of those positively and negatively interested in continuing in business as opposed to exiting. Thus there exist both entrepreneurs who want to continue in business and do so, and those whose interest in staying in business is waning but who continue in business for some reason. Fig. 2-2-26 shows each of these types of entrepreneur according to their interest in wanting to continue in business.

Fig. 2-2-25 Long-term trends in number of bankruptcies and bankruptcy incidence rate
Number of bankruptcies has remained high in recent years

Notes: 1. Total number of bankruptcies of businesses with liabilities of at least ¥10 million.
2. SMEs are defined as sole proprietorships and corporations with capital stock of under ¥100 million. Due to the absence of published data, it is not possible to determine the number of SME bankruptcies in 1976 and 1980.
3. Bankruptcy incidence rate = number of bankruptcies (excluding sole proprietorships) / number of ordinary corporations
4. The numbers of ordinary corporations in 2001 and 2002 are according to estimates by Tokyo Shoko Research, Ltd.

15) As this figure does not include enterprises that entered and exited between the date of the last and the previous survey, one should bear in mind that the actual number of exits may be higher.
If we look at the exiting entrepreneurs (bottom of diagram), it can be seen that, irrespective of intention to continue in business, forced exit from the market (typically due to bankruptcy) has a particularly large negative impact on entrepreneurs and those involved with them.

If we look at continuing entrepreneurs (top of diagram), on the other hand, it can be seen that it is not an ideal situation for the individual concerned to have to reluctantly continue in business for various reasons despite not wanting to do so.

Following this taxonomy, below we analyze two cases where entrepreneurs cannot act in accordance with their own wishes: (1) inability to withdraw from business despite having no desire to continue in business, and (2) the stereotypical case of bankruptcy of being forced to withdraw from business despite wanting to continue in business.

2. Desire to continue in business and actual continuation

(1) Characteristic attributes of entrepreneurs who lose the desire to continue in business

As observed above, the demise of an enterprise does not simply take the form of bankruptcy. In fact, there are far more enterprises that exit without experiencing the “hard landing” of bankruptcy.

What circumstances thus cause such exiting entrepreneurs to exit? While the difficulty of tracking what subsequently happens to those who exit makes answering this question problematic, it is possible to get some idea of the causes by tracking entrepreneurs who lose the desire to continue in business because they want to close down their business when they themselves retire. According to the Fact-finding Survey of Business Succession16 conducted in 2002 by the Japan Small Business Research Institute (JSBRI), the proportion of entrepreneurs thinking of closing down their businesses when they retired was 27.6%. The commonest reason given for this was “poor performance” (38.0%), followed by “no suitable successor” (29.0%) (Fig. 2-2-27).

Asked about when they will close down their business, 33.0% of those who have lost the desire to continue in business say they wish to exit within three years (Fig. 2-2-28). Behind exits we thus find “poor performance” to be a cause, and understandably so.

Next we identify what kinds of entrepreneurs managing enterprises with what kinds of attributes consider exiting by analyzing the attributes of entrepreneurs who have lost the desire to continue in business and the attributes of the enterprises that they manage.

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16) A survey undertaken in December 2002 by the JSBRI in collaboration with the Ota City Industrial Promotion Organization and the Higashiosaka Chamber of Commerce and Industry (Appended Note 2-2-3).
We begin with the relationship between size of enterprises and the desire to continue in business. As Fig. 2-2-29 shows quite clearly, the desire to continue in business declines as the size of an entrepreneur’s enterprise falls\(^1\), indicating that the desire to continue in business is affected by enterprise size.

Regarding age of individual entrepreneurs and desire to continue in business, there was not observed to be any clear relationship between the two. As Fig. 2-2-30 clearly shows, entrepreneurs at enterprises with unique technologies and know-how had a stronger desire to continue in business, and other entrepreneurs had less desire to do so.

Next let us consider the relationship between the current state of an enterprise and the desire to remain in business.

If we begin with the relationship between sales in the immediately previous term and the desire to remain in business, we find that a greater proportion of entrepreneurs have lost the desire to continue in business at enterprises whose sales decline compared with the same period a year earlier than at enterprises where sales increased or remained level (Fig. 2-2-31). There is also a greater tendency for entrepreneurs to lose the desire to continue in business at enterprises whose ordinary profit/loss was a “deficit for two consecutive terms” than at enterprises that registered a “surplus in previous term” or “deficit in previous term only” (Fig. 2-2-32).

Regarding the asset situation, more entrepreneurs lose the desire to continue in business at enterprises with more liabilities than assets than at enterprises with more assets than liabilities or equal assets and liabilities (Fig. 2-2-33)\(^2\).

\(^{17}\) Below, the entrepreneurs who did not desire to continue in business are those who responded “want to quit business upon own retirement”.

\(^{18}\) An analysis was made of the relation of desire to continue in business with the profit/loss and asset situation of enterprises taking into consideration the effects of other variables (Appended Note 2-2-4).
Fig. 2-2-31 Trend in sales and desire to continue in business  
Increase in proportion of entrepreneurs without desire to continue in business at enterprises where sales are in decline

![Graph showing the relationship between sales trend and desire to continue in business.](image)

Source: JSBRI, *Fact-finding Survey of Business Succession (2002).*

Notes:  
1. "All respondents" indicates the total number of respondents from whom valid responses were obtained regarding the trend in sales, and does not match the figures given in other figures.  
2. Entrepreneurs without the desire to continue in business are entrepreneurs who answered "want to close business upon retirement" (the same applies below).

Fig. 2-2-32 Ordinary profit and desire to continue in business  
Proportion of entrepreneurs without desire to continue in business increases as earnings deteriorate

![Graph showing the relationship between ordinary profit trend and desire to continue in business.](image)

Source: JSBRI, *Fact-finding Survey of Business Succession (2002).*

Note: “All respondents” indicates the total number of respondents from whom valid responses were obtained regarding ordinary profit, and does not match the figures given in other figures.

Fig. 2-2-33 Asset status and desire to continue in business  
Proportion of entrepreneurs without desire to continue in business increases as asset status deteriorates

![Graph showing the relationship between asset status and desire to continue in business.](image)

Source: JSBRI, *Fact-finding Survey of Business Succession (2002).*

Note: “All respondents” indicates the total number of respondents from whom valid responses were obtained regarding asset status, and does not match the figures given in other figures.

While that describes the relationship between enterprises’ current situation and the desire to continue in business, what must be kept foremost in mind is that trends in sales, ordinary profit, and the balance of assets to liabilities impact simultaneously. Fig. 2-2-34 shows the relationship with the desire to continue in business taking into account these relations. From this it can be seen that whereas among enterprises that register a surplus in the previous term the proportion of entrepreneurs that lose the desire to continue in business is lowest at enterprises with more assets than liabilities and highest at enterprises with more liabilities than assets, no significant relationship was observed between asset status and desire to continue in business at enterprises that registered a deficit in the previous term or a deficit for two consecutive terms.

These results regarding enterprises that register a deficit in the previous term or two consecutive terms differ from our finding so far that the desire to continue in business falls as an enterprise’s business position deteriorates. The question we must then ask is: What causes these differences?

One possible explanation is that the desire to continue in business as a negative choice rises as a result of having no alternative but to continue in business in order to eliminate excess debt where an enterprise is in deficit and has excess liabilities (making sell-offs and transfers...
unlikely options). This runs counter to the normal pattern, according to which the desire to continue in business weakens as asset status deteriorates, thus blurring the relationship between asset status and desire to continue in business\(^{19}\).

The responses of entrepreneurs intending to close down their businesses when they retired who were asked what barriers they faced to doing so also suggest that the problem of final disposal of liabilities upon exiting has some impact. For as can be seen from Fig. 2-2-35, the second most commonly identified obstacle to quitting business after “no means of living after quitting business” was “unable to repay loan even after disposal of all assets when quitting business” (24.0%) (Fig. 2-2-35).

From what we have observed thus far, it may be surmised that smooth exit becomes difficult when the business position of an enterprise deteriorates a certain amount, leaving entrepreneurs with no alternative but to remain in business.

To avoid entrepreneurs having to stay in business reluctantly, it would be better in many cases for enterprises whose business position is deteriorating and whose earnings in their main line of business are unlikely to recover to withdraw before their problems are exacerbated.

(2) Business recovery through transfer of business

One effective means of enabling a smooth withdrawal when an entrepreneur has lost the desire to continue in business for any of a variety of reasons, such as age, difficulty finding a successor or other personal reasons, or a decline in orders, is through the transfer of business to another enterprise.

Use of business transfers has failed to become widespread among SMEs in particular because of the

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19) The prospect theory developed by the 2002 Nobel laureate in economics D. Kahneman helps to explain the behavior of such SMEs with more liabilities than debt (Appended Note 2-2-5).

20) See “3.4 Recovery efforts” in this section regarding the responses of entrepreneurs in critical business difficulties.

21) See “3.5.3 Impact of bankruptcy on employees” regarding the increase in the impact on employees (such as the increase in unpaid wages to employees) as well as on the entrepreneur himself/herself as an enterprise’s financial position worsens, as during bankruptcy.
conventional view of the company as in a sense the entrepreneur’s personal property. It is interesting to note, however, that there are in reality surprisingly many enterprises interested in business transfers. According to the Fact-finding Survey of Business Succession, for example, 23.7% of entrepreneurs yet to decide on a successor or intending to close down their business when they retire said that they are interested in selling or transferring their business to another company (Fig. 2-2-36). According to the same survey, the condition considered especially important by the largest proportion of entrepreneurs in the event that they were to sell or transfer their business is “securing employment of employees” (29.4%). This is followed by “continuance of business with existing customers and suppliers” (26.5%), with “monetary compensation of current entrepreneur” in third place (23.5%) (Fig. 2-2-36).

What then is the perception on the side of enterprises buying or taking over another company’s business operations? In the above survey, all the respondents were asked whether they would agree to take over another company’s business, and 48.1% said that they would “accept depending on the conditions” (Fig. 2-2-37). There are no doubt more than a few enterprises capable of rehabilitating and continuing their businesses, even where for whatever reasons staying in business as an independent enterprise might be difficult, provided that they can combine their operations with those of another enterprise or inject business resources through a business transfer, thus preserving valuable know-how and skills and securing the employment of employees.

In the future, options such as the rehabilitation of businesses through business transfers need to be considered as a means of eliminating the traditional problem described above of entrepreneurs unwillingly remaining in business and reducing the impact of exits for personal reasons.

Regarding business transfers, there are organizations, such as the Osaka Chamber of Commerce and Industry, that gather data on enterprises seeking to transfer and take over business operations and put likely partners in touch with each other, and there are also enterprises in the private sector that provide assistance by, for example, introducing potential takeover partners, conducting surveys, and helping to negotiate conditions. As the number of cases in which business transfers would offer a necessary and effective form of recovery is likely to increase as action to turn enterprises around spreads, such business “match-making” services need to be expanded and improved.

On a closing note, it should be noted that while the Fact-finding Survey of Business Succession analyzed above covered only enterprises in Ota-ku and the city of Higashiosaka, conditions in these areas, which constitute two of the most important industrial clusters in East and West Japan, reflect conditions in the country as a whole and not just in these two areas.

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**Fig. 2-2-36 Interest in sale or transfer of business to another company and important conditions**

23.7% of entrepreneurs interested in sale or transfer of business to another company, many identify employment of employees as condition

![Interest in sale or transfer of business](image)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interested in sale or transfer of business</td>
<td>23.7%</td>
</tr>
<tr>
<td>Not interested in sale or transfer of business</td>
<td>76.3%</td>
</tr>
<tr>
<td>Securement of employment of employees</td>
<td>29.4%</td>
</tr>
<tr>
<td>Continuance of business with existing customers and suppliers</td>
<td>26.5%</td>
</tr>
<tr>
<td>Possibility of monetary compensation of current entrepreneur</td>
<td>23.5%</td>
</tr>
<tr>
<td>Preservation of technologies and know-how</td>
<td>20.6%</td>
</tr>
</tbody>
</table>


**Fig. 2-2-37 Interest in taking over another company’s business depending on the conditions**

Approximately one in two entrepreneurs interested in taking over another company’s business depending on the conditions

![Interest in taking over another company’s business](image)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting depending on conditions</td>
<td>51.9%</td>
</tr>
<tr>
<td>Not interested</td>
<td>48.1%</td>
</tr>
</tbody>
</table>

Chapter 2 — Revitalization of entries and facilitation of withdrawals, regeneration and comebacks

Case 2-2 Business transfer leads to business recovery and smooth exit

Enterprise background
B Ltd., a company in Niigata Prefecture with 27 employees (before transferring part of its business), was established in 1973 for the purpose of designing and constructing air-conditioning systems, and in 1984 it entered the vacuum system manufacturing business. Until recently, the vacuum system manufacturing division was responsible for manufacturing semiconductor manufacturing systems (sputtering and dry-etching systems) as a subcontractor for C Ltd., a wholly owned subsidiary of a major electrical equipment manufacturer. The air-conditioning system design and construction division undertook the design, construction and maintenance of building and factory automation systems as an agent of D Ltd. (one of three in the prefecture).

Events leading up to partial transfer
B Ltd.’s performance grew and grew up until November 2000, and in March 1999 it extended its head office building and expanded its clean room facilities for manufacturing vacuum systems. However, the representative director, who was born in 1942, was approaching retirement age, and he had explained previously to the employees that he felt that, for an SME with fewer than 30 employees, the company’s two major divisions (the vacuum system manufacturing division and the air-conditioning system design and construction division) had spread its resources too thinly, and that he intended to split up the two divisions and ensure that each was taken over by an appropriate specialist. Because of the sudden fall in orders received by the vacuum system manufacturing division with the collapse of the IT bubble, however, the company urgently needed to find a solution to its problems. In the summer of 2001, therefore, B Ltd. approached E Ltd., another company in the same industry with a plant in Niigata Prefecture, regarding starting to do business or selling the vacuum system manufacturing division (on condition that the employees would be taken on along with the business). This is because he felt that there would be no opposition from the workforce as he had already spoken about securing their employment in the case of a sell-off when he proposed the sale of the vacuum system manufacturing division.
E Ltd. initially placed an order worth around ¥1 million. Based on the outcome of the order, it made an offer to buy the vacuum system manufacturing division in October 2001. E Ltd. agreed to purchase the division because (a) the purchase price was cheaper than the ordinary market price as it was based only on the book value of the land, buildings and equipment, and did not include any payment for know-how (which B Ltd. did not seek in exchange for securing the employment of the entire workforce), (b) the lack of any qualms regarding taking on all the employees as it had confirmed for itself B Ltd.’s technical capabilities as a result of its order, and (c) its fear that E Ltd.’s know-how would fall into the hands of C Ltd. if it placed regular orders with B Ltd. As a consequence, B Ltd. transferred its vacuum system manufacturing division to E Ltd. with the closing of its accounts on November 20, 2001.

B Ltd.’s present situation
16 of the company’s 27 employees were transferred to E Ltd., and their salaries are reportedly higher than they were previously. Nine members of the air-conditioning system design and construction division established a new company, F Ltd., and opened a completely separate office. B Ltd. has a 55% stake in F Ltd., with the remainder being owned by B Ltd.’s representative director (5%) and the nine employees (40%). B Ltd. survives only as an investor. While B Ltd.’s representative director does provide advice to F Ltd., he is not involved in the business. The remaining two employees retired.

Reasons for success of transfer
The success of the transfer of business was due to the trusting relationship between both sides (general meetings were held once or twice a month), as the representative director had long explained in detail the company’s situation and his own position to the employees. In addition, the representative director constantly put the employment of his employees above all else. (As the company’s technology was by no means common and reemployment in the locality not easy, he had recommended for some time that employees acquire qualifications such as nationally recognized qualifications.) The planned business transfer had no effect on the representative director’s desire to protect the jobs of his employees, and the focus on ensuring their job security even at the expense of a somewhat lower selling price was one reason for the success of the deal.
3. State of business bankruptcies, and avoidance and recovery from bankruptcy

(1) Definition of bankruptcy
In the preceding pages, we have looked at instances where withdrawal has not been possible (and entrepreneurs have had no alternative but to continue in business despite having no desire to continue in business). Next we look at the state of bankruptcies in those cases where an entrepreneur is forced to withdraw despite wanting to remain in business. Before proceeding to examine bankruptcies, let us first define the word. Although the phenomenon known as bankruptcy is not generally clearly defined, we may adopt as a working definition the following definition proposed by the private-sector credit research agency Tokyo Shoko Research, Ltd.: “the state of being generally unable to pay debts (in general rather than specific debts) when due, and therefore incapable of continuing economic activities as they are.” In this section, we define those cases which fall under categories 1) to 7) below as bankruptcies in order to gain a concrete understanding of bankruptcies, and proceed to examine the issue in (2).

1) Suspension of bank transactions
The bills and checks brought in to financial institutions are taken to regional clearinghouses. In order to ensure the payment of bills and checks, clearinghouses operate a business suspension system under which persons who default on payment (fail to honor) a bill or check two times in the space of six months are prohibited for two years from engaging in current account transactions or lending transactions. Imposition of this sanction is called suspension of bank transactions.

2) Filing for corporate reorganization
The Corporate Reorganization Law provides a reconstructive bankruptcy procedure principally for large joint-stock companies. A petition can be made to the courts to initiate reorganization procedures when a debt that is due cannot be repaid and there is no conspicuous impediment to continuation in business, and where there may arise grounds for straight bankruptcy.

3) Filing for corporate arrangement under the Commercial Code
Corporate arrangement as provided for under the Commercial Code is a reconstructive procedure initiated by applying to the courts when there arises the risk of a company becoming insolvent or having more liabilities than assets. It is characterized by the fact that the entrepreneur remains at the company concerned and is involved in its reconstruction. As a rule, however, the consent of all creditors is required, and its use virtually ceased following the entry into effect of the Civil Rehabilitation Law.

4) Filing for civil rehabilitation
This reconstructive legal procedure was introduced by the Civil Rehabilitation Law, which entered effect in April 2000, and replaced the traditional procedure for reconstruction provided under the Composition Law. This allows a person to petition the courts to initiate rehabilitation proceedings where there is a risk of there arising grounds for straight bankruptcy or a due debt cannot be repaid and there exists no conspicuous impediment to continuing in business. The requirement that proceedings be approved by a meeting of creditors is relaxed, making the system comparatively easier for SMEs to use. For example, it is easier to draw up rehabilitation plans and the entrepreneur may remain at the enterprise and be involved in reconstruction.

5) Filing for straight bankruptcy
Under the provisions of the Bankruptcy Law, it is possible to file for bankruptcy through the courts where there exist grounds for bankruptcy, such as insolvency. When a court declaration of bankruptcy is made, the bankrupt’s assets are liquidated and divided up equitably among the creditors through the courts.

6) Filing for special liquidation
The Commercial Code provides a special liquidation procedure for joint-stock companies after their dissolution. This is a legal process whereby the courts may, if there are deemed to exist circumstances conspicuously hindering liquidation, order the appointment of a special liquidator or the commencement of liquidation by its authority.

22) Under the Law on Mutual Relief for the Prevention of Bankruptcies of Small and Medium Enterprises, bankruptcies are defined as follows:
   i. Filings for straight bankruptcy (hasan), initiation of rehabilitation procedures, initiation of reorganization procedures, initiation of arrangement procedures, or initiation of special liquidation procedures
   ii. Official announcement at a clearinghouse of the existence of grounds for the suspension of financial transactions by financial institutions using that clearinghouse to such financial institutions

However, bankruptcy is normally defined in a broader sense.

23) Quoted from Tokyo Shoko Research, Ltd.’s homepage.

24) From the Japanese Bankers Association homepage and other sources.
7) Initiation of personal resolution (voluntary/internal resolution, etc.)

Resolution of the debts of an enterprise through agreement between debtor and creditors without recourse to legal procedures is called personal resolution. (It is also known as voluntary or internal resolution.) As it is not legally binding, the agreement of all creditors is necessary and it may be a lengthy process. If it proceeds smoothly, however, its advantages are that it can be quicker and cheaper than legal measures.

(2) Socioeconomic impact of bankruptcies and its minimization

In 1., it was noted that withdrawals from the marketplace consist of withdrawals for both positive and negative reasons in terms of the desire to continue in business. Below, we consider in detail the actual state of bankruptcies, which stereotypically take the form of forced withdrawals from the marketplace despite entrepreneurs' continued desire to remain in business.

The impact of the collapse and bankruptcy of a single enterprise can be great or small and varied in effect depending on that enterprise's size and type. The interested parties that can be affected include 1) the bankrupt enterprise, 2) managers and owners, 3) employees, 4) other enterprises with which it does business (including financial institutions), 5) competitors, local governments and central government, and 6) the national economy. The costs borne by each are shown in Fig. 2-2-38.

The bankruptcy of a single enterprise can thus potentially have a wide social impact. In examining bankruptcies, therefore, it is necessary to consider what should be done to prevent, before the fact, the occurrence of bankruptcies that give rise to these various costs, and secondly to consider what measures should be taken in order to minimize these costs in the event that bankruptcy is unfortunately unavoidable. An effective means of doing so is to determine the circumstances pre- and post-bankruptcy of the bankrupt enterprise and interested parties, and to compare their situation with that of enterprises that avoided bankruptcy and recovered despite falling into critical business difficulties. To date, however, the post-bankruptcy circumstances of enterprises, and of entrepreneurs in particular, have been largely unexplored, due in part to the obstacles to research in this area.

Despite these difficulties, however, there has been one study of entrepreneurs of bankrupt enterprises of unparalleled size and breadth, this being the Fact-finding Survey of Business Rechallenge (hereafter called the Rechallenge Survey) conducted by the Small Business Institute Japan (SBI) in December 2002.

The survey was conducted by the SBI to determine the actual circumstances of entrepreneurs of bankrupt

![Fig. 2-2-38 Costs of bankruptcy borne by each sector](image)

Costs borne by bankrupt enterprise
- Sacrifice due to exit, suspension of business, change of business, conversion to other company, reduction in business size, loss of valuable customers and suppliers
- Loss of reputation and confidence
- Loss during turmoil (e.g. unfair seizure of assets, removal of cash and goods, etc.)
- Large reduction in real value due to sale of assets
- Loss of skilled human resources
- Limitation of bank transactions

Costs borne by managers and owners
- Unemployment of managers, loss of means of attaining satisfaction
- Loss of social rights and family life
- Loss of invested capital, debt burden
- Psychological blow of loss of self-confidence, etc.
- Pursuit of managerial, criminal and ethical liability

Costs borne by employees
- Loss of job
- Non-/delayed payment of wages and retirement pay
- Loss of corporate welfare and other benefits
- Loss due to movement between jobs and fall in income
- Inefficiency in new job and psychological and physical stress
- Psychological sense of humiliation
- Loss of hope and future security

Costs borne by customers and suppliers
- Loss of credit provided
- Cost incurred in recovery of claims
- Loss of dividends, interest and benefits
- Loss of work
- Loss and reduction of market
- Aftereffects of bankruptcy, e.g. decline in own standing and unrest among employees
- Loss of source of goods and services
- Reduction of price of goods handled/purchased

Costs borne by national economy
- Wastage of funds, resources and labor
- Non-realization of potential returns and benefits
- Depreciation and wastage due to abandonment after bankruptcy
- Impedance of development of healthy enterprises
- Inducement of misallocation of incomes
- Decline in jobs and incomes
- Loss due to transfer of labor and assets
- Loss of management ability and skills of bankrupt entrepreneurs
- Increased distrust of free enterprise and social instability
- Cost of measures to deal with bankruptcies
- Stagnation and decline of national economy

Costs borne by local/central governments
- Caught up in destructive competition
- Effects of clearance sale of goods after bankruptcy
- Decline in image of industry and goods
- Decline in tax revenues
- Wastage of grants and subsidies
- Cost of auditing, supervision and administration of bankrupt enterprise

Costs borne by competitors
- Loss of market share
- Loss of important customers
- Loss of valuable customers
- Loss of skilled human resources
- Loss of work
- Loss and reduction of market
- Aftereffects of bankruptcy, e.g. decline in own standing and unrest among employees
- Loss of source of goods and services
- Reduction of price of goods handled/purchased

Source: Prepared by SME Agency from Toshikiko Toda Kigyo tosan no yobo senryaku [Strategies for preventing enterprise bankruptcies], Dobunkan Shuppan Co., Ltd., p.21.

25) Some commentators argue that “internal resolution” only occurs in the case of “private resolution where the main creditor(s) consult secretly with the debtor and other parties”.


27) In the 2002 White Paper on Small and Medium Enterprises in Japan, reference was made to an interview survey of 223 former entrepreneurs whose companies had entered straight bankruptcy or had had their bank transactions suspended. The above survey differs from this in that 1) it also includes entrepreneurs of bankrupt enterprises taking various forms (including, for example, companies covered by the Corporate Reorganization Law as well as straight bankruptcies), and 2) it is much larger in scope.
enterprises. It covered the 23,718 entrepreneurs of enterprises that went bankrupt between January 2000 and December 2001 whose address at the point of bankruptcy could be determined. This is equivalent to 62.5% of the 37,933 bankruptcies (with total liabilities of at least ¥10 million) during the same period published by the private-sector credit research agency Tokyo Shoko Research, Ltd. Of the 23,718 questionnaires sent, 1,508 responses (6.4%) were received, which is equivalent to 4.0% of the total number of bankruptcies. In terms of capital stock, the respondents tended to be larger enterprises (Fig. 2-2-39), but their industrial makeup differed little from that bankrupt enterprises as a whole (Fig. 2-2-40).

Below, let us examine the actual circumstances of bankrupt enterprises over time from before until after bankruptcy using mainly the results of the Rechallenge Survey.

(3) Signs of enterprise bankruptcy, bankruptcy avoidance and recovery

Enterprises that have continued in business to date collapse. Although there sometimes occur bankruptcies due to unexpected causes, such as a disaster or the sudden death of the entrepreneur, there are in most cases signs before bankruptcy occurs. Recognizing these signs is an effective means of reducing, if only slightly, the impact on the entrepreneur himself/herself and those involved with the enterprise by allowing an enterprise that could potentially go bankrupt to quickly take action and avoid bankruptcy and recover.

What then are the signs that emerge before the bankruptcy of an enterprise? Let us examine them using

Fig. 2-2-39 Breakdown of questionnaire respondents by capital
Large proportion of bankruptcies of large enterprises in terms of capital stock among respondents

<table>
<thead>
<tr>
<th>Capital Stock</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under ¥1,000,000</td>
<td>17.4%</td>
</tr>
<tr>
<td>¥1,000,000 or over</td>
<td>21.3%</td>
</tr>
<tr>
<td>¥10,000,000 or over</td>
<td>7.6%</td>
</tr>
<tr>
<td>¥100,000,000 or over</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

Respondents

Fig. 2-2-40 Breakdown by industry of bankrupt enterprises and questionnaire respondents
Hardly any deviation in respondents compared with all bankrupt enterprises

Note: Total number of bankrupt enterprises according to research by Tokyo Shoko Research, Ltd.

Fig. 2-2-41 Equity ratio and default rate
The lower the equity ratio, the higher the default rate

Source: Prepared by the CRD Steering Committee.
Note: Equity ratio = total capital / liabilities and total capital x 100
Default rate up to December 2001 based on equity ratio according to financial statements for January-December 1998.
the SME Credit Risk Database\(^{28}\) (CRD) and the *Rechallenge Survey* conducted by the Small Business Institute Japan.

1) Default rate increases as equity ratio falls\(^{29}\)

The equity ratio expresses the proportion of an enterprise’s total capital that consists of capital that is raised by the enterprise\(^{30}\). This ratio should ideally be as high as possible, and the results of an analysis of financial data contained in the CRD confirm that the lower the equity ratio is, the higher the subsequent default rate is (Fig. 2-2-41).

2) Default rate increases as ratio of deposits to borrowing declines

Next let us look at the balance between cash/deposits and borrowing. If we examine the default rate taking as a yardstick cash and deposits / (short-term borrowing + long-term borrowing + discounted notes receivable) \(\times\) 100 we find that the lower this ratio is (i.e. the greater borrowing is compared to cash and deposits), the higher is the subsequent default rate (Fig. 2-2-42).

Our analysis yielded other findings, such as high levels of interest expenses and discount expenses to sales, and an increase in the default rate as an enterprise’s dependence on interest-bearing debt as a means of raising funds increases. The *Rechallenge Survey* too suggests that bankrupt enterprises gradually become dependent on borrowing, with 68.0% of respondents saying that either that their debt in the year previous to bankruptcy had “increased drastically” or “increased gradually”\(^{31}\) (Fig. 2-2-43).

3) Recognition of bankruptcy crisis

So when does the party to a bankruptcy, i.e. the enterprise’s entrepreneur, become aware of an approaching bankruptcy crisis? According to the *Rechallenge Survey*, the average is 16.6 months before bankruptcy, and the majority of respondents became aware of a bankruptcy crisis at least six months beforehand (Fig. 2-2-44).

What is it that prompts the entrepreneur to sense an approaching bankruptcy crisis? Asked to select just one factor, 41.9% of respondents said “decline in..."

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28) The SME Credit Risk Database (CRD) is a large database set up at the suggestion of the SME Agency to enhance the financial information infrastructure and assist the quantitative assessment of the credit risk of SMEs. It contained quantitative data (such as financial data) on approximately 1,350,000 enterprises as of December 2002.

29) The CRD contains data on defaults rather than bankruptcies, defaults being defined as follows: “a party in arrears (for three months in principle)”, “a failure (as determined by a financial institution’s own assessment)”, “(legal or formal) failure”, and “a party for which subrogated payment has been made (by a credit guarantee corporation)”. We proceed on the basis that the CRD’s definition of default means almost the same thing as bankruptcy.

30) Equity ratio = total capital / liabilities and total capital \(\times\) 100

31) According to a report published by the Cabinet Office in December 2002, the signs of bankruptcy are a sharp drop in operating profit from five terms prior to bankruptcy and an accompanying sharp fall in the return on sales.
sales or orders”, and 23.5% said that their sense of crisis was prompted by the “refusal or reduction of loan from financial institution” (Fig. 2-2-45). If we categorize the factors that prompted a sense of bankruptcy crisis according to period before bankruptcy, as shown in Fig. 2-2-46, we find that the proportion of enterprises saying “refusal or reduction of loan by financial institution” increases as bankruptcy nears. One would expect an entrepreneur with a sense of approaching bankruptcy to have numerous worries. Asked what concerned them most about bankruptcy, the largest proportion of entrepreneurs (23.8%) said “unemployment of employees” (Fig. 2-2-47), providing evidence of entrepreneurs’ concern for supporting the livelihoods of their employees and their families.

(4) Recovery efforts
The next question we consider is what measures entrepreneurs sensing a bankruptcy crisis take in order to avoid bankruptcy. For the Rechallenge Survey, respondents were asked what measures they took to avoid bankruptcy after they began to sense a bankruptcy crisis. To examine whether bankrupt enterprises exhibit any characteristic tendencies regarding measures taken, Fig. 2-2-48 shows the

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**Fig. 2-2-44 Timing of recognition of danger of bankruptcy**
One in two entrepreneurs recognize danger of bankruptcy at least six months before bankruptcy

**Fig. 2-2-45 Reasons for sensing danger of bankruptcy**
Largest proportion of entrepreneurs sense danger of bankruptcy due to decline in sales


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**Fig. 2-2-46 Timing and cause of sensing danger of bankruptcy**
Increase in financial position as cause with approach of bankruptcy

**Fig. 2-2-47**
Decline in sales/orders Bankruptcy of customer Bankruptcy of supplier Bankruptcy of customer Bankruptcy of supplier Refusal or reduction of loan by financial institution Loss Other

responses of enterprises asked a similar question for the Fact-finding Survey on Overcoming Difficulties (see Appended Note 2-2-6) conducted by the SBI at the same time as the Rechallenge Survey. A comparison of the responses to this survey to those of bankrupt enterprises and surviving enterprises that sensed a crisis of a level threatening the enterprise’s continued existence (such as a decline in sales or orders, or the bankruptcy of a customer or source of orders) is shown in Fig. 2-2-48.

The measures taken to overcome business difficulties may be classified into i) measures intended to improve the earnings structure of a business (such as by strengthening sales activities and cutting costs), and ii) measures designed to effect a temporary solution to financial difficulties (such as the introduction of fresh borrowing and the injection of the entrepreneur’s own funds).

Following this classification, we find that while there is no major variation between bankrupt enterprises and surviving enterprises in the proportion of enterprises that adopt measures to improve their earnings structure, many more bankrupt enterprises than surviving enterprises take measures to address their financial position. However, these findings are entirely logical if we consider that bankrupt enterprises are in a more serious position than surviving enterprises in terms of their business profits and financial status.

Next let us compare the measures taken to overcome business difficulties by surviving enterprises and by bankrupt enterprises in an equivalent position in terms of profits and financial status (Figs. 2-2-49-51).

In comparison with enterprises registering an ordinary profit and with more assets than liabilities, it can be seen that conspicuously more bankrupt enterprises took measures such as the above to tackle financial problems. From this we may conclude that an important factor that sets apart whether enterprises of similar profit and financial statuses are able to avoid a crisis is whether they make steady efforts in their core business or take the option of seeking a short-term financial solution to their problems.

Both surveys likewise asked respondents about the financial institutions from which they had borrowed, revealing that a conspicuously larger proportion of bankrupt enterprises than respondents as a whole (surviving enterprises) to the Fact-finding Survey on Overcoming Difficulties responded that they had borrowed from non-bank financial institutions. This would seem to be indicative of an increasing dependency on borrowing from non-banks, whose lending screening...

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**Fig. 2-2-48 Bankruptcy avoidance measures of bankrupt and surviving enterprises**

Bankrupt enterprises more likely than surviving enterprises to tackle financial position

![Diagram showing bankruptcy avoidance measures](https://via.placeholder.com/150)


Notes: Proportion of entrepreneurs giving valid responses who adopted each measure. Surviving enterprises include only enterprises that responded that their sense of crisis "continues and similarly concerned". Totals exceed 100 due to multiple responses.

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32) Although the choice of answers was otherwise practically identical, only the Fact-finding Survey on Overcoming Difficulties gave “finding successor” as a possible response.

33) Although not to the extent of enterprises with “ordinary profit” and “more assets than liabilities”, enterprises with an “ordinary loss in previous term only” and “equal assets and liabilities” and enterprises with “ordinary loss for two consecutive terms” and “more liabilities than assets” exhibit a similar trend.

34) The following results of analysis remain unchanged even taking into account variables such as equity ratio, ratio of ordinary profit to sales, and ratio of cash/deposits to borrowing (Appended Note 2-2-7).
**Fig. 2-2-49** Bankruptcy avoidance measures of bankrupt and surviving enterprises (comparison between enterprises registering “ordinary profit in preceding term” and “more assets than liabilities”)

Bankrupt enterprises more likely than surviving enterprises to tackle financial position


Notes: Proportion of entrepreneurs giving valid responses who adopted each measure. In order to compare groups of enterprises with similar attributes, both “surviving enterprises” and “bankrupt enterprises” consist only of enterprises responding “ordinary profit in preceding term” and “more assets than liabilities.” Totals exceed 100 due to multiple responses.

**Fig. 2-2-50** Bankruptcy avoidance measures of bankrupt and surviving enterprises (comparison between enterprises registering “ordinary loss in preceding term only” and with “equal assets and liabilities”)

Bankrupt enterprises more likely than surviving enterprises to tackle financial position


Notes: Proportion of entrepreneurs giving valid responses who adopted each measure. In order to compare groups of enterprises with similar attributes, both “surviving enterprises” and “bankrupt enterprises” consist only of enterprises responding “ordinary loss in preceding term only” and “equal assets and liabilities.” Surviving enterprises include only enterprises that responded that their sense of crisis “continues and similarly concerned.” Totals exceed 100 due to multiple responses.

**Fig. 2-2-51** Bankruptcy avoidance measures of bankrupt and surviving enterprises (comparison between enterprises registering “ordinary loss for two consecutive terms” and with “more liabilities than assets”)

Bankrupt enterprises more likely than surviving enterprises to tackle financial position


Notes: Proportion of entrepreneurs giving valid responses who adopted each measure. In order to compare groups of enterprises with similar attributes, both “surviving enterprises” and “bankrupt enterprises” consist only of enterprises responding “ordinary loss for two consecutive terms” and “more liabilities than assets.” Surviving enterprises include only enterprises that responded that their sense of crisis “continues and similarly concerned.” Totals exceed 100 due to multiple responses.

**Fig. 2-2-52** Financial institutions borrowed from

Proportion of use of non-banks especially high among bankrupt enterprises


Note: “Leading banks” here consist of city banks, long-term credit banks and trust banks.
procedures are considered to be less rigorous, at a time of severe business difficulties when banks, credit associations and other such financial institutions with deposit accounts are adopting a more cautious attitude to lending, providing clear evidence of the severity of their financial position (Fig. 2-2-52). Thus entrepreneurs at enterprises facing bankruptcy crisis tend to be pushed into a corner by their current financial position, and some entity is required that is capable of providing advice from an impartial standpoint to enable enterprises to take appropriate action and minimize the impact on interested parties (including entrepreneurs).

There may also occasionally be cases where business recovery is not a viable option, and in such cases it is important that the judgment that remaining in business should be difficult be taken as early as possible in order to prevent the damage worsening. In reality, however, judging whether or not continuing in business is possible is not easy. The most important thing in practice, therefore, is to begin reviewing business with a view to recovery as soon as possible, while also considering the possibility of not continuing in business. As there are believed to be large numbers of enterprises that, providing that they have operations with future growth potential, would be capable of recovery if they were to improve their management focusing mainly on these areas, the Government has progressively established a SME Revitalization Support Councils in each prefecture from February 2003, under the fiscal 2002 supplementary budget as a business recovery support measure, whose function is to provide advice and consultations and help draw up recovery plans. If enterprises are to be helped to recover, it is important that these SME Revitalization Support Councils, too, should listen to the views of interested parties and begin looking into steps toward rehabilitating enterprises when providing support, such as advice and guidance, to SMEs, and that a quick start should be made to prevent the damage worsening where it is judged that continuation in business would be difficult.

(5) Occurrence of bankruptcies and their impact

The bankruptcy of enterprises imposes heavy costs on a broad range of parties, affecting not only the enterprise going bankrupt but also the various people and enterprises involved with it.

As noted earlier in this section, those bearing the cost of bankruptcy include bankrupt enterprises themselves, entrepreneurs and owners, employees, suppliers and customers, competitors, local and central governments, and the national economy. Of these, below we examine in detail the respective effects on bankrupt enterprises, entrepreneurs and owners, employees, and suppliers and customers by analyzing the Rechallenge Survey used above.

1) Cost borne by bankrupt enterprises

When a bankruptcy occurs, considerable funds are required to pay off debts due to the need to immediately pay back borrowing from creditors such as financial institutions. Enterprises have to quickly sell off facilities and inventories to raise the funds, and it may be necessary to smoothly liquidate assets to pay creditors even if closing down rather than going bankrupt. In such cases, one would expect enterprises to tend to be taken advantage of and not receive a fair valuation, and the Rechallenge Survey, which found that 37.0% of enterprises sold off the majority of their inventory for less than half the usual price, supports this hypothesis (Fig. 2-2-53).

The same survey also found that 23.3% of enterprises had to make additional expenditures on the disposal of redundant facilities, showing that combined with the heavy discounting of inventory, the removal of equipment too entails considerable costs. The value of an enterprise’s intangible as well as tangible assets plummets, as it loses not only its visible assets, such as facilities and inventories, but also suffers the loss of revenue streams due to the axing of business with customers and the decline in the enterprise’s capabilities as human resources drain away.

**Fig. 2-2-53  Decline in value of enterprise after bankruptcy**

<table>
<thead>
<tr>
<th>Decline in value of enterprise in terms of both inventories and equipment after bankruptcy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale of majority of inventory at no more than half normal price</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
<tr>
<td>Additional expenditure required for disposal of equipment</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
</tbody>
</table>


35) Writer Tomohiro Koseki (2002), who as well as working 51 years as a latheman after graduating from high school has published numerous works of non-fiction focusing on small workshops, describes the views of the proprietors of small workshops such as the following: “Closing down also takes money. Far from being worth selling, old machinery costs money to dispose of, and you want to vacate a rented workshop and hand it back to the owner after clearing it out properly. Even if what you really want to do is a runner”. Although the speaker in this instance is talking about exits, much the same could be said of bankruptcies.
2) Effects of bankruptcy on entrepreneurs
Entrepreneurs who have been making every effort to avoid bankruptcy run into the problem of how to pay off their enterprise’s debts in the event of bankruptcy.
When an enterprise borrows from a financial institution, it is normal for the entrepreneur to provide a personal guarantee or to pledge his or her personal assets as security. According to one survey, 79.3% of entrepreneurs said that they provide a personal guarantee or pledge their personal assets as security (Fig. 2-2-54). As we have already seen, it is also not unusual for entrepreneurs to use their funds before bankruptcy or inject loans borrowed in their own name as individuals (Fig. 2-2-48). Entrepreneurs can thus bear a heavy debt when their enterprises go bankrupt.
According to a survey by Tokyo Shoko Research, Ltd., there were 19,090 bankruptcies of SMEs in 2001, with total liabilities of ¥10,963.5 billion and average liabilities per bankruptcy of around ¥574 million, while in 2002 there were 19,022 bankruptcies with total liabilities of ¥10,452.9 billion and an average of around ¥550 million per bankruptcy. Fig. 2-2-55 shows the amount of debt borne by individual entrepreneurs as a result of the bankruptcy of their enterprises. From this it can be seen that more than one in two, or 57.4%, of entrepreneurs said that their personal debt immediately after bankruptcy exceeded ¥100 million. In more than a few cases, this debt is repaid either through the sale of personal assets or through legal procedures such as straight bankruptcy or civil rehabilitation.
If we look at the disposal of personal assets according to the results of the Rechallenge Survey, we find that 74.1% of the 1,182 respondents who owned their own homes one year prior to bankruptcy sold their homes to repay their debts, and likewise that 65.0% of the 809 respondents who owned their own cars one year prior to bankruptcy sold their car to repay their debts (Figs. 2-2-56~57). In addition, 43.4% of entrepreneurs filed for straight bankruptcy in order to resolve debts arising as a result of bankruptcy (Fig. 2-2-58). These results too indicate that the economic cost to

Fig. 2-2-54 Scope of personal guarantees and offering of personal assets as security
Large majority of entrepreneurs provide personal guarantees and/or offer personal assets as security

- Guarantee or personal assets of entrepreneur
- Guarantee or personal assets of entrepreneur's family or relatives
- Guarantee or personal assets of third party other than entrepreneur's family or relatives

Proportion of respondents providing such guarantees or security

79.3% 54.9% 32.1%


Fig. 2-2-55 Debts personally assumed by entrepreneurs as a result of bankruptcy
Majority of entrepreneurs shoulder debt of more than ¥100 million

- ¥5,000,000 or less
- Over ¥5,000,000~¥10,000,000
- Over ¥10,000,000~¥50,000,000
- Over ¥50,000,000~¥100,000,000
- Over ¥100,000,000~¥500,000,000
- Over ¥500,000,000
- No response/unknown

Immediately after bankruptcy
11.9% 16.0% 42.2% 15.2% 12.4%

At time of survey
11.9% 16.0% 42.2% 15.2% 12.4%


36) Although according to the survey more entrepreneurs owned their own homes than owned their own cars, this may indicate that many entrepreneurs used vehicles in registered in their enterprise’s name rather than their own. This is clear evidence of the lack of any clear division between the entrepreneur’s personal assets and those of the enterprise.
entrepreneurs of enterprise bankruptcy is exceedingly high.

3) Impact of bankruptcy on employees
The employees who earned their livelihoods from an enterprise that goes bankruptcy also face critical difficulties. According to the Rechallenge Survey, wage arrears occur at 38.5% of enterprises, and the amount unpaid averages 2.13 month’s wages.

At enterprises that are in a completely impossible financial position in particular, there is a strong probability that payment of wages to employees will be affected. An examination of the relationship of failure to honor bills and checks payable and insolvency (e.g. inability to repay loans) with salary arrears reveals that the proportion of enterprises responding that “salary arrears occurred” is significantly higher among enterprises saying that “insolvency was certain within one month” or “insolvency occurred” than among enterprises that said that there was “no hindrance to financial position within one month” (Fig. 2-2-59).

If we then examine the relationship with asset status at the time of bankruptcy, we find that a significantly greater proportion of enterprises with “equal assets and liabilities” or “more liabilities than assets” than

Fig. 2-2-56 Proportion of entrepreneurs who sold own home to repay debt
Around three in four entrepreneurs with own home one year before bankruptcy sold home to repay debt

![Diagram showing proportion of entrepreneurs who sold own home to repay debt]


Fig. 2-2-57 Proportion of entrepreneurs who sold own car to repay debt
Majority of entrepreneurs with own car one year before bankruptcy sold car to repay debt

![Diagram showing proportion of entrepreneurs who sold own car to repay debt]


Fig. 2-2-58 Forms of disposal of debt used by entrepreneurs of bankrupt enterprises
Over 40% of entrepreneurs experience personal bankruptcy

![Diagram showing forms of disposal of debt]


Note: Form of disposal of debt used most recently prior to survey.

Fig. 2-2-59 Relationship between insolvency and salary arrears at time of bankruptcy
Increase in salary arrears as financing difficulties increase

![Diagram showing relationship between insolvency and salary arrears]

enterprises with “more assets than liabilities” said that “salary arrears occurred” (Fig. 2-2-60).

Although the workers’ claims of employees in respect of their bankrupt enterprise, such as wages, are treated as privileged claims with higher priority than other claims under straight bankruptcy proceedings, it is frequently the case that an enterprise either already has hardly any realizable assets when it goes bankrupt or, even if it has assets, it is unable to secure sufficient cash to pay unpaid wages due to the slump in the value of assets described above.

Employees also commonly become unable to receive retirement pay which they would otherwise have received had their enterprise continued to prosper. 39.9% of enterprises that had retirement pay schemes said that they fell into arrears or cut payment of retirement pay, with retirement pay being cut by an average rate of 75.4% (37) (Fig. 2-2-61).

4) Impact on guarantors
When an enterprise borrows business funds, it is not unusual for a third-party guarantor to be required. As a result, third parties with no direct connection are also caught up in enterprises’ bankruptcies (38).

According to the Rekchannge Survey, 32.1% of entrepreneurs said that guarantees were provided by guarantors other than the themselves, their families or relatives (“third-party guarantors”) (Fig. 2-2-54). While this is valuable to creditors as a means of ensuring the security of their claims, this imposes a serious burden in the event of bankruptcy, and “impact on guarantors” is the most commonly cited “biggest concern” of entrepreneurs along with “unemployment of employees” and “impact on family” (Fig. 2-2-47).

5) Effects on customers and suppliers
The costs arising as a result of having done business with a bankrupt enterprise include the interruption of supplies of goods and technology and loss of custom, as well as the transformation of credits, such as accounts receivable, advances and bills, into bad debts. According to the Survey of the Financial Environment conducted by the SME Agency in 2002, 42.1% of the respondents said that claims had become irrecoverable as a result of the exit or bankruptcy of a supplier or customer, of which 26.3% said that they had irrecoverable claims with more than one supplier or customer.

If we take as a basis the value of claims reported to the courts, we find that the average annual value of bad debts is ¥56 million at enterprises with 20 or fewer employees, and ¥55 million at enterprises with between 21 and 100 employees. It is thus clear that many SMEs are hindered in business by the downsizing and bankruptcy of enterprises with which they do business and the consolidation of financial institutions. In order to assist enterprises confronted by such difficulties, the Government is

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37) Average rate of cut = amount not paid / amount originally due × 100
38) It is common for interested parties, such as supplier and client enterprises, to act as guarantors.
enhancing the financial safety net by, for example, expanding the safety net guarantee system to ¥10 trillion and establishing the Refinancing Guarantee Program for Facilitating Guarantees through amending the Small Business Credit Insurance Law and passing a supplementary budget during the extraordinary session of the Diet in autumn 2002.

Next we consider the impact of bankruptcies on the supply of goods and technology. According to the Fact-finding Survey on Business Management Strategy conducted by the SME Agency in 2002, 63.3% of enterprises have experienced the exit or bankruptcy of a customer or supplier in the past year, irrespective of whether this also resulted in claims becoming irrecoverable (Fig. 2-2-62). 11.7% of these enterprises responded that they had “abandoned business, services and products, etc. requiring technologies, goods or information, etc.” obtained from the enterprises that exited or went bankrupt, suggesting that an enterprise’s bankruptcy can not only lead to financial loss arising from irrecoverable claims, but also lead to the loss of various intangible economic resources, such as technology and know-how (Fig. 2-2-63).

(6) Existence of enterprises that continue in business after bankruptcy

1) Limited Sources of funds for continuation in business
As we saw in (5), bankruptcies cause tremendous damage in all sorts of areas. Due in part to this, the word “bankruptcy” tends to suggest the “end of everything”. In actuality, however, the bankruptcy of an enterprise certainly does not mean the immediate demise of an enterprise. Even where a situation occurs that falls into the category of bankruptcy, it is not uncommon for an enterprise to seek to rebuild and continue in business. Enterprises that make use of reconstructive bankruptcy procedures, such as under the Civil Rehabilitation Law, are especially likely to continue as they are in business, as their initiation of such bankruptcy proceedings is premised on their reconstruction and the reconstruction of their businesses.

It is also possible for an enterprise to continue in business when its bank transactions have been suspended, as it can continue doing business in cash despite being unable to obtain fresh loans or make use of checks or bills as a means of settling payments. According to the Rechallenge Survey, 32.0% of enterprises continue in business after bankruptcy, which means that one in three bankrupt enterprises remain in business (Fig. 2-2-64).

However, once an enterprise is labeled as bankrupt, its credit drops precipitously, greatly restricting its business with banks, including bill and current account transactions as well as just borrowing. How then do enterprises continuing in business even after bankruptcy obtain funds despite the consequently extreme difficulty of financing?

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**Fig. 2-2-62 Experience of exit or bankruptcy of customer/supplier by number of employees**

<table>
<thead>
<tr>
<th>Exit or bankruptcy of customer/supplier experienced by enterprises of all sizes</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No experience of exit or bankruptcy of customer/supplier</td>
<td>36.7</td>
</tr>
<tr>
<td>Experienced exit or bankruptcy of customer/supplier</td>
<td>53.2</td>
</tr>
</tbody>
</table>


**Fig. 2-2-63 Method of substitution of resources obtained from bankrupt enterprise**

Enterprises forced to abandon business in some fields or goods due to bankruptcy or exit of supplier

- **Internalization of technologies, products or information, etc.**
- **Sourcing of similar technologies, products or information from other enterprise**
- **Abandonment of business, services or products requiring technologies, products or information, etc.**
- **No impact due to continuation of business by enterprise concerned**

As Fig. 2-2-65 demonstrates, enterprises that continue in business after bankruptcy find it difficult to raise finance from their own funds, and have no alternative but to depend heavily on raising funds from “face-to-face networks” consisting, for example, of relatives, friends, acquaintances, customers and suppliers. This tendency is the same as that for startup funds as determined by the Survey of the Environment for Startups conducted in 2001 by the SME Agency (apart from the fall in financing from financial institutions) (Fig. 2-2-65).

Whereas policy support to help entrepreneurs raise startup funds has developed in recent years, the lack of progress in assisting the recovery of bankrupt enterprises has contributed to this situation. Further evidence of what has been observed thus far is the fact that a far greater proportion of those forced to suspend or exit business (who outnumber those who continue in business by 2.1 to 1) (Fig. 2-2-64) give “difficulty of financing” (61.2%) as their reason for abandoning continuing in business, as compared with those who give “no prospect of demand” (13.2%) or “difficulty obtaining supplies” (8.5%) as their reasons (Fig. 2-2-66).

The question we next ask is: What kinds of enterprises survive the hardships of bankruptcy and continue in business?

To answer this question, we begin by examining the relationship between size of enterprise and continuation in business. Size in terms of number of employees immediately before bankruptcy and continuation in business after bankruptcy are shown in Fig. 2-2-67, from which it can be seen that the proportion continuing in business increases as size increases. This is logical considering that the desire to continue in business is stronger the larger an enterprise is, and that “sponsor” enterprises wanting to make use of an enterprise’s business resources are more likely to come forward to support the reconstruction of a bankrupt enterprise the larger that it is. Next we look at the relationship between business conditions before bankruptcy and continuation in business, and we begin by examining the bankruptcy of profitable enterprises, i.e. the

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**Fig. 2-2-64  Continuation in business of bankrupt enterprises**

Large numbers of enterprises remain in business even after bankruptcy


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**Fig. 2-2-65  Procurement of funds to continue in business after bankruptcy**

Financing from face-to-face networks supports continuation in business after bankruptcy

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**Fig. 2-2-66  Reasons for abandoning continuing in business**

Interruption of financing forces end to continuation in business

bankruptcy of enterprises that encounter a financing crisis, despite being profitable, due to reasons such as poor management or unforeseen circumstances. In the case of such enterprises, the present value of future expected profits in the event that they continue in business should theoretically be greater than the value realized by closing down, and so it should be comparatively easier to obtain creditors’ support for continuing in business and securing financing.

An examination of the relationship between ordinary profit and continuation in business confirms that the proportion of enterprises continuing in business increases in the following order: enterprises registering an ordinary loss for at least two terms prior to bankruptcy, enterprises registering an ordinary loss in the term immediately prior to bankruptcy, and enterprises registering an ordinary profit in the term immediately prior to bankruptcy (Fig. 2-2-68).

What then of the relationship between the trend in sales and continuation in business? Although there exists the problem of the impact of factors unrelated to the profitability of a business, i.e. the strategy of increasing sales by selling at an impossible discount regardless of profitability, it is usually safe to say that an upward trend in sales is indicative of the future growth potential of a business, making it easier to obtain the cooperation of creditors and obtain financing.

If we therefore examine the relationship between the trend in sales and continuation in business, we find there to be significantly more enterprises whose sales are on an upward trend that continue in business than enterprises whose sales are stable or declining (Fig. 2-2-69).

What about the relationship with the assets and liabilities situation of an enterprise? To simplify, one would expect enterprises with more assets than liabilities to suffer less damage than enterprises with

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**Fig. 2-2-67 Number of employees and continuation in business**

Proportion of enterprises continuing in business increases with number of employees

![Bar chart](source)


**Fig. 2-2-68 Ordinary profit immediately before bankruptcy and continuation in business**

The better the ordinary profit situation, the greater the proportion of enterprises continuing in business

![Bar chart](source)


**Fig. 2-2-69 Trend in sales immediately before bankruptcy and continuation in business**

Greater proportion of enterprises whose sales were increasing continue in business

![Bar chart](source)

more liabilities than assets, and so be more likely to continue in business. However, no statistically significant correlation was discovered between the assets and liabilities status of an enterprise and its continuation in business. This is probably due to the various effects of (a) it being considered more economically advantageous to liquidate a business if its asset status is good and smoothly realize its assets, and (b) if bankruptcy would leave an enterprise with more liabilities than assets, it would have to continue in business in order to pay back its large debts.

An examination of the relationship between an entrepreneur’s age at the time of bankruptcy and continuation in business also reveals no clear correlation between age and continuation in business (Fig. 2-2-70). The conclusion to be drawn from the above is that whether a bankrupt enterprise can continue in business is related to its business situation at the time of bankruptcy. To put it another way, even if there is judged to be no alternative to bankruptcy, the conditions under which that judgment is made impact on the potential for recovery at subsequent stages.

The difficulty of raising funds in the event of staying in business is apparent from the preceding, and the development of mechanisms to supply business rehabilitation funds (i.e. debtor-in-possession, or DIP, financing) to bankrupt enterprises has been lagging in Japan. However, rapid advances have been made in developing arrangements to assist in the provision of funds to bankrupt enterprises with good recovery prospects. These include the establishment in recent years of the Business Rehabilitation Loan Program (DIP finance) by government-affiliated financial institutions and the DIP guarantee system (for business rehabilitation) by credit guarantee corporations, as well as the establishment of a wave of business rehabilitation funds by the private sector. In the future, programs of this kind need to be further enhanced.

2) Present business situation of enterprises continuing in business

Let us look next at the current business situation of enterprises that continue in business. It goes without saying that, even if capable of continuing in business, there is much less sense in staying in business unless an enterprise can develop a structure that enables it to secure profits. In the case of reconstruction of an enterprise through corporate reorganization or civil rehabilitation, for example, it is very rare for the liabilities of a bankrupt enterprise to be entirely waived, though they are generally

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39) The above findings remain almost unchanged even taking into account variables such as asset status immediately prior to bankruptcy and type of industry (Appended Note 2-2-8).

40) See “5. Bankruptcy today and the requisites for comeback and recovery” later in this section for further details of the development of mechanisms to assist the business recovery of bankrupt enterprises.
considerably reduced, and so it is still necessary for an enterprise to repay its debts, if only in part.\(^{41}\)

The results of the Rechallenge Survey regarding the present profit status of enterprises that continue in business is shown in Fig. 2-2-71. Of particular interest is the fact that 39.5% of the respondents said that they were making a profit and 27.1% were breaking even. Altogether, therefore, the businesses of 66.6% of the respondents were back on track. While it is necessary to bear in mind that this question does not specifically ask about profits on a year-end financial reporting basis, these results nevertheless suggest that there is plenty of potential for an enterprise to recover from bankruptcy and again produce a profit.

The next question we look at is what kinds of enterprises succeed in generating profits in their business activities amid the serious hardships that follow bankruptcy. We begin by looking at the relationship with the business situation before bankruptcy. The relationship between the present profit status of an enterprise and the sales trend, ordinary profit and asset status immediately prior to bankruptcy are shown in Figs. 2-2-72–74. As the figures demonstrate, while there is no clear relationship between sales trend and present surplus and between asset status and present surplus, there is a correlation between ordinary profit before bankruptcy and present surplus. What this means is that although it is difficult to transform an enterprise into a profitable structure even if it continues in business due to its future potential simply because its sales were growing prior to bankruptcy, whether an enterprise was

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\(^{41}\) A detail picture of the state of enterprises seeking to reconstruct through corporate reorganization or civil rehabilitation is provided by the Study of Trends among Failed Enterprises, which was conducted by Teikoku Databank Ltd. in May 2002 and commissioned by the Japan Industrial Policy Research Institute (JIPRI).

According to this study, enterprises that file for corporate reorganization draw up reorganization plans requiring the repayment of an average of 100% of security interests, 7.9% of general reorganization claims, and 87.0% of preferred reorganization claims. In the case of civil rehabilitations, enterprises draw up plans for the repayment of an average of 20.9% of rehabilitation claims.

The majority of enterprises (57.1% of corporate reorganization enterprises and 88.0% of civil rehabilitation enterprises) generate the business profits to fund the repayment of these claims and establish a structure that enables them to secure revenues, reaffirming the importance of this issue.
making a profit or loss prior to bankruptcy has a major impact on whether its business is in profit after continuing in business, and enterprises that go bankrupt while they are in profit are comparatively more likely to be able to rebuild through their efforts in the future.\(42\)

An examination of the taking of legal steps and present performance is shown in Fig. 2-2-75. From this it may be inferred that the number of enterprises saying that business continued after bankruptcy is in profit increases as enterprises implement legal measures, and that many enterprises have taken steps to improve their earnings structure through legal steps that serve to reduce liabilities through the involvement of the courts.\(44\)

Even if an enterprise that has gone bankrupt itself ceases to exist, it is still possible for its business to survive in various forms. If a bankrupt enterprise as a whole is in deficit, for example, those operations that are in profit or which have future potential may survive and be rehabilitated through the transfer of business.

There are also cases where those involved with a bankrupt enterprise, such as the employees, rebuild its business in some form.

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\(42\) These findings are unaffected by simultaneously taking into account the effects of various other variables (see Appendix Note 2-2-9).

\(43\) By “legal steps” we mean steps to repay debt based on the involvement of the courts through corporate reorganization procedures, civil rehabilitation procedures and corporate arrangement under the Commercial Code.

\(44\) The Study of Trends among Failed Enterprises also found there to exist enterprises that have found the shake-up in thinking within the enterprise as a result of taking legal steps to have helped to improve their corporate structure.
Enterprise growth and bankruptcy
G Ltd. is a company in Osaka Prefecture with 110 employees and capital of ¥64.5 million, and is a retailer of furniture, indoor decorations and other miscellaneous goods. It was established in 1951 and incorporated in July 1960, and expanded its operations by, among other things, entering the furniture wholesale business through a subsidiary. In February 1978, however, it went bankrupt after dishonoring a check for a second time. (At the time, it had 75 employees and capital of ¥8 million.)
It opened new stores one after another, with the number of stores at its peak reaching 13, and borrowing ballooned. Externally, the economy was in a structural recession following on from the effects of the oil shock, while internally the company fell into a situation where its current assets were tied up through uncoordinated store expansion, though it still maintained the advantages of having a retailer’s cash flow structure in that payment for sales could be collected daily in cash.
On the advertising front, the company produced large quantities of advertising handbills which it paid for using bills, and it fell into the classical vicious circle of hand-to-mouth business management characterized by advertising using handbills in order to settle accounts as the settlement of accounts approached.

Filing for corporate reorganization and recovery
G Ltd. filed for corporate reorganization, and its reorganization plan was approved in December 1980. While the entire management of the rank of department chief or above resigned en masse, it still had its inventory. Two stores in Osaka that were profitable were therefore re-launched, and the name of the company changed to its present name. In 1988, an online system was introduced at all stores, enabling rigorous sale and inventory control. In July 1991, the reorganization process was concluded. Subsequently in 1992, the company dramatically expanded its retailing of accessories and miscellaneous goods in order to boost its customer drawing power. It then established a delivery center in 1993, one store in 1995, and two stores in 1998, to bring the total number of stores up to five.

Present circumstances and future growth strategy
Presently, G Ltd. aims to create a profitable structure, prohibit discounted sales, achieve gross profit of at least 40%, cut expenses, and eradicate complaints. In order to do so, it is making innovative use of handbills to promote sales, and has appointed six buyers to lay in stock (including two responsible for sourcing from overseas) who always check supplies with their own eyes. It has also produced a manual on employee training, and places a strong emphasis on ensuring that internal rules are always followed. It has in addition introduced a target management system, analyses deviation from plans, and prepares statements on its financial position, and these are reported at monthly board meetings where appropriate action is taken.
The company plans to open another five stores in Osaka and one or two in the Kanto region around Tokyo in the next two to three years in order to develop a larger store network. It is also looking at utilizing its store management know-how to develop a regional furniture franchise, and at assisting local furniture stores by, for example, producing handbills and buying in stock jointly so as to cut costs and generate synergies.
G Ltd. has in this way remedied its pre-bankruptcy recklessness, and is seeking to make improvements across the board to its sales operations, laying-in of stock and financial matters, such as by eradicating discounted sales. At the same time, it is riding out the present difficult times by adopting a positive business policy rather than a passive, negative approach.
Case 2-4  Regeneration of part of failed enterprise’s operations and targeting of fresh growth

H is a business cooperative in Fukushima Prefecture with seven cooperative members and 26 part-time staff engaged in the provision of nursing care services. The cooperative took on the employees and nursing care operations of a failed transportation company, I Ltd.

Background to establishment of business cooperative
H’s present representative director, who used to work at a major enterprise, was asked in April 2000 by the president of transport provider I Ltd., whom he had known for some time, to manage its nursing care division. (Due to the poor state of the transportation business, I Ltd. had been looking for a new area of business in which to engage. This was when the public long-term care insurance system was being launched, and there was a wave of new entries in the nursing care business from numerous other industries.) The nursing care business was licensed by the prefecture in June 2000, and services were launched employing five home helpers. In the summer, however, the president suddenly disappeared, leaving behind only his debts. Thinking of the jobs of the home helpers whom he had recruited and also the service users, who then numbered five, he decided to establish a new center in September and continue the nursing care business. In order to continue the nursing care business on an independent footing, he decided it was necessary to establish a new corporation rather than use I Ltd.’s name. Quite by chance, he heard on his car radio one day that the prefecture’s industry development center was looking for applicants for startup funds worth ¥2.5 million per startup, and he applied. Although his initial application was rejected, one successful applicant supported the idea of providing nursing care services, and each was given ¥1.25 million. As it is not possible to establish a joint-stock company with just ¥1.25 million, he sought the advice of the industry promotion center, which suggested that he establish a business cooperative and introduced him to a central union of cooperatives. In March 2001, he established a business cooperative with the seven members it has now.

Although the chairman of the board of directors (the present representative director) became liable for I Ltd.’s guaranteed liabilities, he repaid these out of his own funds. There was no retirement pay.

Growth of nursing care business
Although only home-help services were provided when the business was owned by I Ltd., H now provides 24/365 service and other services on top of those required by law. The chairman has also continued to undertake straightforward sales activities in order to increase the user base, which has increased from five to over 60. For a while after its establishment, the cooperative maintained its care-only structure. However, the philosophy of providing that bit extra and view of home helpers as forming a frontline sales force (the home helpers’ role being to see that users made use of the cooperative’s remaining services once the director succeeded in getting a user to sign up for service) took root, and the cooperative’s line of business gradually expanded. The creditworthiness of the business was also increased by the adoption of a cooperative structure in place of I Ltd.

In August 2002, the cooperative embarked on the provision of domiciliary nursing care support services, and then in November it launched the provision of day services. It established four new centers, and raised ¥10 million from a government-affiliated financial institution in order to cover the cost of doing so. It also employed two people required as care managers for the domiciliary nursing care support business. Controlling access to nursing care services through the employment of care managers (who draw up care plans for users) paved the way for expanding the number of users, and this combined with the needs of the times led it to rapidly expand its service lineup. Sales, which amounted to ¥50 million at the end of the fiscal year ending March 2002, are on track to reach ¥100 million by the end of March 2003, and the number of users currently stands at 120.

Reasons for successful continuation of business
When the chairman first became involved in nursing care services when the business was still part of I Ltd., he was not especially enthusiastic about nursing care, and continued with the business out of a desire not to betray the users and home helpers that had been employed. In time, however, he came to realize that the nursing care business is not simply another form of marketing business, but is founded on a spirit of volunteerism whose goal is user satisfaction. This appreciation lead, through the cooperative’s home helpers, to an increase in the quality of services and as a result to an increase in the number of users. The somewhat fortuitous choice of business cooperative status contributed to the growth of nursing care services in terms of assisting financing and improving credit status.
4. Comebacks from bankruptcy

(1) Circumstances of entrepreneurs after bankruptcy

After the bankruptcy of an enterprise, what kind of circumstances do entrepreneurs find themselves in? While we noted earlier that bankruptcy imposes a severe burden of debt on many entrepreneurs who then take legal steps to dispose of their debt, it can also act against entrepreneurs’ interests in a variety of other ways.

We begin by looking at the employment status of entrepreneurs after bankruptcy. The results of questioning entrepreneurs of bankrupt enterprises regarding their present occupation are shown in Fig. 2-2-76. From this it can be seen that their employment status differs considerably according to whether their enterprise continued in business after bankruptcy. If we focus in particular on entrepreneurs of bankrupt enterprises who responded that their bankrupt enterprises exited or suspended business, the proportion who said that they are currently not employed adding together those who said they were looking for work (16.5%) and not looking for work (25.1%) was 41.6%. In this sense, therefore, whether or not a bankrupt enterprise continues in business is of major significance to an entrepreneur’s subsequent fortunes.\footnote{In the 2002 White Paper on Small and Medium Enterprises in Japan, the proportion of all entrepreneurs who responded that they reverted to being entrepreneurs was 13%. This is almost the same as the 16.6% who did so according to the Rechallenge Survey.}

Next we look at the state of settlement of liabilities borne as a result of the bankruptcy of an enterprise. Looking at the extent to which liabilities arising immediately following bankruptcy are reduced by the time of the survey according to whether legal steps (straight bankruptcy procedures or personal rehabilitation procedures) are taken against the entrepreneur as an individual, we find a considerable difference in circumstances. According to Fig. 2-2-77, the rate of reduction of liabilities is greater for entrepreneurs against whom legal steps are taken.

(2) Entrepreneurs who seek to make comebacks

As noted, the burden borne by entrepreneurs of bankrupt enterprises is huge, both in psychological and economic terms. Even in adversity, however, there are entrepreneurs who seek to reenter business once again. 9.6% of entrepreneurs who exited or suspended business after bankruptcy said that they had started up in business after bankruptcy and reverted to being entrepreneurs at the time of the survey (i.e. they were second-time entrepreneurs).
Similarly, 42.6% of entrepreneurs said that, although not currently entrepreneurs, they wanted to reenter business and revert to being entrepreneurs (Fig. 2-2-78).

Of particular interest are the 13.7% who reentered business after their bankrupt enterprise suspended business or exited and they themselves were bankrupted (Fig. 2-2-79). This runs counter to the traditional view of bankruptcy as being a “death knell”.

What then are the motives of former entrepreneurs who seek to reenter business despite the many hardships encountered? Fig. 2-2-80 shows a graph comparing the motives of entrepreneurs who seek to reenter business and first-time entrepreneurs, and from this it can be seen that a greater proportion of second-time entrepreneurs did so for reasons that indicated that they gained satisfaction from entrepreneurship itself, such as “to achieve self-fulfillment” and “to gain social recognition as entrepreneur”, although a large proportion also sought to reenter business due to “no other employment prospects”. The figure also shows that a far greater proportion of second-time entrepreneurs than first-time entrepreneurs give as a reason “to continue to work regardless of age”. However, this is due to the fact that the age of entrepreneurs who reenter (or seek to reenter) business after experiencing bankruptcy is higher than that of first-time entrepreneurs (Fig. 2-2-81).

Fig. 2-2-78 Desire of entrepreneurs of bankrupt enterprises to reenter business

Majority of entrepreneurs of bankrupt enterprises that have closed down or suspended business hope to reenter business

<table>
<thead>
<tr>
<th>Already reentered business</th>
<th>No desire to reenter business</th>
<th>Desire to reenter business</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6%</td>
<td>47.8%</td>
<td>42.6%</td>
</tr>
</tbody>
</table>


Note: Entrepreneurs of bankrupt enterprises that had closed down or suspended business who responded that they were currently entrepreneurs as a result of having started up in business after bankruptcy are classed as “already reentered business”, and those who responded that they were not currently entrepreneurs but wanted in the future to start up in business and become entrepreneurs again were classed as “desire to reenter business”.

Fig. 2-2-79 State of reentry of bankrupts

13.7% of entrepreneurs of bankrupt enterprises who experienced personal bankruptcy reenter business

<table>
<thead>
<tr>
<th>Second-time entrepreneurs</th>
<th>First-time entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.7%</td>
<td>86.3%</td>
</tr>
</tbody>
</table>


Fig. 2-2-80 Reasons for wanting to start up in business of first-time and second-time entrepreneurs

Increase in proportion seeking self-fulfillment and large increase in proportion reentering business due to lack of other employment among second-timers


Note: Totals exceed 100 due to multiple responses.

46) Fig. 2-2-81 shows the age composition of respondents to the Rechallenge Survey. This is approximately the same as the age composition of entrepreneurs of bankrupt enterprises over the same period according to recompiled data from Tokyo Shoko Research Ltd.’s bankruptcy database.
Turning next to examine what kinds of people reenter business, we find that the proportion of people reentering business increases the younger they are (Fig. 2-2-82). A likely reason for this that on the one hand one is more able to take on the risk of starting up in business the younger one is, while on the other hand reaching pension age makes it possible to enjoy a reasonable standard of living without having to take on the risk of starting up in business, coupled with the physical problem of the enormous work required to start up in business.

Regarding the relationship between the desire to reenter business and other attributes, such as whether the representative director was the first or a subsequent director, the burden of debt borne, and adoption of legal steps against the entrepreneur as an individual, no clear relationship was found.

Next we look at the responses of those not desiring to reenter business (47.8%) regarding their reasons for not wanting do so, the results of which are shown in Fig. 2-2-83. It has already been noted that age has a major impact on desire to reenter business, and “too old” was the most commonly given reason (35.1%) for not wanting to reenter business, confirming that age has a major impact on the desire to reenter business. The next most commonly cited reasons were “large economic cost in event of failure” (17.8%) and “large psychological cost in event of failure” (11.4%). Thus while a large proportion of entrepreneurs of bankrupt enterprises focus on the economic cost of bankruptcy as the reason for having no desire to reenter business, the psychological burden of bankruptcy clearly also must not be overlooked.

**Fig. 2-2-81 Age composition of entrepreneurs of bankrupt enterprises and startups**

Bankrupt entrepreneurs tend to be older than startup entrepreneurs

**Fig. 2-2-82 Age at time of bankruptcy and desire to reenter business**

The lower the age at bankruptcy, the higher the proportion wanting to reenter business

**Fig. 2-2-83 Reasons for not wanting to reenter business**

Psychological as well as economic cost discourages reentries


(3) Obstacles to comebacks

Over the preceding pages, it has been clearly shown that a not insignificant number of former entrepreneurs who experienced the bankruptcy of their enterprises desire to form a startup and reenter business again (i.e. become second-time entrepreneurs).

As also noted, however, entrepreneurs of bankrupt enterprises face considerable economic and non-economic costs. Entrepreneurs who have experienced bankruptcy may thus face special obstacles on the path to startup. Below, therefore, we examine the obstacles to comebacks through analyzing the present circumstances of former entrepreneurs who want to reenter business but who are not currently preparing to do so.

Looking firstly at the prevalence of former entrepreneurs interested in reentering business who are actually preparing to do so, we find that whereas 45.7% of would-be second-time entrepreneurs are preparing to reenter business in some way, 54.3% are not preparing to do so.

An examination of the reasons given by would-be second-time entrepreneurs for not preparing to reenter business reveals the commonest reason to be “poor financing prospects” (52.3%) (Fig. 2-2-84). Further evidence of this problem is provided by the results of the Survey of SME Loans (a survey of financial institutions conducted by the SBI in 2003), which revealed that 41.9% of financial institutions consider “bankruptcy history of representative director” to be a “particularly important” factor in deciding whether and how much to loan to an enterprise, making it the most commonly cited “particularly important” factor even compared with other choices of qualitative data. This provides clear evidence of how being an entrepreneur of a bankrupt enterprise makes it especially difficult to obtain loans from financial institutions.

The next commonest reason given for not preparing to reenter business was “disposal of bankrupt enterprise incomplete” (34.3%). This indicates that lack of progress in disposing of bankrupt enterprises is a major obstacle to reentering business, as well as the difficulty of raising funds.

The next question we ask is: In what industries do would-be second-time entrepreneurs seek to re-embark in business? The results of questioning entrepreneurs whose bankrupt enterprises suspended or exited business and who intended to start up and revert to being entrepreneurs or had already done so about their new line of business and reasons are shown in Figs. 2-2-85~86.

These show that there is a strong tendency to choose fields related to the bankrupt enterprise’s field, with 36.1% of entrepreneurs choosing the “same field” and 32.3% choosing “not the same but a related field”. A comparison of the reasons for choice of field of business compared with at the time of first startup additionally shows that a large proportion of entrepreneurs choose fields in which it is possible to start up in business with small funds, as well as their desire to utilize knowledge and personal connections developed at the bankrupt enterprise.

Fig. 2-2-84 Proportion of would-be second-time entrepreneurs not preparing to reenter business and their reasons

Disposal of bankrupt enterprise and financing difficulties hinder preparations for reentry

Fig. 2-2-85 Desired field of business of reentry

More than two in three entrepreneurs seek to reenter business in same or related line of business to bankrupt enterprise


Note: Second-time entrepreneurs and would-be second-time entrepreneurs combined.
(4) Entrepreneurs who reenter business

Up to this point we have looked at what difficulties are encountered when a bankrupt entrepreneur reenters business. As already noted, there exist both entrepreneurs who have overcome these difficulties and succeed in reentering business, and also entrepreneurs who succeed in reentering business despite themselves being bankrupt (Figs. 2-2-78~79).

How then do entrepreneurs who successfully reenter business overcome the biggest problem faced of raising funds? Fig. 2-2-87 shows a comparison of sources of finance between second-time startups and first-time startups. (Data on the latter are from the Survey of the Environment for Startups conducted by the SME Agency in 2001.) Whereas 80.9% of entrepreneurs gave “own funds” as their method of raising funds at the time of first startup, interestingly this figure plummets to 31.3% for second-time startups. Instead, there is a large increase in the number of entrepreneurs using “financing and borrowing from family” and “financing and borrowing from friends and acquaintances, etc.”. On the financial front at least, it can be seen that bankrupted entrepreneurs are unable to rely on their own funds and have no alternative to overcoming the biggest problem to reentering business of financing than to seek financial support from people with whom they have close contacts.

Note: Totals exceed 100 due to multiple responses.
Case 2-5  Entrepreneur embarks on new business applying the lessons of bankruptcy

Tokyo-based J Ltd. is an enterprise with six employees that plans and develops staplers for trade use. The chairman, K, was once the manager of L Ltd., which rapidly expanded its line of business but went bankrupt after failing to adapt to the sudden appreciation of the yen after the Plaza Accord. However, K overcame this to establish a new enterprise and embark on a new business applying his previous experience of failure.

Success and bankruptcy of independent entry
K, who worked at a major stationery manufacturer, left the company in 1975 when aged 34 to form L Ltd. (capital: ¥20 million), which he established together with a co-worker, to make and sell staplers. The company performed everything from production through to sale, and exported almost all of its products. It developed numerous revolutionary new products, winning orders from the U.S. federal government and developing a network of agencies throughout the world as it steadily expanded its business. In 1985 in its tenth year after startup, it reached an annual turnover of ¥2.8 billion.

As it exported almost all of its products, however, sales plummeted due to the sudden appreciation of the yen after the Plaza Accord in 1985, and annual turnover in 1986 plunged by two thirds from the previous year to ¥900 million. Because of this combined with the cost of capital investment in expanded capacity, the company filed for corporate arrangement under the Commercial Code.

Reconstruction of bankrupt enterprise and re-launch as new company
As he wanted to continue in business, K chose to file for corporate arrangement under the Commercial Code, which, though legally a form of liquidation, allowed the representative director to remain at the helm to reconstruct the business. As corporate arrangement under the Commercial Code as a rule requires the consent of all creditors (in practice, the order for implementation of an arrangement plan is issued provided that the consent of at least 90% has been obtained), he negotiated with the company’s creditors, which numbered almost 300, and obtained their agreement to repaying ¥770 million of the company’s total liabilities of ¥2.1 billion in installments over a period of 15 years by repaying small creditors in full and repaying 35% of the amount owed to large creditors.

As the company was bankrupt, obtaining fresh loans was difficult. Not only new capital investment but also the production of new molds for new products was consequently impossible. Using the facilities and molds that the company already had, K continued to produce and export products using the minimum necessary workforce (approximately 20), and paid back his creditors out of the profits. The task of repayment was completed in February 2000, when the Tokyo District Court officially declared the arrangement procedure closed. However, no financial institution would provide fresh lending or purchase letters of credit in L Ltd.’s name. K therefore abandoned the idea of continuing in business under L Ltd.’s name. L Ltd. was turned into a dormant company (its stapler manufacturing operations were transferred to another enterprise), and K established J Ltd. in collaboration with a group of close young acquaintances that he had known for over 10 years so as to enter into business afresh. K was made chairman, and two friends became the president and executive director. Of the company’s ¥25 million capital, ¥10 million was provided in equal shares by each of the three directors. A further ¥10 million was provided by a stockbroker whose president was one of K’s old university friends, and a venture capital provider backed by K’s alma mater provided the remaining ¥5 million.

Fresh business growth built on lessons of past failure
The company’s business, like that of L Ltd., was stapler manufacturing. However, its approach to business was completely different, and informed by the lessons of L Ltd.’s failure.

Firstly, its policy is to focus on manufacturing original cassette-type staplers developed by K, rather than attempting to produce a wide variety of products (staplers) as L Ltd. did. Learning from his past failure, the company specializes in the development of cassette-type staplers, and outsources wherever possible so as not to tie down its funds by contracting out production and marketing to other enterprises wherever possible. The company’s cassette-type stapler is capable of stapling anything between two and several dozen sheets simply by changing the cassette containing the staples, and requires only around half the strength of a conventional stapler to use.

The company launched its first model in August 2001, and its next product launched in July 2002 won the Good Design Award. Its strategy now is to progressively expand its line-up of cassette-type staplers.

Reasons for successful reconstruction and re-launch
The most obvious reason why K was able to establish another company and engage in business as a real entrepreneur after bankruptcy is that he dealt with his creditors in good faith and did not
abandon his desire to continue in business when L Ltd. went bankrupt. K chose the difficult option of continuing in business as the representative director and continuing to repay the company’s creditors, and this he succeeded in doing. Although L Ltd. was rebuilt through corporate arrangement under the Commercial Code, a new company was needed in order to grow the business, and the successful reconstruction of L Ltd. led to the establishment of J Ltd.

The second factor was L Ltd.’s technology and brand strength. That the company did not lose its customers and continued to repay its debts by selling its existing products for over 10 years was due to the outstanding nature of its products and the wide penetration of L Ltd.’s brand overseas. Learning from this experience, K’s adopted strategy, even though manufacturing and marketing are now outsourced to other enterprises, is to focus on the development of its own products to create its own new brand.

The third factor was K’s own creativity and development skills. Although the newly established J Ltd. specializes in the planning and development of staplers, the design and development capabilities that are its strength originated entirely from K. The motive force of the business behind L Ltd. and J Ltd. was K. Without K, it would have been impossible for L Ltd. to remain in business and repay its debts. A second startup through J Ltd. would also not have been possible. Utilizing K’s design and development skills and applying the lessons of failure in the past are what made the new business possible.
5. Bankruptcy today and the requisites for reentry and recovery

Up to this point we have examined in detail the actual conditions of bankruptcy and the circumstances of comebacks from bankruptcy. As stated at the beginning of this section, bankruptcies should ideally be avoided, and various measures have been taken to prevent them. These include the provision of safety-net guarantees by credit guarantee corporations and the establishment of a lending program by government-affiliated financial institutions.

Where bankruptcy is unavoidable, however, it is important to provide enterprises with opportunities to continue in business and recover, and so minimize the impact on workers. It is also important to develop institutional measures to provide opportunities for entrepreneurs to make comebacks. Legislative and financial measures are therefore being rapidly taken in this area, and in this section we look at these developments.

(1) Spread of use of the Civil Rehabilitation Law

Civil rehabilitation under the Civil Rehabilitation Law, which entered effect in April 2000, has become the most widely used reconstructive bankruptcy procedure. According to calculations by the private-sector credit research agency Teikoku Databank, Ltd., there were 553 bankruptcies resulting from filings under the Civil Rehabilitation Law in 2000 leaving total liabilities of ¥5,386.536 billion. In 2001, there were 953 such bankruptcies with liabilities of ¥6,788.866 billion, and in 2002 the respective numbers were 916 and ¥4,465.339 billion. If the number and total liabilities of bankruptcies are broken down according to number of employees and capital stock, we find that enterprises of various sizes, including large enterprises as well as SMEs, are making use of the Civil Rehabilitation Law, and that these enterprises are drawn from a diverse range of industries (Figs. 2-2-88~90).

The fact that enterprises with up to 100 employees account for 90.1% of the total number shows that civil rehabilitation is regarded by comparatively small enterprises as a convenient form of reconstructive bankruptcy.

Fig. 2-2-88 Number of civil rehabilitation applications by number of employees

Widespread use of Civil Rehabilitation Law, especially among SMEs

<table>
<thead>
<tr>
<th>No. of employees</th>
<th>1~5</th>
<th>6~20</th>
<th>21~100</th>
<th>101~300</th>
<th>301~500</th>
<th>501~1,000</th>
<th>1,001~</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total liabilities (¥ billion)</td>
<td>8.2</td>
<td>272</td>
<td>4,415.7</td>
<td>913</td>
<td>3,387.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of applications</td>
<td>142</td>
<td>271</td>
<td>756</td>
<td>217</td>
<td>72</td>
<td>69</td>
<td></td>
</tr>
</tbody>
</table>

Source: Teikoku Databank, Ltd.

Fig. 2-2-89 Number of civil rehabilitation applications by size of capital stock

Enterprises with capital stock of under ¥50 million account for 70.8% of applications

<table>
<thead>
<tr>
<th>Capital stock</th>
<th>¥0</th>
<th>¥1~under ¥3,000,000</th>
<th>¥3,000,000~under ¥10,000,000</th>
<th>¥10,000,000~under ¥50,000,000</th>
<th>¥50,000,000~under ¥100,000,000</th>
<th>¥100,000,000~under ¥500,000,000</th>
<th>¥500,000,000~under ¥1,000,000,000</th>
<th>¥1,000,000,000 or over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of applications</td>
<td>23</td>
<td>30</td>
<td>31</td>
<td>19</td>
<td>12</td>
<td>6</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total liabilities (¥ billion)</td>
<td>859.2</td>
<td>431.2</td>
<td>2,336.3</td>
<td>1,397.1</td>
<td>1,431.1</td>
<td>3,387.0</td>
<td>2,919.4</td>
<td>2,490.2</td>
</tr>
</tbody>
</table>

Source: Teikoku Databank, Ltd.

Fig. 2-2-90 Number of civil rehabilitation applications by industry

Civil Rehabilitation Law used in wide range of industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number of applications</th>
<th>Total liabilities (¥ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>12.7%</td>
<td>5,125.3</td>
</tr>
<tr>
<td>Services</td>
<td>15.7%</td>
<td>5,819.4</td>
</tr>
<tr>
<td>Transport and communications</td>
<td>12.7%</td>
<td>2,386.3</td>
</tr>
<tr>
<td>Real estate</td>
<td>1.2%</td>
<td>2,336.3</td>
</tr>
<tr>
<td>Other</td>
<td>1.2%</td>
<td>366</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>25.9%</td>
<td>3,387.0</td>
</tr>
<tr>
<td>Retailing</td>
<td>15.7%</td>
<td>2,490.2</td>
</tr>
<tr>
<td>Wholesaling</td>
<td>22.1%</td>
<td>4,315.0</td>
</tr>
</tbody>
</table>

Source: Teikoku Databank, Ltd.
On the other hand, while large enterprises with 1,001 or more employees make up only a very small proportion (0.3%) of the total number, their total liabilities account for 20.4% of the total, showing that the Civil Rehabilitation Law is also being used by large enterprises that previously primarily made use of the Corporate Reorganization Law, which is targeted at large enterprises. There is thus no doubt that civil rehabilitation is widely used as an effective means of embarking on business recovery.

**Fig. 2-2-91 Comparison of civil rehabilitation and corporate reorganization procedures (summary)**

<table>
<thead>
<tr>
<th>Civil rehabilitation</th>
<th>Corporate reorganization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope</strong></td>
<td></td>
</tr>
<tr>
<td>- Unlimited</td>
<td>- Joint-stock companies only</td>
</tr>
<tr>
<td><strong>Business management</strong></td>
<td></td>
</tr>
<tr>
<td>- Management retained in principle</td>
<td>- Receiver appointed by court (management steps down)</td>
</tr>
<tr>
<td>- Receiver appointed by court in exceptional cases</td>
<td>- Receiver appointed by court (Manager without management liability may be appointed as receiver)</td>
</tr>
<tr>
<td><strong>Scope of changes in rights (exemption, etc.)</strong></td>
<td>(1) Claims on assets arising from causes prior to initiation of procedures (reorganization claims)</td>
</tr>
<tr>
<td></td>
<td>(2) Claims secured by security interest (reorganization security interest)</td>
</tr>
<tr>
<td></td>
<td>(3) Rights of shareholders</td>
</tr>
<tr>
<td><strong>Treatment of security interests</strong></td>
<td>- Reorganization security interest (subject to exclusion, exercise of security interest also entirely restricted)</td>
</tr>
<tr>
<td>- Right of exclusion (not subject to exclusion and exercise of security right unrestricted) However, mechanisms for ordering the suspension of auction procedures and terminating security interest exist.</td>
<td></td>
</tr>
<tr>
<td><strong>Plan requirements</strong></td>
<td>(1) Approval of proposed rehabilitation plan by the decision of the rehabilitation creditors +</td>
</tr>
<tr>
<td></td>
<td>(2) Approval of the court</td>
</tr>
<tr>
<td><strong>Approval requirements</strong></td>
<td>(1) Consent of majority of rehabilitation creditors, etc. present holding at least half of total value of claims +</td>
</tr>
<tr>
<td></td>
<td>(2) Consent of persons with reorganization security interests holding at least four fifths of total value of claims +</td>
</tr>
<tr>
<td><strong>Ensuring of performance of plan</strong></td>
<td>- Performance of reorganization plan by receiver</td>
</tr>
<tr>
<td>(1) Supervision of performance for three years in event of appointment of supervising member</td>
<td></td>
</tr>
<tr>
<td>(2) Performance of rehabilitation by receiver in event of appointment of receiver</td>
<td></td>
</tr>
<tr>
<td><strong>Features</strong></td>
<td>(1) Procedure involving all interested parties and enabling formulation of drastic reconstruction plan including everything from company directors and capital structure to change of organization</td>
</tr>
<tr>
<td>(2) Sweeping restriction of execution of rights by security interest holders</td>
<td></td>
</tr>
<tr>
<td>(3) Complexity and severity of procedure imposes heavy cost and procedural burden</td>
<td></td>
</tr>
</tbody>
</table>

Source: MOJ website.

47) Of the enterprises known to Teikoku Databank Ltd. that had filed under the Civil Rehabilitation Law by December 2002, 1,395 were identified as having already received approval for their rehabilitation plans. The proportion of the total number of applicants (2,527), including those that had been using other bankruptcy procedures and switched to civil rehabilitation, whose plans had been approved was therefore around 55% (excluding those that discontinued proceedings after approval). Conversely, 435 enterprises applied under the Civil Rehabilitation Law but their rehabilitation ended in failure (due, for example, to the rejection, withdrawal, or discontinuation of civil rehabilitation procedures), including 62 cases that were discontinued after approval. Based on the 1,830 enterprises whose rehabilitation plans were either approved or rejected, it may be inferred that the probability of approval is around 76%, and that the rehabilitation procedures of one in four applicants end in failure. Recently, however, there has been an increase in the number of cases of procedures that, approval having been granted, are being discontinued on the grounds that there is little prospect of the rehabilitation plans being implemented (Article 194 of the Civil Rehabilitation Law), and efforts to rehabilitate businesses using civil rehabilitation as a fresh starting point are required.
(2) Outline of the amended Corporate Reorganization Law

The Corporate Reorganization Law was enacted in 1952 mainly for large joint-stock companies, and has remained in effect until the present. In order to make it functionally better suited to today’s society and economy, however, an amended Corporate Reorganization Law was passed by the Diet in December 6, 2002.

The number of bankruptcies due to reconstructive bankruptcy procedures in 2002 was 985 according to Teikoku Databank Ltd., of which 916 were filed under the Civil Rehabilitation Law, 64 under the Corporate Reorganization Law, and five effected by corporate arrangement under the Commercial Code. It is clear, therefore, that the main form of reconstructive bankruptcy procedure used is the Civil Rehabilitation Law.

The recent amendment to the Corporate Reorganization Law was undertaken to expedite and rationalize procedures overall and strengthen the reconstructive mechanisms provided as the law had ceased to suit present economic conditions due to procedures being too strict and reconstruction being too time consuming. The present amended law is expected to enable large enterprises in particular to rebuild more swiftly and smoothly.

The differences between the Civil Rehabilitation Law, former Corporate Reorganization Law and new Corporate Reorganization Law are summarized in Fig. 2-2-91.

Enterprises will in the future face the choice of whether to opt for civil rehabilitation or corporate reorganization when they file to initiate reconstructive bankruptcy procedures, and if they are to successfully rebuild, their choice will have to be informed by a knowledge of the respective characteristics of each system.

(3) Spread of DIP financing

Alongside developing the legal arrangements for enterprise reconstruction, it is also important that arrangements be put in place to assist with the economic aspects of reconstruction, such as financing. As described above, enterprises face enormous financing difficulties after bankruptcy, and in many cases find it difficult to continue in business due to being unable to raise funds even though their businesses may be viable or have future potential.

In this regard, there has been a noticeable increase in DIP financing, which provides the funds required by enterprises seeking to recover through legal steps or private arrangement. Business rehabilitation loans (debtor-in-possession (DIP) financing) by government-affiliated financial institutions as of the end of February 2003 amounted to 24 loans worth ¥1.682 billion by the Shoko Chukin Bank, and 31 loans worth ¥2.75 billion by the Japan Finance Corporation for Small Business, and a wave of enterprise rehabilitation funds have also been established by private financial institutions. Thus in Japan, too, the economic conditions to assist enterprise rehabilitation have steadily developed.

(4) Post-bankruptcy recovery and requisites for reentry

1) Development of environment for business recovery after bankruptcy

In this section, we have examined in detail exits, bankruptcies, rehabilitation and post-bankruptcy reentry in Japan. What has emerged is that the decision to quit a business is related to the problem of debt, the size of the impact of exits and bankruptcies, and the difficulty of reentering business after exit or bankruptcy.

At the same time, we have seen that there exist enterprises that have continued in business and again gone into profit even after bankruptcy, which is traditionally viewed as marking the death knell of an enterprise.

Even where an enterprise files for reconstructive bankruptcy in order to reconstruct while continuing in business, however, it has become evident that enterprises must rely on “face-to-face networks” to raise the funds to continue in business after bankruptcy.

The entry into effect of the Civil Rehabilitation Law and amendment of the Corporate Reorganization Law have made reconstructive bankruptcy procedures better suited to current economic conditions and made recourse to them easier, and on the legal front at least, greater opportunities are now available for failed enterprises to make a fresh start.

As a result of the spread of DIP financing, moreover, the environment is being developed to enable the provision of business rehabilitation funds to businesses with future potential. But though the environment is now more amenable to business rehabilitation and recovery, the fact remains that the understanding and cooperation of interested parties are what are most required in practice in order to ensure an enterprise’s successful reconstruction.

It goes without saying that obtaining the understanding and cooperation of interested parties requires that every possible step be taken to ensure that an enterprise’s bankruptcy does affect other parties by, for example, taking immediate steps when it becomes apparent that independent recovery is impossible, choosing appropriate forms of bankruptcy, and acting in good faith toward those parties adversely affected.

Considering that large numbers of enterprises seek to recover from bankruptcy, a change is also required in society at large in the traditional image of bankruptcy as marking the death knell of a business. A distinction should therefore be made between bankruptcies that lead to exits and bankruptcies that serve as a starting point for
recovery, and appropriate action taken regarding each of these two types of bankruptcy.

2) Development of environment for reentries
We have seen how, on the individual level, more than a few entrepreneurs succeed in reentering business and re-launching themselves despite suffering personal bankruptcy as a result of the bankruptcy of the enterprise that they managed. Even though they may not actually reach the stage of reentering business, there are also a not insignificant number of entrepreneurs of bankrupt enterprises that wish to reenter business. Also clear, however, is that there are many people who encounter financing difficulties and cannot prepare to reenter business despite wanting to do so. On the legal front, therefore, the scope of exemptions that bankrupts are allowed to keep that are exempt from bankruptcy assets in the event of bankruptcy under the Bankruptcy Law is being examined by the Legislative Council of the Ministry of Justice, and needs to be set at an appropriate level to allow bankrupts to maintain a suitable standard of living and reenter business. Regarding the question of financing, it is important to develop financing arrangements that do not force entrepreneurs to rely on face-to-face networks. In the future, therefore, arrangements need to be put in place to enable the provision of the necessary funds to would-be second-time entrepreneurs with suitable business plans who want to reenter business. Even if the environment for reentries is improved, however, the fact will remain that the understanding and cooperation of the parties affected by an enterprise’s bankruptcy will be as essential to reentry into business as to enterprises continuing in business after bankruptcy. As in the case of enterprises seeking to rebuild after bankruptcy, reentering business requires that interested parties be dealt with in good faith.
Chapter 3 SME financing in the changing financial environment

For SMEs to function normally and the Japanese economy to recover, having a financial system that provides smooth funding to SMEs is essential. At the moment, however, Japan’s financial system is undergoing what might be described as a process of structural change. For almost half a century, there has developed in Japan a system of supplying funds through indirect financing in the form of loans secured by land based on the “land myth”, i.e. the assumption that land prices would not fall. However, the expansion of overseas production and development of information technology from the 1990s has served to counteract the traditional scarcity of land in Japan as a factor of production, and the “land myth” is now a thing of the past. Maintaining a system of SME financing premised on such a “land myth” has thus become tricky, and now the traditional financial system is being rapidly transforming. The changes in the financial environment observed in Part I, Chapter 3 are one manifestation of this change.

As we shall see below, SME financing involves assessing the credit risk and business cash flow of individual enterprises and continuing to monitor them after the provision of a loan, making lending to SMEs comparatively more costly and difficult than lending to large enterprises. There is consequently a greater problem of “market failure” arising from “asymmetry of information”\(^1\), which occurs when a lender cannot distinguish whether lending to a borrower is safe or not, and there is a greater probability of there arising “credit rationing”, which makes it more difficult to obtain necessary funding from banks\(^2\) when interest rates are at a certain level\(^3\).

These, then, are the main features of SME financing in Japan, where the comparatively smooth supply of funds has until now been guaranteed by land, which has functioned as security due to the price of land being regarded as stable. Land’s loss of this function is therefore quite capable of causing a “market failure” in SME financing.

With this in mind, in this chapter we examine how SMEs can achieve smooth financing following this transition in the traditional financial system. We begin in Section 1 by ascertaining the features of SME finance. In Section 2, we examine means of facilitating borrowing from banks based on the characteristics of SME finance. Finally in Section 3, we look into methods of facilitating financing by means other than borrowing from banks.

Section 1 Features of SME finance

In order to discover means of facilitating SME financing, it is necessary first of all to determine the principal features of SME financing. Below, therefore, we seek to identify the structure and conditions of SME financing and the features of institutions such as the financial institutions with which enterprises do business.

1. Features of SME financing patterns

(1) Dependence on borrowing in SME financing patterns

We begin by asking what characterizes SME financing in comparison with that of large enterprises, and look first of all at financing patterns by size of enterprise. Fig. 2-3-1 shows the financing patterns of enterprises at the close of fiscal 2001 according to number of employees. As can be seen, the proportion of borrowing of enterprises with 20 or fewer employees is 66.9%, whereas the proportion of equity capital is 12.2%. Among enterprises with 301 or more employees, on the other hand, the proportion of borrowing is 24.2%, whereas the proportion of equity capital is 33.2%. The proportion accounted for by equity capital thus increases with number of employees and the proportion of borrowing declines. Thus smaller enterprises are dependent for a large proportion of their financing on borrowing\(^4\).

What is important to note is that not all SMEs have equally little equity capital. As Fig. 2-3-2 shows, although the bottom 25th percentile of enterprises with 20 or fewer employees have an equity ratio of only 8.1%.

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1) The term “asymmetry of information” is named after the information gap between seller (lender) and buyer (borrower).
2) “Banks” here refers to all deposit-receiving financial institutions, including credit associations and credit cooperatives as well as ordinary banks, long-term credit banks and trust banks.
City banks, long-term credit banks and trust banks we call “leading banks”, regional banks and second-tier regional banks we call “regional/second-tier regional banks”, and credit associations and credit cooperatives we call credit associations/coops.
3) Stiglitz and Weiss (1981) and numerous other researchers have noted this phenomenon.
4) This pattern of financing differs from that in the U.S., for example (Appended Note 2-3-1).
the top 25th percentile have an equity ratio of 41.7%, which is on a par with that of large enterprises.

2. Terms of SME financing

(1) SMEs unable to borrow even if they want to

Although as we have seen SMEs are dependent on borrowing for the majority of their financing, borrowing does not go as smoothly for SMEs as for large enterprises.

Fig. 2-3-3 shows the proportion by number of employees that said the commonest response of their main bank to loan applications in 2002 was “refused or reduced”. This shows that smaller enterprises encounter greater difficulty in obtaining loans.

(2) High borrowing rates for SMEs

As we have seen, the terms of borrowing represent a major problem for SMEs, which are dependent on borrowing for much of their financing. Below, therefore, we examine the terms of borrowing in terms of interest rates, security and guarantees.

5) According to the SME Agency’s Survey of the Financial Environment, the median value of long-term borrowing applied for by SMEs from main banks in 2002 was ¥40 million.
Fig. 2-3-3 Proportion of enterprises unable to obtain loan from main bank (by number of employees)

Smaller enterprises more likely to be refused borrowing

Note: “Enterprises unable to obtain loan” consists of enterprises that responded “loan application refused or amount reduced” to the question “What has been the commonest response to loan applications of your main bank in the past year?”

Fig. 2-3-4 Short-term borrowing rates of main banks (by number of employees)

Smaller enterprises charged higher short-term borrowing rates

Notes:
2. Latest short-term borrowing rate where there was no borrowing for the end of October 2002, and highest short-term borrowing rate where there was more than one.
3. The short-term prime rate used by the largest number of city banks at the end of October 2002 was 1.375%.

6) The proportion of bankrupt enterprise’s entrepreneurs providing guarantees is 79.3% (see Part II, Chapter 2), which is approximately the same level as indicated by the survey cited above.

Fig. 2-3-4 shows short-term borrowing rates in 2002 by number of employees. From this it can be seen that SMEs borrow at higher rates of interest than large enterprises.

However, it is not inevitable that interest rates should be high for SMEs. For example, the rate for the bottom 25th percentile of enterprises with 21~100 employees is 1.519%, and there are many SMEs that borrow at rates on a par with those of large enterprises. Thus while if we look at the average SMEs may be in a more difficult position than large enterprises in relation to the interest rates that they are charged, SMEs can take steps to overcome this problem.

(3) Security and guarantees required of SMEs

Fig. 2-3-5 shows the state of provision of security to main banks according to number of employees. From this it can be seen that the majority of SMEs are required to provide security when they borrow.

The situation regarding the provision of guarantees (personal security) is shown in Fig. 2-3-6. This reveals that most SMEs provide guarantees, most of which are personal guarantees provided by the representative director (Fig. 2-3-7).
“Asymmetry of information” in SME finance

As seen above, the financing terms that SMEs are required to meet are generally stricter than those imposed on larger enterprises. Why then does this phenomenon occur? It would appear to be due to the following. In financial transactions, financial institutions only earn income, qua lenders, if principal and interest are repaid by borrowers over a long period. In order to ascertain whether a borrower is capable of repaying over the long term, therefore, acquiring accurate information on the borrower is of definitive importance.

In SME finance, however, the generally smaller size of loans compared with those to large enterprises makes it difficult to properly assess borrowers and monitor them after a loan has been made in order to obtain this information. As there are no rating agencies or analysts to assist in assessing borrowers, it is difficult to accurately determine the quality of borrowers and their behavior after lending. As a consequence, there arises “asymmetry of information” between lender and borrower, making financial institutions more reluctant to lend to SMEs of unknown risk and leading them to impose stricter terms.

According to the Survey of SME Loans conducted by the SBI, very few financial institutions say that they encounter no particular problems in determining the credit risk of SMEs. The results instead indicate that financial institutions possess insufficient information, which hinders smooth SME financing (Fig. 2-3-8). “Little information disclosed”, “unreliable financial statements” and “difficulty assessing qualitative information” also pose obstacles to determining the credit risk of SMEs. When they encounter difficulties determining credit risk, financial institutions respond through the “active use of credit guarantee corporations” (57.3%), “requirement of physical security” (29.5%), and “refusal of loans” (26.7%) as well as “conduct of further investigations” (45.1%).

In SME finance, smooth lending appears to be impeded and terms made stricter in comparison with lending to large enterprises as a result of this “asymmetry of information”.

---

7) Security and guarantees function not only to reduce loss in the event of bankruptcy. The provision of security and guarantees by parties such as the representative director also serves as a signal that a business will succeed, and act as an incentive for the provider to participate in business. Because of the problem of “asymmetry of information” with SMEs, therefore, SMEs are required to provide greater security and guarantees.
Fig. 2-3-7 Types of guarantor providing guarantees to main banks (by number of employees)

More smaller enterprises provide personal guarantees given by the representative director

Note: Only enterprises with borrowing are included. The population is therefore the same as that for Fig. 2-3-6.

Fig. 2-3-8 Problems determining the credit risk of SMEs (by type of bank)

Asymmetry of information in SME finance

3. Providers of funds to SMEs

(1) Majority of SMEs use local financial institution as main bank

Having seen that SMEs are dependent on borrowing for the majority of their financing, we look next at their main banks, which are most important to them as providers of funds (Fig. 2-3-9). What we find is that the probability of an enterprise’s main bank being a city bank increases with enterprise size. Conversely, the main banks of the majority of SMEs are local financial institutions.

Next let us look at relations with main banks in terms of the length (in years) of an enterprise’s transactions with its main bank (Fig. 2-3-10). We find that as size increases, the length of the relationship with a main bank increases. This is because growing SMEs change their main bank from a credit association/coops to a regional/second-tier regional bank, and then to a city bank as they grow. At the same time, however, there are also many SMEs whose relationship with their main bank has continued over the long term for more than 30 years.

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8) Below we group together regional/second-tier regional banks and credit associations/coops as “local financial institutions”.

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Notes: 1. Banks regarded by enterprises as their main bank are treated as their main bank, regardless of their share of outstanding borrowing.

2. Long-term credit banks are Shinsei Bank and Aozora Bank.

Local financial institutions important to SMEs

Next we look at relations with banks overall, including main banks. Fig. 2-3-11 shows a breakdown of sources of borrowing according to number of employees. From this it can be seen that the smaller an enterprise is, the more likely it is to borrow from a local financial institution (i.e. regional/second-tier regional bank or credit association/coop) rather than a city bank. In addition, the larger an enterprise is, the greater the proportion of total borrowing that is accounted for by borrowing from city banks.

Furthermore, the likelihood of doing business with more banks increases with the size of an enterprise (Fig. 2-3-12). To summarize, the distinguishing features of SME financing are as follows: 1) high dependence on borrowing, 2) the inability in some cases to borrow the entire amount sought due to “asymmetry of information”, 3) high interest rates, 4) the provision in most cases of security and guarantees by the representative director, and 5) the important position of local financial institutions.

(2) Local financial institutions important to SMEs

Next we look at relations with banks overall, including main banks. Fig. 2-3-11 shows a breakdown of sources of borrowing according to number of employees. From this it can be seen that the smaller an enterprise is, the more likely it is to borrow from a local financial institution (i.e. regional/second-tier regional bank or credit association/coop) rather than a city bank. In addition, the larger an enterprise is, the greater the proportion of total borrowing that is accounted for by borrowing from city banks.

Furthermore, the likelihood of doing business with more banks increases with the size of an enterprise (Fig. 2-3-12). To summarize, the distinguishing features of SME financing are as follows: 1) high dependence on borrowing, 2) the inability in some cases to borrow the entire amount sought due to “asymmetry of information”, 3) high interest rates, 4) the provision in most cases of security and guarantees by the representative director, and 5) the important position of local financial institutions.
Section 2 Smooth indirect financing

As was seen in Part I, Chapter 3, the financial environment faced by SMEs is undergoing structural change. So what is required to enable SMEs, which face particular financing difficulties, to smoothly raise bank borrowing amid such change? To answer this question, we begin by examining what can be done from the standpoint of SMEs.

Fig. 2-3-13 Proportion of enterprises unable to obtain loans (by equity ratio)

Enterprises with higher equity ratios more able to obtain loans

<table>
<thead>
<tr>
<th>Equity ratio</th>
<th>Proportion of enterprises unable to obtain loans (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 0%</td>
<td>23.7</td>
</tr>
<tr>
<td>0%~5%</td>
<td>17.0</td>
</tr>
<tr>
<td>Over 5%~10%</td>
<td>12.5</td>
</tr>
<tr>
<td>Over 10%~20%</td>
<td>5.1</td>
</tr>
<tr>
<td>Over 20%~40%</td>
<td>2.5</td>
</tr>
<tr>
<td>Over 40%</td>
<td></td>
</tr>
</tbody>
</table>

Notes: 1. See Fig. 2-3-2 regarding calculation of the equity ratio.
2. See Fig. 2-3-3 regarding the definition of enterprises unable to obtain loans.

Fig. 2-3-14 Average short-term borrowing rate (by equity ratio)

The higher an enterprise’s equity ratio, the lower the borrowing rate

<table>
<thead>
<tr>
<th>Equity ratio</th>
<th>Average short-term borrowing rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 0%</td>
<td>2.998</td>
</tr>
<tr>
<td>0%~5%</td>
<td>2.558</td>
</tr>
<tr>
<td>Over 5%~10%</td>
<td>2.451</td>
</tr>
<tr>
<td>Over 10%~20%</td>
<td>2.204</td>
</tr>
<tr>
<td>Over 20%~40%</td>
<td>1.903</td>
</tr>
<tr>
<td>Over 40%</td>
<td>1.658</td>
</tr>
</tbody>
</table>

Notes: 1. See Fig. 2-3-2 regarding calculation of the equity ratio.
2. See Fig. 2-3-4 regarding the determination of interest rates.

1. Relations with banks and smooth indirect financing

Let us begin by looking at how relations with banks affect SMEs’ borrowing.

Fig. 2-3-15 Proportion of enterprises unable to obtain loans (by type of main bank)

Response to loan applications differs according to type of financial institution

Notes: 1. Leading banks are city banks, long-term credit banks and trust banks.
2. See Fig. 2-3-3 regarding the definition of enterprises unable to obtain lending.

9) This includes various information regarding, for example, the personality of the president, morale of employees, reputation in industry and among customers and suppliers, ability to develop technology, and quality of goods and products.
Importance of long and close relations with main bank

Figs. 2-3-15 and 2-3-16 show the impact of differences in the type of main bank on main banks’ responses to loan applications and the interest rates charged. From these it can be seen that if the main bank is a leading bank, interest rates are lower but lending is difficult to obtain, while if the main bank is a local financial institution, the reverse is the case. Next we look at the length of relationship (in years) with the main bank, and the proportion of enterprises unable to obtain loans from their main bank and the effect on interest rates, which are shown in Figs. 2-3-17 and 2-3-18. From these it can be seen that bank borrowing becomes easier as length of relationship increases.

Because of the “asymmetry of information” in SME finance, “relationships” are important. This is because the longer a relationship becomes, the more soft information not found in enterprises’ financial statements can be acquired by financial institutions in addition to quantitative data (such as end-of-year financial data), making lending easier and bringing down interest rates 11).

One possible index of the relationship with a main bank is the extent of use of services other than borrowing. As can be seen from Fig. 2-3-19, both large enterprises and SMEs make use of a wide range of financial services as well as borrowing. The use of numerous such services other than borrowing allows a bank to acquire more detailed information on an enterprise. The size of the number of non-borrowing transactions is in addition an

---

10) Sustained and close relations between lender and borrower.

11) In Europe and North America too, a negative correlation has been observed between length of relationship and interest rates (see for example Berger and Udell (1995)).
Enterprises that use many non-borrowing financial services should therefore be placed in a more advantageous situation vis-à-vis borrowing. Below, therefore, we define enterprises obtaining at least seven of the 13 types of non-borrowing services shown in Fig. 2-3-19 (such as term deposits, draft payment collection, settlement of notes payable, and participation in meetings with customers and suppliers organized by banks) from their main bank as using numerous non-borrowing services, and examine their impact. We find as a result that enterprises that use numerous services other than borrowing provided by their main bank find it easier to obtain loans (Fig. 2-3-20). The use of numerous non-borrowing financial services thus appears to help facilitate borrowing.

(2) Competition between main bank and other banks also facilitates indirect financing

Above we focused on the impact on borrowing transactions of relations with main banks. However, most enterprises do business with many other banks as well (Fig. 2-3-12), and these can be of a variety of types. Thus enterprises whose main bank is a credit association/coop frequently also do business with regional/second-tier regional banks. It is therefore perfectly conceivable that banks other than main banks may also impact on the response and interest rates of main banks. Below, we examine the impact on the response and interest rates of main banks of an indicator of the closeness of an enterprise and bank. Enterprises that use many non-borrowing financial services should therefore be placed in a more advantageous situation vis-à-vis borrowing. Below, therefore, we define enterprises obtaining at least seven of the 13 types of non-borrowing services shown in Fig. 2-3-19 (such as term deposits, draft payment collection, settlement of notes payable, and participation in meetings with customers and suppliers organized by banks) from their main bank as using numerous non-borrowing services, and examine their impact. We find as a result that enterprises that use numerous services other than borrowing provided by their main bank find it easier to obtain loans (Fig. 2-3-20). The use of numerous non-borrowing financial services thus appears to help facilitate borrowing.


Notes: 1. SMEs and large enterprises are defined in accordance with the Small and Medium Enterprise Basic Law.
2. Totals exceed 100 due to multiple responses.
enterprise’s relations with a bank other than its main bank of a type that is “superior” to the main bank (Figs. 2-3-21–22). What we find is that doing business with a bank immediately above the main bank makes obtaining loans easier and reduces interest rates. This may be explained as follows. If an enterprise does business with a bank other than its main bank that is “superior” to its main bank, the main bank may adopt a more positive attitude toward that enterprise’s applications for borrowing due its fear that the “superior” bank may usurp the main bank’s position. As shown in Fig. 2-3-16, moreover, banks that are “superior” to the main bank generally offer lower interest rates than the main bank, and so may use this as a means of winning more business. Where there is competition between different types of banks, therefore, interest rates are more advantageous for borrowers than where there is no such competition. Thus competition between banks of different types creates conditions that are advantageous for borrowers. For although it may be more difficult to obtain loans from a bank of a “superior” type if it is a main bank, such a bank’s presence as a competitor to the main bank helps to facilitate borrowing.

What banks other than its main bank an enterprise does business with is therefore a factor impacting on smooth indirect financing. SMEs need to be aware of this, and endeavor to build relations with banks that are advantageous to themselves.

### (3) Lending rates determined through negotiation

Fig. 2-3-23 shows the relationship between knowledge of interest rates and borrowing rates, and from this it can be seen that enterprises with greater knowledge of interest rates obtain lower interest rates. The rate of interest indicates the price of financing as a product, and it may be persuasively argued that knowing the price level is advantageous in negotiating. As we shall observe above, interest rates are not determined mechanically by factors such as an enterprise’s financial position, but rather through mutual negotiation between bank and enterprise. Knowing the number of points difference between a bank’s prime rate and an enterprise’s own borrowing rate and negotiating with a bank in this knowledge may theoretically have a positive impact on reducing the interest rate.

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**Fig. 2-3-21 Proportion of enterprises unable to obtain loans (by relationship with superior bank)**

Enterprises doing business with a bank of a type immediately superior to their main bank find it easier to obtain borrowing

<table>
<thead>
<tr>
<th>Type of main bank</th>
<th>No relationship with superior bank</th>
<th>Relationship with superior bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/second-tier bank</td>
<td>6.2</td>
<td>10.4</td>
</tr>
<tr>
<td>Credit association/coop</td>
<td>7.3</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Proportion of enterprises unable to obtain loans

**Fig. 2-3-22 Average short-term borrowing rates (by relationship with superior bank)**

Enterprises doing business with a bank of a type immediately superior to their main bank enjoy lower borrowing rates

<table>
<thead>
<tr>
<th>Type of main bank</th>
<th>No relationship with superior bank</th>
<th>Relationship with superior bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional/second-tier bank</td>
<td>2.233</td>
<td>1.826</td>
</tr>
<tr>
<td>Credit association/coop</td>
<td>2.763</td>
<td>2.540</td>
</tr>
</tbody>
</table>

Average short-term borrowing rate

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Notes: 1. “Relationship with superior bank” applies where at least 30% of borrowing is from a leading bank if the main bank is a regional/second-tier regional bank, and from a regional/second-tier regional bank if the main bank is a credit association/coop.
2. See Fig. 2-3-21 regarding the definition of enterprises unable to obtain loans.
3. See Fig. 2-3-15 regarding the definition of types of main bank.

12) “Superior” banks are leading banks where the main bank is a regional/second-tier regional bank, and regional/second-tier regional banks where the main bank is a credit association/coop.
Next we look at the relationship between the number of banks that an enterprise has and borrowing. As described in Appended Note 2-3-2, there is no statistically significant relationship between the number of banks\(^{13}\) and a main bank’s response\(^ {14}\). Interest rates, however, are generally higher if an enterprise has more banks. Considering that interest rates are determined through mutual negotiation between bank and enterprise, this may seem strange. This is because interest rates should fall, as doing business with a large number of banks leads to competition between banks and as a result puts the bank in a relatively weaker position in interest rate negotiations.

This may be explained, however, if doing business with a large number of banks is the result of being regarded by a main bank as having poor creditworthiness and not receiving sufficient funds, resulting in an enterprise being treated less accommodatively by its main bank and being charged interest rates set at a higher level. In other words, it is not the number of banks that affects a main bank’s response and interest rates, but rather that the number of banks increases as a result of the negative attitude of the main bank.

If the relationship is such that credit risk stands between the number of banks that an enterprise has and interest rates, and enterprises with more banks as a result are required to pay higher interest rates, then the situation should change where credit risk is lower and banks focus only on those enterprises to which they want to lend. In the case of such enterprises, this should manifest itself in the form of a natural power relationship in mutual negotiations between bank and enterprise, i.e. the party in an oligopolistic position should have greater negotiating strength, and the more banks an enterprise has, the lower interest rates should be.

In order to test this hypothesis, let us examine the relationship between interest rates and number of banks focusing on enterprises to which main banks actively lend. Fig. 2-3-24 shows the relationship between the number of banks of an enterprise and interest rates for such enterprises only\(^ {15}\). From this it can be seen that, except where an enterprise has 11 or more banks, interest

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13) In the 2002 White Paper on Small and Medium Enterprises in Japan, an analysis was made using the number of financial institutions, including non-banks and life insurers, with which an enterprise did business. In this year’s edition, however, we analyzed the number of banks (banks and credit associations/coops) in order to clarify the effect more.

14) An analysis of the determinants of the number of banks of an enterprise by Farinha and Santos (2002) shows that the number of financial institutions increases when 1) avoiding monopolization of information through doing business with one bank, and 2) each financial institution does not attempt to increase lending much due to the deterioration of an enterprise’s performance.

15) Only enterprises whose commonest response from their main bank when they applied for loans in 2002 was approval or encouragement to increase their borrowing.
rates come down as the number of banks increases. Enterprises that are actively courted by their main banks therefore see an increase in their negotiating strength as the number of banks increases, allowing them to borrow on better terms.

From this it may be concluded that in the case of enterprises to which banks actively want to lend, moderately increasing the number of banks with which they do business is one means of negotiating with banks to achieve lower interest rates.

2. Disclosure and smooth indirect financing

In order to effectively accumulate information to alleviate the “asymmetry of information” that exists between lender and borrower, active disclosure and close contact with lending staff are essential. Because of the problem of the decline in land prices and personal guarantees, there is growing interest in means of supplying funds that do not depend on real estate security or the personal guarantees of representative directors, such as non-recourse loans and lending at rates that reflect the level of risk. However, these methods are dependent on accurately determining enterprises’ credit risk, and this requires accurate and positive disclosure on the part of enterprises.

Below we seek to determine the state of information disclosure by enterprises, and analyze the impact of disclosure on financing.

(1) Low level of disclosure by SMEs

Fig. 2-3-25 shows the state of voluntary provision of data to main banks. From this it can be observed that the larger an enterprise is, the more likely it is to voluntarily provide data. Next we look at the frequency of provision of data by those enterprises that do provide data (Fig. 2-3-26). What we find is that the frequency of provision of data increases with size of enterprise. Among SMEs, while there are many enterprises that only provide data once a year, there are also more than a few enterprises that provide data every month on a regular basis. But while we may conclude from this that information disclosure is not yet sufficiently advanced among enterprises, the SME Agency’s Survey of the Financial Environment found that 94.0% of enterprises have not been specifically requested by financial institutions to implement measures to improve the reliability of their financial reports, indicating that there is scope for improving disclosure by enterprises through the active involvement of banks.

Disclosure can be improved in two ways: by increasing the frequency of provision of data, and by improving the quality of data disclosed. Fig. 2-3-27 shows the measures being taken by enterprises to improve the quality of data disclosed. Evident from this is that although most SMEs make use of licensed tax accountants, they are not actively taking other steps to improve the reliability of their financial reports.
(2) Communication through contact with lending staff

A characteristic feature of SME finance is the importance of soft information other than financial data regarding, for example, the character of the president, technical capabilities, and relations with customers and suppliers, as well as the hard information that can be garnered from financial statements\footnote{This point has been noted by numerous researchers in Europe and North America. Most recently, Berger et al. (2002) have found that the impact on the possibility of borrowing of the length of the relationship between financial institutions and enterprises increases as the size of financial institutions decreases, and note the importance in SME finance of soft information acquired over time.}. This is due to such things as the fact that an enterprise’s direction is often affected by the thinking of its president (Fig. 2-1-26), and its technological strengths frequently being dependent more on the skills of individuals than on the performance of machinery and facilities. For a financial institution to acquire such soft information on an enterprise, however, it is important that its staff frequently visit the enterprise and meet for talks with its management. Unlike hard information such as financial data, which is easily numerically quantified, soft information can only be acquired if lending staff meet and talk with the president, and see and weigh up the enterprise and its products for themselves. Let us therefore look at the extent of communication of soft information to banks through the frequency of contact with the lending staff of main banks (Fig. 2-3-28). This reveals that enterprises whose main bank is a local financial institution have a greater frequency of contact. This is probably because local financial institutions aim to maintain close local ties, and have close contact with enterprises through their day-to-day operations, such as bill collection. Such enterprises with a greater frequency of contact find it easier to obtain loans (Fig. 2-3-29). Accordingly, enterprises should place a strong emphasis on close contact with lending staff, and the continuation over the long-term of such contact in order to build long-term relationships.

**Fig. 2-3-27 Measures to improve reliability of data**

<table>
<thead>
<tr>
<th>Extensive use of licensed tax accountants by SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(%)</strong></td>
</tr>
<tr>
<td>27.2%</td>
</tr>
<tr>
<td>38.5%</td>
</tr>
<tr>
<td>26.8%</td>
</tr>
<tr>
<td>8.6%</td>
</tr>
<tr>
<td>1.0%</td>
</tr>
</tbody>
</table>

Notes: 1. SMEs and large enterprises are defined in accordance with the Small and Medium Enterprise Basic Law
2. Totals exceed 100 due to multiple responses.

**Fig. 2-3-28 Frequency of contact with main bank lending staff (by type of bank)**

<table>
<thead>
<tr>
<th>High frequency of contact with local financial institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(%)</strong></td>
</tr>
<tr>
<td>9.9%</td>
</tr>
<tr>
<td>29.2%</td>
</tr>
<tr>
<td>5.2%</td>
</tr>
<tr>
<td>1.4%</td>
</tr>
<tr>
<td>4.1%</td>
</tr>
<tr>
<td>4.1%</td>
</tr>
</tbody>
</table>

Note: See Fig. 2-3-15 regarding the definition of types of main bank.
(3) Disclosure leads to smooth indirect financing
Let us examine the impact on borrowing of data disclosure to main banks (Figs. 2-3-30~31). Doing so, we find that enterprises that voluntarily provide data find it easier to obtain loans and are charged lower interest rates. Disclosure admittedly requires time and labor. With human resources being limited, therefore, disclosure imposes a particular burden on SMEs, which lack the specialist staff to handle disclosure. Nevertheless, the cumulative effect of disclosure over time undoubtedly facilitates borrowing (Case 3-1).

Fig. 2-3-29 Proportion of enterprises unable to obtain loans (by frequency of contact)
Enterprises with more frequent contact find it easier to obtain lending

Fig. 2-3-30 Proportion of enterprises unable to obtain loans (by voluntary provision of data)
Enterprises that voluntarily provide data find it easier to obtain loans

Fig. 2-3-31 Average short-term borrowing rates (by voluntary provision of data)
Enterprises that voluntarily provide data enjoy lower interest rates
Case 3-1 Winning over banks through disclosure

T Ltd. (based in Tokyo with 43 employees) facilitates borrowing through active disclosure of information to banks.

Active information disclosure

T Ltd. was established by the current president in 1992. Doing business as a contractor providing a complete range of store maintenance services, including repairs and store facility maintenance as well as cleaning of commercial facilities, the company grew rapidly, and in the last fiscal year registered sales of approximately ¥1.5 billion.

Most of T Ltd.’s borrowing is unsecured. “Banks are obviously not going to lend you an umbrella if you go running to them when it rains, so it’s important to keep them informed about your company on a regular basis”, says the president, explaining the company’s active stance on disclosure to banks.

Almost immediately after starting up, T Ltd. hired a certified public accountant and applied itself to determining its financial status in greater detail. Monthly trial balances are drawn up, and the president himself writes a business report every quarter. This describes everything from the profit/loss situation, factors underlying the profit/loss situation and the state of orders on its books to recruitment of employees. When the corroborating documents (such as copies of orders) are included, T Ltd.’s business reports are a colossal size. The president then visits all of the company’s banks to explain the report, a practice that T Ltd. has continued since startup.

When business deteriorates as well, T Ltd. reports on the reasons for the deterioration and draws up remedial plans. It therefore enjoys healthy relations with banks, obtaining first of all a ¥50 million unsecured overdraft from a city bank in its third year after startup and subsequently expanding its unsecured borrowing to the point where its overdraft now stands at approximately ¥700 million. When T Ltd.’s financial position deteriorates due to the bankruptcy of an enterprise with which it does business, the banks volunteer assistance, showing it has truly won them over. The president says, “There’s nothing special about our business reports, they’re the sort of thing that any company could produce. However, keeping it up requires dedication. I know as I used to work at a bank that actively disclosing financial information makes it easier to obtain loans from banks, while preparing the materials for disclosure has the advantage of enabling us to keep a constant track of our position”. As well as facilitating borrowing from banks, disclosure thus appears to help a company monitor its own financial status. Based on this, it can make accurate business decisions, and that is what has enabled T Ltd. to grow.

Bank’s view of disclosure

Bank Z, T Ltd.’s main bank, rates T Ltd.’s attitude toward disclosure highly. In Z’s words, “While disclosure was common before the economic bubble, it ceased during the bubble period when it was possible to obtain lending provided one had security. Generally speaking, it is easier to lend to companies that actively disclose information than those that do not. That is because if there is enough data, it is possible to see how loans have been used and how they will be used in the future. Banks too have depositors and shareholders, and cannot take unknown risks”. The bank rigorously checks data disclosed actively by enterprises, and the tension thus generated creates a relationship of trust between an enterprise and bank, thereby generating confidence.

Diverse financing

T Ltd. is not dependent on borrowing alone as a means of financing, and raises funds by a variety of methods. In its fourth to fifth year after startup, for example, T Ltd. increased its capital by a total of ¥80 million. The company encountered no particular difficulties in finding investors for the capital increase, who included customers and suppliers as well as the president himself, possibly because it demonstrably had future potential. In 1998, T Ltd. was approved under the Temporary Law Concerning Measures for the Promotion of the Creative Business Activities of Small and Medium Enterprises, and in 2000 succeeded in raising approximately ¥100 million by issuing corporate bonds with subscription warrants using the special loans for development of new growth business from a government-affiliated financial institution. Having grown using a variety of means of financing—capital increases and issuing of corporate bonds with subscription warrants as well as smooth borrowing from banks through information disclosure—T Ltd.’s new target now is to go public.
3. Means of facilitating indirect financing

(1) Keys are building relationships and developing sub-main banks

Up to this point we have examined the impact on the response of main banks and interest rates of enterprise attributes such as enterprise size and financial status, and the impact of factors such as the relations with banks, the frequency of contact with main banks’ lending staff, and the provision of data to main banks. What then of the effect on the response of main banks and interest rates if we consider all these factors in unison? Appended Note 2-3-2 describes an analysis from this perspective of the effects of multiple variables taken into consideration simultaneously, the results of which are the same as those described above (Fig. 2-3-32).

From the above analysis it is apparent that while it is obviously important for an enterprise to grow and increase in scale and to strengthen its financial position in order to make borrowing easier, there are also a variety of other measures that it should adopt.

The first step that they should take is to endeavor to build long and close relations with and actively and voluntarily disclose information to their main banks due to the importance to banks of accumulating information through “relationships” with SMEs so as to facilitate SME finance.

An excessive dependence on main banks, on the other hand, increases the risk of being unable to borrow the desired amount from a main bank and, as we shall see in 4. below, exposure to the risk of unforeseen circumstances such as the merger or collapse of a main bank.

For example, the commonest response of SMEs (43.3%) in the event that they are unable to obtain lending from their main bank is to borrow from a financial institution other than their main bank (Fig. 2-3-33). The financial institutions from which they borrow in such cases are comparatively more likely to be regional/second-tier regional banks and government-affiliated financial institutions (Fig. 2-3-34). It is therefore sensible for enterprises to develop their everyday relations with local financial institutions, which act as a safety net when they cannot obtain the lending that they need from their main bank.

Given that, as shown above, doing business with types of banks that are “superior” to their main bank has a positive influence on borrowing, enterprises should therefore also do business with “superior” types of banks to their main bank in order to provide a source of competition.

Leading banks, regional/second-tier regional banks and credit associations/coops are generally believed to exhibit different lending behavior. Thus whereas leading banks tend to lend at lower interest rates to safer enterprises (as determined by objective indicators of their financial affairs), local financial institutions such as regional/second-tier regional banks and credit associations/coops regard their close local ties as a strength and so are better positioned to ascertain the strengths of enterprises from information other than hard information (i.e. from soft information). It should therefore also be possible for enterprises to make use of different financial institutions to suit their circumstances and to make them compete against each other in order to facilitate borrowing.

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**Fig. 2-3-32 Characteristics of enterprises that obtain borrowing easily**

<table>
<thead>
<tr>
<th></th>
<th>Enterprises obtaining loans easily</th>
<th>Enterprises with low interest rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Large</td>
<td>Large</td>
</tr>
<tr>
<td>Number of banks</td>
<td>Unrelated</td>
<td>Not many&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Relationship with superior bank</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Main bank</td>
<td>Local financial institution</td>
<td>Leading bank</td>
</tr>
<tr>
<td>Relationship with main bank</td>
<td>Long</td>
<td>Long</td>
</tr>
<tr>
<td>Non-borrowing transactions</td>
<td>Many</td>
<td>Unrelated</td>
</tr>
<tr>
<td>Knowledge of interest rates</td>
<td>-</td>
<td>Extensive</td>
</tr>
<tr>
<td>Use of borrowing</td>
<td>Not retrogressive</td>
<td>Not retrogressive</td>
</tr>
<tr>
<td>Voluntary provision of data</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Frequency of provision of data</td>
<td>Low&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Low&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Measures to improve financial statements</td>
<td>Unrelated</td>
<td>Many</td>
</tr>
<tr>
<td>Frequency of contact with lending staff</td>
<td>High</td>
<td>Unrelated</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Operating income to total assets</td>
<td>High</td>
<td>Unrelated</td>
</tr>
</tbody>
</table>

<sup>1</sup> In the case of enterprises whose main bank has a positive lending attitude, the interest rate declines as the number of banks with which it does business increases.

<sup>2</sup> This is probably because enterprises with poorer performances and enterprises that are less creditworthy are supervised by their main banks and requested to provide data frequently.
Fig. 2-3-33  Solutions adopted after being unable to obtain loan from main bank

Many enterprises borrow from financial institution other than main bank

Notes: 1. SMEs and large enterprises defined in accordance with the Small and Medium Enterprise Basic Law.
2. Totals exceed 100 due to multiple responses.

Fig. 2-3-34  Sources of borrowing after failure to obtain loan from main bank (by type of main bank)

Regional/second-tier regional banks and government-affiliated SME financial institutions commonly borrowed from

Note: See Fig. 2-3-15 regarding the definition of types of main bank.
4. Impact on SMEs of changes in the financial environment and solutions

So far we have examined the measures that SMEs can take to facilitate smooth borrowing. As was seen in Part I, Chapter 3, SMEs face enormous changes in the financial environment. Below, therefore, we analyze the impact on SME financing of these changes in the financial environment.

(1) Deterioration in earnings of SMEs due to increase in interest rates

Fig. 2-3-35 shows details of the demands made during this past year by main banks regarding the terms of lending. From this it can be seen that around one in four enterprises were requested to accept an increase in their short-term borrowing rate. If we focus on this demand to raise interest rates and look at the proportion of enterprises requested to accept a rise in interest rates according to type of main bank (Fig. 2-3-36), we discover that enterprises are more likely to receive a request if their main bank is a leading bank.

When interest rates are raised, the party that actually pays is the enterprise. However, the earning power of SMEs is declining, and the burden of interest rates may potentially impose a heavy burden on enterprises. Accordingly, any discussion of the raising of interest rates must also examine the ability of enterprises to pay interest rates under such conditions.

So to what extent does the increase in the interest rate burden impact on SMEs? Fig. 2-3-37 shows the results of a simulation of the deterioration in ordinary profit due to a rise in interest rates according to MOF’s Financial Statements Statistics of Corporations by Industry, Annually. This shows that although a rise of around 0.50 points in the rate of interest does not cause that many enterprises to go into the red, a 1.0-point rise in the rate of interest leads to a 3.9% increase in the number of enterprises registering an ordinary loss, and a 2.0-point increase in the rate of interest leads to a 5.8% increase.\(^{17), 18}\)

(2) Improving finances and voluntary disclosure key to avoidance of demand to accept interest rate hike

What then should be done so that earnings are not squeezed by increased interest rates? If we examine the relationship between voluntary disclosure and demands to raise interest rates as in 2. (Fig. 2-3-38), we find that enterprises that voluntarily disclose data are less likely to be requested to accept an increase in interest rates.

Even if they do receive such a request, moreover, more than a few enterprises succeed in refusing these demands (Fig. 2-3-39).

Let us therefore look at the factors having an impact on an increase in interest rates as in Appended Note 2-3-2 (Appended Note 2-3-3). What we find is that an enterprise is less likely to receive a demand to increase interest rates if 1) it is large, 2) its main bank is a local financial institution, 3) it voluntarily discloses data, and 4) it is in a healthy financial position and has a high equity ratio and rate of operating income to total assets.

Unlike the results described in Appended note 2-3-2, a significantly large proportion of enterprises with long relationships and a high frequency of contact with their main bank were requested to accept an increase in interest rates. This is probably because enterprises with long relationships and everyday contact with their main

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17) It should be noted that these estimates are for a simple rise in the short-term borrowing rate of financial institutions assuming that conditions such as sales and rates of return are exactly the same as in fiscal 2001.

18) If the level of all borrowing rates and not just the short-term borrowing rates of financial institutions are increased, a 0.50-point rise in interest rates leads to a 7.2% increase in the number of enterprises registering an ordinary loss, a 1.0-point rise in interest rates leads to a 10.8% increase, and a 2.0-point rise in interest rates leads to a 16.3% increase.
Whether or not interest rates are actually increased after a request has been made is likely to be affected by subsequent negotiations. Size is a factor here too, and large enterprises are frequently able to refuse a request to increase interest rates, possibly due to their better negotiating strength. Our findings also show that

bank are easier for main banks to approach regarding increasing interest rates.

Fig. 2-3-36 Proportion of enterprises requested to accept interest rate rise (by type of main bank)

Leading banks frequently request interest rate rise

Fig. 2-3-37 Interest rate rise and proportion of enterprises registering ordinary loss

Increase in proportion of enterprises registering ordinary loss due to interest rate rise

Fig. 2-3-38 Proportion of enterprises requested to accept interest rate rise (by voluntary provision of data)

Fewer enterprises voluntarily providing data requested to accept interest rate rise


Note: See Fig. 2-3-15 regarding the definition of types of main bank.

Notes: 1. Calculated according to increase in interest expenses resulting from ordinary profit minus interest rate rise (short-term borrowing from financial institutions multiplied by size of interest rate rise).

2. SMEs and large enterprises are defined in accordance with the Small and Medium Enterprise Basic Law.


Notes: 1. See Fig. 2-3-15 regarding the definition of types of main bank.

2. The extremely small size of the sample of enterprises requested to accept an interest rise by credit associations/coops (54 enterprises not providing data voluntarily and 56 enterprises providing data voluntarily) should be noted.
enterprises with long relationships with their main bank are more likely to receive a request to increase interest rates, but are also more likely to refuse such a request. One more finding is that enterprises with greater knowledge of interest rates are more likely than enterprises without such knowledge to be able to avoid an increase in interest rates.

In the light of the above results, we may conclude that in order not to receive a request to increase interest rates it is necessary for an enterprise to improve its finances, increase its earning power, undertake active disclosure, and be able to assert to its bank that there exist no grounds for it to accept a rate increase. If an enterprise does receive such a request, it may be able to avoid an actual increase through its “relationship” with its main bank and the negotiating strength bestowed by its knowledge of interest rates.\(^{19}\)

(3) Collapse of main bank affects borrowing
As is apparent from Appended Note 2-3-4, there was a succession of failures of financial institutions in fiscal 2002. There have been a particularly large number of failures of credit associations and credit cooperatives, which are important sources of finance for SMEs, and this may be expected to have had a major impact on SMEs. In the event of the collapse of a main bank, obtaining fresh loans becomes difficult, and so enterprises change their main bank. If we then look at the impact on borrowing transactions of experience of the failure of a main bank (Fig. 2-3-40), it appear not to be the case that enterprises whose main bank collapsed enjoy smooth financing.\(^{20}\) This is because in SME finance, where a strong emphasis is placed on “relationships”, changing main bank means rebuilding relations with one’s main bank again.

Considering the above, enterprises should keep a

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19) Generally speaking, the lending rates of financial institutions appear to be determined through negotiation with the borrowing enterprise in line with the policy that interest rates should be set at a level corresponding to customers’ credit risk as carefully ascertained by private financial institutions. Given the public nature of financial institutions, however, their business dealings should be characterized by proper conduct, including dealing with customers in good faith. When raising interest rates, therefore, the terms of contracts should be determined in a mutually satisfactory manner following, for example, sufficient dialogue with the enterprise concerned. It is also essential that financial institutions should take the business stability of SMEs fully into account, and take appropriate action to ensure that a sharp rise in interest rates does not threaten SMEs’ stability and so expose them to criticism for being reluctant to lend or over-zealously recovering loans.

20) A negative effect means a disadvantageous or inconvenient borrowing outcome, such as a less accommodative lending attitude or tighter terms of borrowing.
constant eye on the business position of their main bank in order to avoid financing being disrupted by its sudden collapse. At the same time, they should maintain relations with alternative banks in case of the unexpected collapse of a main bank.

(4) SME financing changed by bank mergers
In order to improve the solidity of Japan’s financial system and allow financial institutions to display their financial intermediary and settlement functions to the full over the medium to long term, financial institutions need to further strengthen their infrastructures, and, as described in Appended Note 2-3-5, there has been a move toward mergers and business integration among banks in recent years. Below, therefore, we look at the impact on SME finance of bank mergers in Japan.

First of all, what changes have occurred in lending to SMEs as a result of mergers in the past? We attempt to answer this question using data regarding, among other things, banks’ outstanding lending. Fig. 2-3-41 shows the deviation from the average rate of change on the previous fiscal year in the rate of lending to SMEs of city banks or regional/second-tier regional banks that merged. The SME lending rate is the same as the average if 0%, and increases more than the average for that type of financial institution if greater than 0%. As can be seen from this, merged banks appear not to lower their SME lending ratios. As far as the figures regarding outstanding lending are concerned, therefore, it cannot be concluded that there is any change in SME lending as a result of bank mergers.

However, the impact of mergers between financial institutions does not manifest itself only in outstanding lending. If we look likewise at the deviation from average for that type of financial institution focusing on the number of branches (Fig. 2-3-42), we discover that merged banks have fewer branches than the average for institutions of their type. Although the aims of bank mergers are diverse, some are designed primarily to achieve improvements in efficiency through the closure and merger of redundant branches. A decline in the number of branches as a result of mergers was therefore

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**Fig. 2-3-41 Trend in SME lending rate of merger banks**

Mergers have no clear impact on SME lending rate

- **Deviation (%)**
  - SME lending rate increases by more than average for type
  - SME lending rate decreases by more than average for type

### Notes:
1. Deviation = change from previous fiscal year in SME lending rate (outstanding SME lending / total outstanding lending) - average rate of change from previous fiscal year in SME lending rate for that type of financial institution.
2. Figures are for the following banks that merged between fiscal 1998 and fiscal 2001: Asahi Bank, Bank of Tokyo-Mitsubishi, Sumitomo Mitsui Banking, UFJ Bank, San-in Godo Bank, Kumamoto Family Bank, Hokuto Bank, Namihaya Bank, Kinki Osaka Bank.


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**Fig. 2-3-42 Trend in number of branches of merged banks**

Decline in number of branches as a result of mergers

- **Deviation (%)**
  - Number of branches decreases more than average for type

### Notes:
1. Deviation = rate of change from previous year in number of branches of merged banks - rate of change from previous year in number of branches of all banks of that type
2. See Fig. 2-3-41 regarding the scope of analysis.

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21) The impact of such bank mergers on lending to SMEs is the subject of much interest in Europe and North America. For example, it is argued that while mergers between large banks has the effect of reducing their lending to SMEs, mergers between small banks serve to increase lending to SMEs.

According to studies of the size of financial institutions and relations with SMEs, gathering information based on strong relations between banks and enterprises is generally inefficient for large financial institutions, which as a result increase their business with larger, more transparent enterprises (Berger et al. (1998, 1999), Peek and Rosengren (1998)).
to be expected. However, while the closure and merger of redundant branches has the advantage for banks of cutting expenses, it can also result in changes in the branches with which SMEs as borrowers do business, increasing the distance to branches and changing the lending staff with whom they have contact. In SME finance where a strong emphasis is placed on “relationships”, this impact may be greater.

Next we analyze mergers from the point of view of borrowing enterprises (Fig. 2-3-43). As the figure shows, a greater proportion of enterprises whose main banks merged said that this had a negative impact on borrowing than said that the impact was positive. Why should this be so?

A useful clue is provided by Fig. 2-3-44, which shows the proportion of enterprises unable to obtain borrowing according to whether their main bank merged. This demonstrates that enterprises whose main bank merged find it more difficult to obtain loans than enterprises whose main bank did not.

The finding that enterprises whose main bank merges are affected disadvantageously with respect to borrowing remains the same even when merger of a main bank is included among the factors used in Appended Note 2-3-2 (Appended Note 2-3-6).

Bank mergers are ordinarily considered to facilitate lending to SMEs as a result of strengthening banks’ finances and infrastructure. So why should we obtain such a finding? The negative influence on lending to SMEs by merged financial institutions may conceivably arise from the following two factors.

The first factor is that as there are limits to the risk that a bank can bear in respect of one enterprise, it refrains from lending when the amount of lending increases as a result of the merger of two banks lending to the same enterprise. This is because banks aim to achieve a portfolio effect and disperse lending among a large number of enterprises. Hence although pre-merger they may have lent in the belief that they were sharing the risk and from the herd mentality that “we’ll lend as other banks are lending”, after their merger they may refrain from lending in order to avoid a concentration of risk and because of the reduced impact of the herd instinct.

The second cause is that the increase in size following a merger of two banks lending to the same enterprise may lead to an increase in the number of branches and personnel engaged in lending, which may result in a reduction in the number of enterprises that receive approval for loans. In this way the merger may result in an increase in the number of enterprises that are not approved for loans, and may therefore result in enterprises whose main banks merged finding it more difficult to obtain loans.


Notes: 1. Enterprises whose main bank merged in or after 1997 are classified under “main bank merged”.

2. See Fig. 2-3-3 regarding refusal or reduction of loan applied for.

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22) Miller (1996) argues that financing becomes increasingly difficult as the distance to a branch increases. Some recent studies, however, argue that there emerge financial institutions that fill the gap left by financial institutions whose lending has decreased due to a merger and, though their branches may be located at a distance from an enterprise, use IT and credit scoring technology to offset any resulting disadvantages, thus preventing the impact of mergers from being especially severe.
merger makes communicating the information possessed by SMEs, as borrowers, to those in authority more difficult, thus making lending more difficult. In the case of SMEs, information other than financial information regarding, for example, the personality of the president, technological capabilities, and relations with customers and suppliers, is important when examining loan applications. Non-financial information of this kind (i.e. soft information) is obtained by lending staff who actually visit enterprises and meet for talks with representative directors. As it is difficult to convert into numerical data, however, there occurs data loss between lending staff and persons in positions of authority during the process of examining loan applications. Consequently, when an organization increases in size and the distance between lending staff and those in authority increases following a merger, there occurs a shortage of non-financial information for supplementing financial information, intensifying the problem of "asymmetry of information".

As banks merge and consolidate, therefore, this suggests that there is a need to further strengthen relations with existing banks and to establish alternative means of raising funds in case of emergency in order to minimize the impact of the merger and integration of banks.

Case 3-2 describes the actual case of an enterprise that encountered obstacles in financing due to the merger of its main bank. Although the change in the attitude of its main bank may not necessarily have been due to the merger, the fact remains that its attitude changed when the merger occurred. Because of this, the SME Agency expanded the scope of its safety net guarantees in December 2002 to include SME entrepreneurs facing a decline in loans as a result of the merger and reorganization of financial institutions and branch and staff cutbacks (considerable rationalization of business).

For financial institutions, reorganization by means such as mergers offers a valuable way of increasing profitability and strengthening business structures, and in turn improving financial soundness and risk-taking ability. As a result, financial institutions are better placed to fulfill their financial intermediary and settlement functions, thereby facilitating business financing, such as lending to SMEs, in the medium to longer term.

Through mergers, financial institutions rationalize their business and operations by rethinking their organization and operations, and it is to be hoped that when they do so they also review their financial services, such as lending to enterprises with which they do business, so as to encourage more efficient use of funds by those enterprises.

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23) It was for this reason that the Law on Special Measures Regarding the Promotion of the Reorganization of Financial Institutions, etc. was put into effect on January 2003.
Case 3-2 Impact of merger of main bank

L Ltd., a company based in Osaka with 84 employees and capital of ¥20 million, encountered barriers to financing due to the merger of its main bank.

Main bank does about-face due to merger
L Ltd. currently registers sales of around ¥3 billion. Its main bank, Y, is a leading bank with which it has done business for more than 30 years. Its relations with its main bank were good, and it enjoyed a temporary honeymoon period during which, for example, it received staff on loan from the bank. In recent years, however, the situation has changed completely. Main bank Y merged with L Ltd.’s sub-main bank, X. As a result, the main bank’s share of L Ltd.’s borrowing rose from around 30% to over 50%, disrupting L Ltd.’s balance of borrowing from banks.

Regarding the merger, the branch manager declared that main bank Y would continue to do business with L Ltd. on favorable terms on account of its past record. Following the actual merger, however, L Ltd. was told that its proportion of borrowing was too high and that the bank wanted to reduce it to around 40%. L Ltd. as a consequence found itself unable to obtain fresh lending. On top of that, part of its short-term borrowing was altered to long-term borrowing subject to repayment by agreed installments, reducing outstanding borrowing. The borrowing rate was in addition gradually raised each time notes payable were renewed. L Ltd. consequently felt strongly betrayed.

As a result of the merger, the branches with which it did business were amalgamated, forcing it to do all its business with a branch of its sub-main bank, X. Prior to the merger, lending authorized by the branch manager was immediately implemented, even if an application had to be examined by headquarters. The branch manager also took responsibility for responding whether a loan would be provided. After the merger, however, the bank went through some reorganization, with branches being consolidated, as a consequence of which it took some time for a loan to be actually provided even after being authorized by the branch manager, and the branch manager ceased being able to give a definitive answer when asked whether a loan would be provided.

L Ltd. had also done business with another leading bank, Bank W, for over 20 years. W, however, integrated its operations, resulting in the branch with which L Ltd. did business changing on two occasions. L Ltd. was subsequently notified that its business would be transferred to another bank in the same group, but L Ltd. grew uneasy and abandoned doing business with W.

As a result of the change in its treatment at the hands of leading banks, L Ltd. strengthened its ties with local financial institutions and government-affiliated financial institutions in order to minimize the damage.

L Ltd.’s attitude regarding the merger
L Ltd. is disappointed regarding the merger, saying “Had main bank Y notified us before the merger that they would be reducing our share, we could have taken steps to find another sub-main bank.” L Ltd. also says, “Bank mergers are now a trend, so there’s nothing you can do about it. But while the banks adopt an increasingly simple approach as a result of reorganization, the responsibilities [of the people who work at the banks] are growing increasingly blurred. If you apply for borrowing from a leading bank, you can be turned down at the counter, and even if you get past the counter you still have to get past headquarters and the authorities. The people you deal with thus no longer have the ability to take responsibility for their decisions. You get a better response from local banks and government-affiliated financial institutions, and other SMEs too should take note of
5. Action required of banks to facilitate SME finance

Although we have so far examined what SMEs should do to facilitate borrowing, financial problems are not simply caused by factors on the side of the users of funds, but are also affected by factors on the side of providers. This is because smooth SME financing is only possible through the efforts of both borrowers (i.e. SMEs) and lenders (i.e. banks). Below, therefore, we turn to examine what action is required of banks, qua the providers of funds, to facilitate SME finance.

(1) SME financing as scene of future activity
As was shown in Part I, Chapter 3, lending to large enterprises is relatively stable, though low compared to SMEs. As Fig. 2-3-1 shows, moreover, borrowing occupies a smaller share of financing by large enterprises. This is most likely due to large enterprises’ independence of banks and their increasing use of direct finance. Leading banks as well as of course local financial institutions will therefore find that they have to increase the proportion of business lending directed at SMEs.

(2) Reassessment of “relationship” is key to promoting lending to SMEs
An obstacle to banks increasing their lending to SMEs is “asymmetry of information”. Three ways in which banks can overcome this “asymmetry of information” are by 1) boosting their loan investigation capabilities, 2) reassessing their “relationships”, and 3) developing new financing techniques.

First and foremost, the “asymmetry of information” can be eased by banks by strengthening and improving their loan investigation capabilities. If we examine the state of screening by banks according to the results of the SBI’s Survey of SME Loans (Fig. 1-3-12), we find that whereas 58.2% of banks consider “guarantee of credit guarantee corporation” and 23.9% consider “real estate security” to be particularly important in investigating loans, 39.4% identify profitability, 20.8% growth potential, 26.0% business base, and 38.1% business strengths and weaknesses (product and technological strengths). These figures suggest that banks place a greater emphasis on safety (ensured through, for example, the provision of guarantees by credit guarantee corporations) than on

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**Fig. 2-3-45 Financial status in fiscal 1998 and fiscal 2001**

**Large change in financial status in three years**

<table>
<thead>
<tr>
<th>Financial status in fiscal 2001</th>
<th>Normal</th>
<th>More assets than liabilities and making an ordinary loss</th>
<th>More liabilities than assets and making an ordinary profit</th>
<th>More liabilities than assets and making an ordinary loss</th>
<th>Defaulter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial status in fiscal 1998</td>
<td>Normal</td>
<td>More assets than liabilities and making an ordinary loss</td>
<td>More liabilities than assets and making an ordinary profit</td>
<td>More liabilities than assets and making an ordinary loss</td>
<td>Defaulter</td>
</tr>
<tr>
<td>More assets than liabilities and making an ordinary loss</td>
<td>Improving enterprises</td>
<td>More liabilities than assets and making an ordinary profit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More liabilities than assets and making an ordinary loss</td>
<td>Improving enterprises</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Notes:
1. “Normal” enterprises are enterprises that neither make an operating loss nor have more liabilities than assets.
2. “Defaulters” are enterprises that are in arrears by more than three months (in principle), enterprises that have collapsed or found to have de facto collapsed according to a financial institution’s own assessment, and enterprises for which subrogated payment has been made by a credit guarantee corporation.
3. 251,490 companies in the CRD Database for which data regarding default or otherwise were available for fiscal 1998 and fiscal 2001.

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24) See the analysis in Part I, Chapter 3 of the impact on lending to SMEs of the non-performing loans of banks.
their evaluation of an enterprise’s business. Many banks also place their focus on an enterprise’s financial position, and on particular its ability to repay debt, when investigating loan applications. However, the financial data obtainable from financial reports do not necessarily express everything there is to know about an SME. Below, therefore, we examine how the financial status of enterprises had changed in fiscal 2001 compared with fiscal 1998 by ranking them into one of four categories according to their financial status as described in their fiscal 1998 financial statements: 1) “normal” enterprises, 2) enterprises with more assets than liabilities and making an ordinary loss, 3) enterprises with more liabilities than assets and making an ordinary profit, and 4) enterprises with more liabilities than assets and making an ordinary loss (Fig. 2-3-45). 

Doing so, we find that while some enterprises in the normal category fall into the category of making an ordinary loss or having more liabilities than assets, there are also more than a few enterprises with more liabilities than assets whose situation improves and which become normal enterprises. Even among enterprises that had more liabilities than assets and made an ordinary profit (33.4%). In other words, enterprises’ financial status according to their financial statements in any particular year improves and deteriorates, and their financial status at that particular time does not necessarily continue unchanged. Furthermore, an enterprise’s financial status according to its financial statements does not affect its future rate of growth in sales (Fig. 2-3-46). Even among enterprises with more liabilities than assets, one in four enterprises achieves sales growth in excess of 10%. As this indicates, therefore, it is not possible to ascertain an SME’s real strength simply from its financial status according to its financial statements. Accordingly, strengthening the ability to “judge” an enterprise by laying the emphasis on assessing its business strengths and growth potential, which are factors that cannot be determined from an enterprise’s financial statements alone, offers an important means for a bank to limit losses and raise earnings.

So what do banks need to do in order to judge the actual strength of an enterprise that cannot be ascertained only from financial data? The British academic D. J. Storey, one of the foremost researchers in the field of modern small business research, writes that banks should strengthen their loan investigation ability through focusing their investigations on types of industry and stages of growth, arguing that “lending staff can acquire experience by handling similar customers at the same stages of growth”25). As we saw in Part II, Chapter 1, SMEs are active in a diverse range of fields. Given the diversity of SMEs, banks too should therefore be diverse. If all banks were to judge loan applicants according to uniform criteria, then any enterprises that failed to meet these criteria would have no future. Considering that the actual strengths of SMEs are diverse and impossible to determine from financial data alone, and taking on board Storey’s argument that banks should focus their

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**Fig. 2-3-46 Financial status in fiscal 1998 and rate of growth in sales**

No correlation between current financial status and subsequent rate of growth in sales

<table>
<thead>
<tr>
<th>Rate of growth in sales up to fiscal 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10%</td>
</tr>
<tr>
<td>Normal</td>
</tr>
</tbody>
</table>

27.2  24.8  23.4  26.7

Notes: 1. See Fig. 2-3-45.
2. Rate of growth in sales (%) = (sales in fiscal 2001 / sales in fiscal 1998 - 1) x 100

25) Storey (1994)
examinations on particular industries and stages of growth, then banks should examine enterprises flexibly according to their industry and stage of growth.

The second method by which banks can overcome “asymmetry of information” is by reassessing their sustained long-term “relationships”. Building continuous long-term relationships allows information to be built up that eases “asymmetry of information”, which is a demonstrably effective means of making accurate judgments about credit risk. Moreover, building such “relationships” not only contributes to accurately determining the credit risk of enterprises, but also has the advantage of generating new business opportunities due to the more accurate determination of enterprise needs.

Building “relationships” takes time. They can be destroyed in an instant, however, and are extremely difficult to restore once an enterprise feels it has been “betrayed” by a bank. Fig. 2-3-47 shows the reasons given by enterprises that changed their main bank for doing so, and this reveals that many enterprises change their main bank for reasons such as “terms of borrowing tightened”, “rejection or reduction of loan applied for” and “change in lending attitude making stable business difficult”, as well as for the positive reason of “offered better terms than by present bank”. If we compare the proportion of enterprises that changed their main bank in

Fig. 2-3-47 Reasons for changing main bank
Main banks changed for both positive and negative reasons

<table>
<thead>
<tr>
<th>Negative reasons</th>
<th>Positive reasons</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.7</td>
<td>14.2</td>
<td>16.0</td>
</tr>
<tr>
<td>16.1</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td>16.8</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>16.8</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>8.0</td>
<td>9.0</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>14.2</td>
<td></td>
</tr>
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<td>6.7</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>9.0</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>1.4</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td>0.0</td>
<td></td>
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<tr>
<td>0.4</td>
<td>0.0</td>
<td></td>
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<td>0.2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: Enterprises that changed their main bank are enterprises whose main bank changed in or after January 1989.

Fig. 2-3-48 Response of main bank and proportion of enterprises that changed their main bank
Enterprises whose main bank is unaccommodative tend to change their main bank

Response of main bank in 2001

<table>
<thead>
<tr>
<th>Loans not obtained</th>
<th>Loans obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.6</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Proportion of enterprises that changed their main bank in 2002

Note: The difference between the two is statistically sufficiently significant.
The third method by which banks can overcome “asymmetry of information” is by introducing new financial techniques. A peculiar problem of SME financing, for example, is that the returns are argued to be not commensurate with the risk (i.e. the risk that loans may not be repaid). Although the attempts to raise interest rates described above are one means of increasing returns, an across-the-board increase in interest rates serves to lower the profitability of enterprises at the stable growth stage in particular, which means that banks that do so are wringing their own necks. At the same time, there exist many enterprises that are achieving rapid growth despite facing such conditions. While the role of banks according to the natural business model of banking should be to financially support the growth of such enterprises, it is difficult for them to lend where the returns are low but the risks of rapidly growing enterprises are high. An effective means of encouraging lending would therefore be to introduce a “contingency”-based interest rate system, which would enable enterprises and banks to share the returns from a business and match risks with returns, thus helping to facilitate SME financing.

Another effective option is to utilize securitization techniques, such as the securitization of assets such as the accounts receivable of SMEs and the securitization of the loans made by banks to SMEs (known as indirect market financing, which is described below). Use of the receivable-backed loan guarantee system is spreading and interest in financing using accounts receivable increasing, and the securitization of accounts receivable is now the center of enormous attention. These new methods of finance will no doubt help to facilitate SME finance.

Section 3  Diverse means of financing

So far we have looked at the changes in the financial environment in Part I, Chapter 3, the distinguishing features of SME financing in Section 1 of this chapter, and at methods of facilitating borrowing in Section 2. Assuming as described in Part I, Chapter 3 that the financial system is going through fundamental change, however, there is a possibility that, even if the present economic situation improves, SMEs will be unable to raise sufficient funds simply by continuing to borrow principally from banks, as at present. At the same time, advances in financial techniques are creating new methods of finance. In this section, we examine the current state of financing by means other than conventional borrowing from banks, and seek out ways of facilitating financing in general without depending overly on bank borrowing.

1. Use of financing other than indirect financing

(1) Various means of financing available

First of all, let us look once again at Fig. 2-3-1. As this shows, the principal form of finance used by SMEs is borrowing. However, it can also be seen that it is not very uncommon for enterprises to make use of other methods of financing, i.e. inter-enterprise credit (accounts payable and notes payable) and borrowing from sources other than financial institutions. Fig. 2-3-11 too shows borrowing from sources other than banks to be by no means uncommon. Let us therefore look at borrowing from sources other than banks, government-affiliated financial institutions and non-banks (Fig. 2-3-49). What we find is that borrowing from representative directors is common among SMEs. If we examine the means of financing other than borrowing (Fig. 2-3-50), we in addition find that most enterprises use leasing. This indicates that SMEs raise funds by a variety of means in addition to borrowing from banks.

26) SMEs (enterprises with capital of ¥100 million or less) have accounts receivable and notes receivable worth ¥85.3 trillion, rivaling the ¥77.2 trillion that they have in cash and deposits and ¥74.1 trillion that they have in land.

27) “Leasing” here means the use under lease of equipment such as copiers and computers, rather than the borrowing of business funds from lease companies.
2. Use of non-banks in SME finance

The practices of some non-banks, such as excessive lending, charging of high interest rates and illegal exaction of debts, have come to be seen as a social problem, and non-banks are regarded by some in Japan in a negative light. Nevertheless, there are some non-banks that have grown by providing unsecured loans following extremely rapid investigation of loan applications using risk management models that they have developed themselves. Below, therefore, we examine the role of borrowing from non-banks in SME finance as a means of financing other than borrowing from banks.

Fig. 2-3-49 Breakdown of borrowing from other sources

Borrowing from representative directors common among SMEs

Notes: 1. Only enterprises with borrowing from other sources are included (as for Fig. 2-3-11).
2. SMEs and large enterprises are defined in accordance with the Small and Medium Enterprise Basic Law.
3. Totals exceed 100 due to multiple responses.

Fig. 2-3-50 Financing other than borrowing

Public offerings rarely used by SMEs as method of financing

Notes: 1. Use of means of financing other than borrowing from banks, other financial institutions and non-banks, etc. in or after 1997.
2. SMEs and large enterprises are defined in accordance with the Small and Medium Enterprise Basic Law.
3. Totals exceed 100 due to multiple responses.

2. Use of non-banks in SME finance

The practices of some non-banks, such as excessive lending, charging of high interest rates and illegal exaction of debts, have come to be seen as a social problem, and non-banks are regarded by some in Japan in a negative light. Nevertheless, there are some non-banks that have grown by providing unsecured loans following extremely rapid investigation of loan applications using risk management models that they have developed themselves. Below, therefore, we examine the role of borrowing from non-banks in SME finance as a means of financing other than borrowing from banks.

(1) Downward trend in outstanding non-bank lending

Fig. 2-3-51 shows trends in the outstanding lending of deposit-type financial institutions and non-banks at the end of each fiscal year. Apparent from this is that although outstanding non-bank lending reached a peak during the bubble period, it has since declined more rapidly than that of deposit-type financial institutions, and has remained low in recent years.

Non-banks’ share of outstanding lending to government and business borrowers, etc. according to preliminary estimates at the end of December 2002 was 4.6%, which is by no means high (Fig. 2-3-52).

---

28) Non-banks are here defined as finance companies providing business fund lending services, such as credit card and consumer credit companies, lease companies, and small business (*shoko*) loan providers.
Next we look at the extent of use of non-banks from the point of view of enterprises. According to the SME Agency’s Survey of the Financial Environment (November 2002), the proportion of enterprises using non-banks was 3.6%. Fig. 2-3-53 shows the proportion of enterprises using non-banks according to equity ratio. From this it can be clearly seen that enterprises with lower equity ratios tend to make greater use of non-banks.

(2) Non-banks used by enterprises with unhealthy finances

Next we look at the extent of use of non-banks from the point of view of enterprises. According to the SME Agency’s Survey of the Financial Environment (November 2002), the proportion of enterprises using non-banks was 3.6%. Fig. 2-3-53 shows the proportion of enterprises using non-banks according to equity ratio. From this it can be clearly seen that enterprises with lower equity ratios tend to make greater use of non-banks.
If we look next at the relationship with the response of main banks to loan applications, we find that a large proportion of enterprises using non-banks were unable to obtain borrowing from their main bank (Fig. 2-3-54). Clearly evident from Fig. 2-3-53, Fig. 2-3-54 and the breakdown by source of borrowing of enterprises unable to borrow from their main bank (Fig. 2-3-34) described above is that non-banks are used as a means of raising finance when enterprises are unable to raise funds from banks.

However, this appears not to be the only form of use of non-banks. As Fig. 2-3-54 indicates, enterprises that smoothly obtain borrowing from banks too use non-banks. Where there is a choice between two types of borrowing, borrowing from banks and borrowing from non-banks, borrowers should theoretically borrow from banks, which normally offer lower interest rates. This raises the question of why there exist enterprises capable of borrowing from banks that use non-banks.

(3) Immediate access to borrowing one reason for use of non-banks

Below we seek to clarify why non-banks are used by examining the reasons for their use (Fig. 2-3-55). This reveals the commonest reason to be “difficulty of borrowing from banks”, which indicates that non-banks are used when enterprises cannot borrow from banks. The second commonest reason given, however, is “can borrow immediately when necessary”, revealing that
“difficulty of borrowing from banks” is not necessarily the only reason for using non-banks.

Fig. 2-3-56 shows the reasons for not using non-banks given by enterprises that do not use non-banks. This reveals that the overwhelming majority of enterprises choose not to because they have “sufficient borrowing from banks”, with conspicuous numbers also saying that they do not use non-banks due to “decline in creditworthiness” and “high interest rates”.

Perhaps the biggest difference between non-banks and banks concerns deposits. Banks have deposit accounts, and so are able to accumulate information on borrowers by keeping track of their economic circumstances. Conversely, day-to-day monitoring of borrowers is difficult for non-banks, and accumulating information based on a “relationship” with borrowers is tricky. As a consequence, one would expect banks and non-banks to have different quantities of information, and the loans provided by banks and loans provided by non-banks to differ in nature. In actuality, the enterprises that use non-banks and enterprises that do not have different characteristics (Appendix Note 2-3-7). The analysis in the appended note shows clearly that there is a significant positive effect in the service and real estate sectors. This we may surmise is because enterprises in the service sector tend not to have large facilities as in manufacturing, and so have fewer assets that they can offer as security, which makes borrowing from banks more difficult and leads to greater use of non-banks.

In the real estate sector, the need to have swift access to funds to buy real estate (as properties can be lost if a deposit is not made within a week) makes use of non-banks, with their short loan investigation periods, advantageous.

To summarize the above, we may conclude that the use of non-banks is characterized by 1) use by enterprises in poor financial health, 2) use by enterprises lacking smooth relations with their main bank, and 3) differences in use according to industry, such as higher levels of use in the real estate and service sectors, though there are also 4) enterprises that are attracted by the advantages of the “swiftness” and “convenience” of non-bank borrowing.

In the U.S., finance companies have actively lent to comparatively high-risk companies (the “middle-risk market”) that have traditionally been a low priority of commercial banks. The financial services provided range widely, from automobile loans to receivable-backed loans, and the interest rates and duration of loans stand comparison with those offered by commercial banks. Offering increasing competition to commercial banks, finance companies also seek to improve efficiency through means such as making active use of the Internet to communicate with customers. As a result, the proportion of outstanding lending to SMEs lent by finance companies rose from 11.4% in 1987 to 14.7% in 1993. Considering the situation in the U.S. and the recent spread of speedily processed “quick loans”, non-banks’ presence is highly likely to increase further in Japan too, though their business model is completely different from that described above of focusing on “relationships” to develop lending. Further consideration therefore needs to be given to the role of non-banks in SME finance in the future.

3. Inter-enterprise credit

As can be seen from Fig. 2-3-1, inter-enterprise credit (notes payable and accounts payable) accounts for a considerable proportion of financing by SMEs. This indicates that, although there is a tendency to think of financing simply in terms of borrowing, inter-enterprise credit too is an important means of financing. Below, therefore, we turn to examine the state of inter-enterprise credit and look at the characteristics of enterprises that make extensive use of inter-enterprise credit.

![Fig. 2-3-57 Trends in proportion of inter-enterprise credit (by number of employees)](image)

**Long-term decline in inter-enterprise credit**


Note: Proportion of inter-enterprise credit = (notes and accounts payable) / total assets

29) While there is no standard definition of a “non-bank” in the U.S., the general term for an enterprise that raises funds by means other than deposits and provides credit to consumers and businesses is “finance company”. Finance companies may be regarded as occupying almost the same position as non-banks in Japan.

30) Some researchers take a positive view of non-banks’ future potential. Yabushita and Bushimata (2002), for example, argue as follows: “If in the future interest rates can be lowered to a slightly more usable level and psychological resistance alleviated, use of non-bank lending should provide a more feasible financing option”.

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(1) Inter-enterprise credit in long-term decline

Fig. 2-3-57 depicts trends in the proportion of total assets accounted for by inter-enterprise credit. As can be seen, inter-enterprise credit is in long-term decline. Let us therefore look at changes in the terms of payment\(^{31}\) of enterprises over the past year, as shown in Fig. 2-3-58. Doing so, we find that enterprises that have experienced no change in the term of payment constitute the majority over the past year. However, approximately one in ten enterprises have experienced a change in the term of payment. We may surmise from this that terms of payment are being reduced as a result of moves to reduce credit due to the frequent occurrence of bankruptcies observed in Part I, Chapter 1. At the same time, there also appear to exist enterprises whose terms of payment are lengthening as a result of the active use of inter-enterprise credit as an alternative to borrowing due to changes in the financial environment.

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\(^{31}\) The term of payment is the total period from purchase, through the due date and payment date, to the settlement date.
(2) **Impact of decline in inter-enterprise credit with its merits and demerits**

Next we consider the effects of these changes in the terms of payment, which are shown in Figs. 2-3-59~60. According to Fig. 2-3-59, a large proportion of enterprises whose term of payment lengthened responded that their “financial position eased” or their “borrowing reduced”.

From Fig. 2-3-60, it can be seen that whereas a large proportion of enterprises whose term of payment shortened said that their “financial position deteriorated”, there were also many enterprises that responded that it was “possible to purchase at lower prices than in past”.

Generally speaking, inter-enterprise credit declines if the term of receipt and sales are constant and the term of payment is shorter, making it necessary to make up for the shortfall in operating funds by, for example, increasing borrowing. If the term of receipt and sales are constant and the term of payment lengthens, on the other hand, inter-enterprise credit increases and the need for operating funds decreases. The results of Figs 2-3-59 and 2-3-60 are a reflection of this situation.

(3) **Credit through inter-enterprise credit differs from bank lending**

As we have seen, the proportion of SME financing accounted for by inter-enterprise credit is declining over the long term. However, inter-enterprise credit serves to supplement the financing of SMEs that cannot raise sufficient funds from the banks. In order to examine this facet of inter-enterprise credit, we look first of all at the characteristics of enterprises that use inter-enterprise credit. Fig. 2-3-61 shows the differences in the proportion of inter-enterprise credit according to industry and number of employees. From this it can be seen that 1) the proportion of use of inter-enterprise credit differs according to industry, with use being greater in the construction and wholesale sectors, and 2) in the construction sector in particular, use of inter-enterprise credit is greater the greater the size of the enterprise, unlike in other industries.

Appended Note 2-3-8 describes an analysis of the characteristics (other than industry and size described above) of enterprises using inter-enterprise credit taking into simultaneous consideration age of enterprise, length of relationship with main customers and suppliers, relationship with main bank, and financial factors such as the equity ratio. Unlike the results of the analysis of the lending behavior of banks described in Appendix Note 2-3-2, these results show the supply of inter-enterprise credit and lending by financial institutions to be clearly different in structure. If we focus on the equity ratio, for example, the results show that whereas “safe” enterprises with a high equity ratio find it easy to obtain credit from banks, the reverse is the true of inter-enterprise credit, use of which increases as the equity ratio of an enterprise decreases.

These results may be explained as follows. The side providing inter-enterprise credit develops “face-to-face” relations through doing business with the other party on a day-to-day basis. Because of the existence of this “face-to-face network”, the provider of credit is able to monitor the receiving end at extremely low cost. As a result of its day-to-day contact with the recipient, moreover, it also has access to soft information other than the numerical data contained in financial statements that is very difficult for banks to acquire. Credit can therefore be provided from a different perspective to banks.

The support of a company’s customer through inter-enterprise credit has the added advantage that it helps to increase or maintain a company’s own sales. For this reason, *shosha* financing and trading in bills have long been used. Although there is a tendency for financing to be thought of in terms of borrowing, the importance of this form of financing through inter-enterprise credit cannot be ignored.

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32) In inter-enterprise credit, the development of close relations through business means that there can occur cases of accommodation bills without any underlying commercial transaction being drawn between specific enterprises for the purpose of lending funds between the two parties. However, such cases are contrary to business practices and the fundamentals of financial transactions, and so are considered as being out of the question.

33) There can theoretically occur cases where an SME is the provider of inter-enterprise credit. The SME in such a case should constantly watch developments concerning the credit recipient closely, and manage credit prudently in order to avoid claims from becoming irrecoverable.
4. Financing through “face-to-face networks” ("face-to-face finance")

The inter-enterprise credit examined above is one type of finance that uses “face-to-face networks”. Finance using other “face-to-face networks” consisting of, for example, members of the local community, relatives, customers and suppliers is found not only in Japan, but around the world. Financing using such “face-to-face networks” may seem at first glance to be somewhat primitive. Because of the “face-to-face” nature of relations, however, the cost of gathering information is low, and the spirit of mutual aid and sense of solidarity of the community act to ensure a sense of duty to repay debts and encourage monitoring within the group, making it more advantageous than institutional finance, such as borrowing from banks. For SMEs, which find it harder than large enterprises to use institutional finance such as bank borrowing due to the “asymmetry of information”, “face-to-face finance” of this kind provides an extremely valuable method of finance. Below, therefore, we examine the state of “face-to-face finance”, such as the use of privately placed bonds for small numbers of investors and group finance.

1) Importance of financing from representative directors and relatives

Of the various “face-to-face networks” available, we examine first of all financing from relatives. Returning to Fig. 2-3-49, we find that borrowing from the representative director and his/her relatives is particularly common among SMEs. There is also a similar tendency regarding investors for capital increases (Fig. 2-3-62). It can thus be seen that finance from relatives through face-to-face networks is widely used among SMEs.

![Fig. 2-3-62 Investors in bonds and capital increases](image)

Representative directors are common source of investment in capital increases

Notes: 1. Proportion of enterprises issuing bonds (private offering) or capital increase (private offering) in or after 1997.
2. SMEs and large enterprises are classified as defined under the Small and Medium Enterprise Basic Law.
3. Totals exceed 100 due to multiple responses.

34) An internationally well-known example is that of the Grameen Bank in Bangladesh, which provides loans based on the credit of the group. Other examples are to be found elsewhere around the world, such as the Banco Solidario in Bolivia and the SEWA Bank in India. In the U.S. too, there exist community loan funds that lend funds to local enterprises and individuals who find it difficult to obtain loans from financial institutions. In Japan, there existed mutual aid organizations called ko.

35) Finance based on “face-to-face networks” is sometimes called as “three F” (“family, friends and fancy”) finance.
(2) Effectiveness for SMEs of issuing privately placed bonds for small numbers of investors

Financing through “face-to-face networks” (“face-to-face finance”) can take the form of investment in bonds as well as lending and investment in capital increases. From Fig. 2-3-62, it can be seen that representative directors and their relatives—i.e. investors other than financial institutions—comprise the investors in (privately placed) bond issues. Most of these issues take the form of privately placed bonds for small numbers of investors that are now attracting interest. Fig. 2-3-63 shows a comparison of the differences between newly public offerings and private offerings. Whereas publicly offered bonds are invested in by investors through the bond market, privately placed bonds for small numbers of investors are offered and invested in directly by enterprises and investors between themselves. Privately placed bonds for small numbers of investors depending on such “face-to-face” relations provide a mechanism that helps SMEs, which tend to encounter the problem of “asymmetry of information” in ordinary institutional finance, to raise funds smoothly. There are in actual fact enterprises that make skilful use of privately placed bonds of this kind, and consideration should be given to the use of privately placed bonds for small numbers of investors as a means of supplementing financing (Case 3-3). As it is also often difficult to find investors for issues of small-scale privately placed bonds, enterprises need to take steps to encourage investors to invest in bonds by, for example, offering investors products on preferential terms.

Fig. 2-3-63 Comparison of newly public offerings and private offerings

<table>
<thead>
<tr>
<th>Offering (“public offering”)</th>
<th>Private offering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential investors</strong></td>
<td></td>
</tr>
<tr>
<td>Many (50 or over: qualified institutional investors only excepted)</td>
<td>Under 50¹</td>
</tr>
<tr>
<td>Article 2-3 (1) of the Securities and Exchange Law</td>
<td>Article 2-3 (2) ii of the Securities and Exchange Law</td>
</tr>
<tr>
<td>Article 4-1 of the Securities and Exchange Law Enforcement Order</td>
<td>Qualified institutional investors only</td>
</tr>
<tr>
<td>Article 2-3 (2) i of the Securities and Exchange Law</td>
<td></td>
</tr>
<tr>
<td><strong>Amount issued</strong></td>
<td>No limit</td>
</tr>
<tr>
<td>No limit</td>
<td>No limit</td>
</tr>
<tr>
<td><strong>Pre-issue notification requirements, etc.</strong></td>
<td>Registration statement</td>
</tr>
<tr>
<td>Issue of ¥100 million or more: registration statement</td>
<td>not required</td>
</tr>
<tr>
<td>Article 4-1 of the Securities and Exchange Law</td>
<td></td>
</tr>
<tr>
<td>Issue of under ¥100 million–over ¥10 million: notification statement</td>
<td></td>
</tr>
<tr>
<td>Article 4-5 of the Securities and Exchange Law</td>
<td></td>
</tr>
<tr>
<td>Financial statement disclosure requirements, etc.</td>
<td>Financial statements</td>
</tr>
<tr>
<td>Financial statements</td>
<td>not required</td>
</tr>
<tr>
<td>Article 24 of the Securities and Exchange Law</td>
<td></td>
</tr>
<tr>
<td>Other requirements</td>
<td>(Generally required to acquire rating)</td>
</tr>
</tbody>
</table>

¹ Multiple issues in a six-month period are added together.
Chapter 3 — SME financing in the changing financial environment

Case 3-3 Financing using privately placed bonds for small numbers of investors

U Ltd. is an enterprise in Okinawa with 93 employees that successfully issued privately placed bonds for a small number of investors worth a total of ¥90 million.

**Background to development of waste glass recycling system**

Established in 1979, U Ltd. engaged in restaurant management and education. In 1996, it then entered the recycling business, immediately obtaining a technological improvement grant from METI and embarking on the development of a system for recycling waste glass. Although it overcame a variety of problems to successfully develop such a system, its limited applications led the company to abandon the waste glass recycling system business.

At just that time, U Ltd. coincidentally received an order from a local shipyard to provide cleaning services (e.g. of ship bottoms). Although dirt is normally removed by from ship bottoms by blasting with small steel balls, U Ltd. used glass balls instead, which were cheaper and also very hard. These balls were smashed into fragments the moment that the blasting pressure was raised to two atmospheres. Provided that they were pulverized, these were easy to process and the applications endless. This gave U Ltd. the idea of obtaining a grant for R&D on innovative technologies from METI, and in 1998 it succeeded in developing a waste glass recycling system. The material recycled using this revolutionary system was suitable for a wide range of uses and enjoyed an excellent reputation. However, U Ltd. then ran into another problem.

**Background to issue of privately placed bonds for small number of investors**

The restaurant management and education businesses in which U Ltd. had traditionally engaged were largely cash based, and so the company’s financial position generally created no problems as sales increased. In the case of the manufacturing of waste glass recycling systems, however, it took around six months to a year for a sale to be made and payment to be received once an order had been placed. Operating funds were therefore required in order to cover the cost of raw materials and manufacturing during the interim. U Ltd. initially put its efforts into raising finance from banks. Because of the difficult financing environment in recent years, however, it encountered extreme difficulties in obtaining finance from such sources.

After finding out about privately placed bonds for small numbers of investors from a newspaper article, however, the company managed to raise the requisite operating funds for the manufacture of waste glass recycling systems through an issue of such bonds.

The terms of the bond issue, offering of which began in August 2002, were as follows: ¥3 million per unit of investment, ¥90 million total issue, floating rate set at 2.8% in the first year, and lump repayment on the due date after the fifth year. The company succeeded in finding a sufficient number of investors from among relatives, friends, acquaintances, customers and suppliers, and the bonds were issued in September 2002.

**Reasons for success of issue of privately placed bond for small number of investors**

Although one obvious reason for the success of the bond issue was the attractiveness of U Ltd.’s business, another important factor was U Ltd.’s active pursuit of information disclosure. After launching the offering, an explanatory meeting was held, and information on the company’s performance over the previous five years, business plans for the next five years and its financial position disclosed and explained. The company also liaised closely with its main bank, and gave it a series of progress reports on the bond issue.

U Ltd.’s president identifies the following reasons for the success of the privately placed bond issue: “In Okinawa, there is a spirit of mutual help called *yuimaru*. Locally, there is also a mutual financing association called *moai*, which provides the framework for providing financial assistance for things of benefit to the local community. Unless recycling businesses develop in Okinawa, we will be unable to create a sustainable society in Okinawa, and we’ll have to dispose of waste in the Kanto region, where contractors are concentrated, which will push up the cost. I think this is what was in the minds of those whose purchased our bonds.”

In this way, U Ltd. has increased its waste glass recycling system selling capacity from two to four units by raising the funds needed through “face-to-face networks”, and it is now on the brink of major growth.
(3) Group finance likely to attract interest in future

“Face-to-face networks” consist not only of members of the local community and relatives. As described above, enterprises doing business together on a day-to-day basis, such as customers, suppliers and parent enterprises, can also obtain information through their everyday business relations for very little spending on monitoring, and the quality of such information is high. It is therefore possible for such businesses to provide funds in the form of lending as well as through credit provided in the form of inter-enterprise credit. Group finance provided by such businesses and members of the local community has traditionally been provided through what is called in Japan “cooperative finance”. A new type of group finance that has emerged in Japan is “Community Credit”, which was formed in Kobe in November 2001 (Fig. 2-3-64), and group finance should generate considerable interest in the future.

5. Merits and demerits of financing through public offerings

(1) Direct financing through public offerings rare among SMEs

Having thus examined “face-to-face finance”, it can be seen that it is equivalent to direct finance in that funds are raised directly without going through financial institutions. Another method of direct finance is financing by means of public offerings through the security markets. As can be seen from Fig. 2-3-50, however, only a tiny fraction of SMEs “issue bonds (public offering)” or “increase capital (public offering)”.

(2) Low level of need for direct financing through public offerings among SMEs

An examination of the results of the SME Agency’s Survey of Business Financing Environment conducted in December 2001 reveals that the majority of enterprises (70~80%) have not used and do not intend to use direct

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**Fig. 2-3-64 Community credit and cooperative association finance**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Community credit</th>
<th>Cooperative association finance (sub-lending finance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme</td>
<td>1) Entrustment of money by local enterprises with mutually trusting relationship acting jointly 2) Bank signs trust and lending agreement and security interest established in the trust beneficiary rights 3) Trust provides lending only to enterprises able to obtain (joint and several surety from other participating enterprises 4) Community credit concluded when loans are fully repaid, bank borrowing is completely repaid, and trust assets are delivered to the trustor</td>
<td>1) Association directors formulate finance program plan 2) Association members apply to association for borrowing 3) Finance committee investigates applications and loan decision made by the board of directors, then association applies for borrowing from financial institution 4) Financial institution investigates association’s program, ability to supervise and administer financial rules, and creditworthiness of members, etc., then lends to association 5) Association lends funds obtained from financial institution to member 6) Member repays sub-loaned funds to association</td>
</tr>
<tr>
<td>Composition of community</td>
<td>- Voluntary group - Spirit of self-help and self-support</td>
<td>- SME partnerships, etc. (made up of businesses from same and other industries) - Spirit of mutual aid</td>
</tr>
<tr>
<td>Financial contributions of members</td>
<td>- Monetary contribution to trust</td>
<td>- Investment in association</td>
</tr>
<tr>
<td>Lending capital</td>
<td>- Trust bank lends by means of trust assets and bank borrowing (secured by trust assets)</td>
<td>- Funds borrowed by association from financial institution and lent</td>
</tr>
<tr>
<td>Selection of borrowers</td>
<td>- Recommended by community</td>
<td>- Association solicits and chooses sub-loan borrowers</td>
</tr>
<tr>
<td>Guarantees, etc.</td>
<td>- Member guarantee</td>
<td>- Guaranteed by association directors, sub-loan borrowers, etc. (choice possible)</td>
</tr>
<tr>
<td>Disclosure</td>
<td>- Use of credit investigation agency</td>
<td>- Association discloses information to financial institution</td>
</tr>
<tr>
<td>Investigation by financial institution</td>
<td>- Investigation of details of borrowers and also morale, unity and self-reliance of community, etc.</td>
<td>- Evaluation of ability to manage and administer association project and financial rules, and creditworthiness of members, etc.</td>
</tr>
<tr>
<td>Procurement cost for borrowers</td>
<td>- Trust bank procurement cost + credit risk spread + system cost</td>
<td>- Association borrowing rate (financial institution procurement cost + credit risk spread + expenses) + association fee</td>
</tr>
<tr>
<td>Other</td>
<td>- Early-stage communities can disperse risk and clarify risk returns for raising funds</td>
<td>- Various forms of financing suited to funding needs and association and association members’ creditworthiness possible depending on scheme established.</td>
</tr>
</tbody>
</table>
finance. This is probably due to the fact that, in the case of founding presidents at least, much of the desire to engage in business is derived from doing business oneself for oneself. It is therefore difficult to imagine active use of a method of finance that involves handing over ownership in an enterprise to a large number of third parties.

Although an advantage of direct financing through public offerings is that it enables funds to be raised without recourse to financial institutions, the cost of using such a method of financing, both financially and in terms of human resources, is a heavy one for SMEs to bear. It is simplistic and unrealistic to suggest that SMEs that find indirect financing through the banks difficult should engage in more sophisticated direct finance simply because indirect financing is not functioning properly. Although an option for a very few special enterprises with the prospect of high returns aiming to go public, it is impractical in reality to expect ordinary investors to invest actively in the majority of "normal" SMEs.

Taking into consideration these factors on both the supply and demand sides, therefore, it is difficult in general to imagine widespread use of direct financing through public offerings by SMEs (Fig. 2-3-65)36).

(3) Indirect financing through the markets – midway between direct and indirect financing

In SME finance, it would seem on the basis of the above that direct finance through public offerings is, with the exception of a very few exceptional firms, unrealistic. We also saw in Section 2 how there are certain limits to borrowing from banks (indirect finance). In Section 3, therefore, we examined financing methods that do not depend on banks. However, advances in financial techniques in recent years have improved the range of lending instruments banks have at their disposal for lending to SMEs. One such instrument is "quick loans", which use credit-scoring technology, while another means is indirect financing through the markets, or market-type indirect financing, which is a method of financing that lies midway between direct and indirect finance. In the case of direct financing, investors invest in or otherwise finance enterprises without going through financial institutions. In the case of indirect financing, on the other hand, depositors (investors) deposit money in financial institutions, which in turn lend these funds to enterprises. Market-based indirect financing is the same as ordinary indirect financing insofar as financial institutions lend to enterprises. However, these funds are raised through means such as collateralized loan obligations (CLOs) (Fig. 2-3-66).

The fall in value of real estate security and disposal of non-performing loans have reduced banks’ risk-taking ability. CLOs give financial institutions scope to bear risks, as the risks of loans are securitized and sold, thus transferring the risks to investors. From the point of view of borrowers, this technique facilitates financing by the conventional method of borrowing from financial institutions, which means there should be little resistance from borrowers. For investors too, CLOs have the

---

**Fig. 2-3-65 Comparison of direct financing through public offerings and indirect finance**

<table>
<thead>
<tr>
<th>Direct finance through public offerings (public share and bond offerings)</th>
<th>Indirect finance (borrowing from financial institutions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Execution requirements</strong></td>
<td><strong>- Limited by law</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Joint-stock companies only</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Free agreement</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Usable regardless of form of enterprise</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Security and guarantee required</strong></td>
</tr>
<tr>
<td><strong>Cost of management of securities</strong></td>
<td><strong>- None of the costs opposite</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Cost of issue of securities</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Necessary to complete statutory procedures, and so raising funds takes time</strong></td>
</tr>
<tr>
<td><strong>Disclosure costs</strong></td>
<td><strong>- Disclosure to financial institution only</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Due to obligation to disclose information to wide range of investors, necessary to inject considerable business resources</strong></td>
</tr>
<tr>
<td><strong>Organization</strong></td>
<td><strong>- Fewer staff required than for direct financing</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Above two factors require that numerous staff and specialists work on financing</strong></td>
</tr>
<tr>
<td><strong>Interest rates/repayment method</strong></td>
<td><strong>- Interest rates determined by financial institution</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Tax shield</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Payment of interest expenses and principal as agreed essential</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Interest rates determined by market (no tax shield in case of shares) (dividends not required in case of shares)</strong></td>
</tr>
</tbody>
</table>

36) Of the 1,595,493 SMEs in total (counting companies only), the number of statutory SMEs that have gone public is 942, which is equivalent to a just 0.06% (6 out of 10,000 companies) of the total.
advantage of being easier to invest in than individual SMEs as they pool loan claims and so disperse the risks. In Japan, market-type indirect financing by means of CLOs and other instruments is already underway in regions such as the Tokyo metropolis, though its use is still geographically very limited. However, the infrastructure for measuring the risk of loan credits is developing, as illustrated by the establishment of an SME risk database (CRD)\(^\text{37}\), and Japan is now taking the first steps toward the spread of market-type indirect finance throughout the country.

6. Selection of appropriate methods of financing

As has been shown, even SMEs have a variety of means of financing available to them (Fig. 2-3-67). Because of the existence of “asymmetry of information” in SME finance, the decline in banks’ strength resulting from the decline in real estate prices and the disposal of non-performing loans has led to a feeling that borrowing from banks is being choked off. By taking steps such as bank transactions and information disclosure on the part of SMEs, however, there is scope for borrowing to be facilitated. The spread of new forms of indirect finance, such as “quick loans” and market-type indirect finance, which is located midway between indirect and direct finance (CLO), are also increasing the variety of indirect finance options available.

Financing is also possible through means such as inter-enterprise credit, privately placed bonds for small numbers of investors, and group finance using “face-to-face networks”. For its part, the SME Agency is taking steps to help diversify the range of financing options available to SMEs, and in December 2001 launched the receivable-backed loan program. Since February 2003, support has also been provided for the securitization of accounts receivable using government-affiliated financial institutions (Appended Note 2-3-9). In November 2002, meanwhile, the limited partnership system for venture capital investment was amended to expand eligibility for investment in limited partnerships from joint-stock companies to include SMEs in general, including limited liability companies and business cooperatives. In addition, the scope of investment was expanded to include acquisition of rights to allocations of business earnings of SMEs as well as investment in shares.

For SMEs, it is important that appropriate means of financing be chosen to suit an enterprise’s stage of development and use of funds. As shown in Appendix Note 2-3-2, for example, having more equity capital, such as shares, helps facilitate borrowing. At the same time, the cost of financing by means of borrowing is usually lower than for share issues as interest expenses.

\(^{37}\) An SME risk database developed at the initiative of METI and the SME Agency. See Part II, Chapter 2 for details.
are treated as a loss for tax purposes. (This is known as the tax shield.) When the risk of an enterprise’s business is high, however, the increased cost of borrowing makes the cost of financing using shares lower, even taking into consideration the tax shield. In addition to where there exist such business risks, financing using shares is also effective where investment requires recovery over a very long period, such as where the annual repayment of borrowing exceeds the cash flow from a business. Bearing in mind the above, it is important that enterprises select and make active use means of appropriate means of financing themselves in order to be able to display their true functions as SMEs and contribute to the regeneration of the Japanese economy.

Fig. 2-3-67 Financing methods of joint-stock companies

*1 Classified as financing using assets or financing using liabilities/shareholders’ equity on balance sheet.
In searching for fresh ways of developing SME finance amid the current changes in the financial environment, valuable lessons can be drawn from looking at the state of SME financing overseas. In this section, therefore, we provide an overview of the methods being used to facilitate SME financing overseas, focusing in particular on public guarantees and support for securitization.

1) Public guarantees
Public guarantees are guarantees provided by public entities when an enterprise receives a loan from a lender such as a private financial institution. The provision of public guarantees facilitates borrowing by growing enterprises with insufficient creditworthiness and enterprises lacking security. In Japan, the credit guarantee program provided by credit guarantee corporations functions as a public guarantee system. Public guarantee systems of this kind are widespread overseas. In the U.S., for example, the Small Business Administration (SBA) runs a public guarantee system. The major difference from Japan’s credit guarantee program is that, instead of covering a loan in its entirety, guarantees cover a fixed proportion (up to a maximum 85%) of the unrecovered portion when a loan cannot be recovered. This form of proportional guarantee system acts as an incentive for private financial institutions to 1) improve their loan investigation capabilities, and 2) take full responsibility for the recovery of loans.

Public guarantee systems are also to be found in Europe. In France, public guarantees are provided by the Banque du Développement des Petites et Moyennes Entreprises (BDPME), which operates a partial guarantee system that covers loans up to a fixed portion of outstanding lending (up to a maximum of 70%). The Société Française de Garantie des Financements des Petites et Moyennes Entreprises (SOFARIS), a subsidiary of the BDPME that is 42% financed by the private sector, operates this guarantee fund. If the fund’s functioning is impaired, additional funding is provided by the government. If this is insufficient, SOFARIS’s capital is used, thus ensuring that the private sector too bears some of the risk indirectly.

2) Securitization measures
One new means of SME finance attracting interest is securitization. The main features of securitization are 1) the focusing on the cash flow of assets owned by enterprises (banks), 2) the off-balance sheet movement of assets from enterprises’ books through the transfer of such assets to SPVs (special purpose vehicles), 3) the separation from the creditworthiness of enterprises (banks) of financing, which is made dependent on the creditworthiness of assets, and 4) issuance in the form of securities. Securitization in this way boasts a variety of advantages, such as the dispersion of risk through pooling of claims, leading it to take root overseas too as a mechanism for facilitating SME finance. In the U.S. in particular, around half of SBA guaranteed loans are securitized. This securitization scheme is called the secondary loan program, and the SBA itself provides support for securitizations that supplement liquidity. Another popular form of securitization is the securitization of automobile loans and credit loans.

In Europe, the potential for securitization is being investigated by the BDPME in France. In Germany, securitization of lending to SMEs has been in use since 2000. This takes the form of the Kreditanstalt für Wiederaufbau (KfW) shouldering a portion of the risk of loans to SMEs borne by private financial institutions, thereby providing support for the securitization of loans to SMEs.

3) Other measures
Measures to facilitate SME finance are not limited to public guarantees and support for securitization. Direct lending is also provided to SMEs by public entities, as under the SBA’s direct finance program in the U.S. and the cooperative loan program of the BDPME in France. In Germany, meanwhile, the Deutsche Ausgleichsbank (DtA) runs a program to increase equity capital. This helps SMEs with low equity ratios to strengthen their equity capital in practice by providing more accommodative terms for repayment of loans. In France, there are deposits with tax-free interest called “comptes pour le développement industriel” (CODEVI). These are deposits designated as being specifically for lending to SMEs, and are accepted by all banks. The funds thus collected are used as the capital for cooperative loans and guarantee-backed lending. In the U.S., the Virginia State Government assists financing through bond issues by SMEs by subsidizing the legal costs borne by SMEs when issuing bonds.

A variety of measures are thus being taken overseas, as well as in Japan, in order to facilitate SME financing. While the background and circumstances of SME financing naturally differ from country to country and it is debatable whether programs in other countries’ can be introduced lock, stock and barrel in Japan, they do provide useful pointers on how new forms of SME finance can be developed in Japan.
Chapter 4 Business innovation by SME networks

The economic situation of late has undergone intense and rapid change in many areas, making it difficult for SMEs, given their relative restricted business resources, to respond to such change through business innovation undertaken largely independently and so continue to display their strengths. The importance of making active use of external business resources and forming networks has therefore assumed even greater importance than in the past.

In this chapter, we examine two forms of networks: the subcontracting relations that have underpinned the Japanese economy to date (vertical collaborative networks), and the business collaboration activities that have developed between SMEs in recent years (horizontal collaborative networks). We also discuss what shape effective collaboration with outside organizations should take for SMEs, and look at cross-industry collaboration and industry-university-government collaboration as mechanisms for the formation of networks and industrial clusters, which function as seedbeds for the development of networks, in order to discover the requisites for the development of effective networks for SMEs.

Section 1 Vertical collaborative networks

Traditionally the most typical networks involving SMEs have been the vertical collaborative networks formed between subcontractors and “parent” businesses in the interests of the division of labor. Although the existence of such vertical collaborative networks has been traditionally widely observed in manufacturing, similar relations can also be seen in other industries such as the service sector. In recent years, however, the proportion of enterprises engaged in subcontracting business in manufacturing has continued to decline, and there are signs that substantial changes are occurring in subcontracting relations in this field.

In this section, therefore, we examine first of all why many businesses have to date engaged in subcontracting focusing mainly on manufacturing industry, which has encountered these changes and on which considerable statistical and other data are available. We then look at the decline in businesses involved in subcontracting in manufacturing in recent years, and analyze the impact of economic globalization, which is behind this decline, on subcontracting relations. Finally, we consider the best strategies for subcontractors to survive and grow amid these changes.

1. Proportion of subcontractors in manufacturing in long-term decline

According to METI and the SME Agency’s Basic Survey of Commercial and Manufacturing Structure and Activity, the proportion of subcontractors among SMMs as a whole was 47.9% as of the 1998 survey (Fig. 1-1-42). Broken down by industry, larger proportions of subcontractors are to be found among manufacturers of textiles (76.4%) and transport equipment (69.3%) (Fig. 2-4-1). Numerous studies have shown these

![Fig. 2-4-1 Trends in subcontracting rates (main industries)](image)

**Fig. 2-4-1 Trends in subcontracting rates (main industries)**

**Subcontracting rates in long-term decline since 1980s**

66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

60 65 70 75 80 85 90

Electrical machinery
Textiles
Apparel & other textile products
General machinery
Transport equipment
Metal products


Note: “Main industries” are the six industries with the highest subcontracting ratios (in value terms).

---

1) Networks are here defined as continuous organizational relationships formed by two or more enterprises or organizations to share business resources and enjoy external benefits.

2) Although there is no standard definition of the term “subcontractor”, we define it here as follows: “individuals or enterprises with capital stock of not more than ¥300 million or no more than 300 workers that manufacture or process under contract to an individual or enterprise with more capital stock or workers than itself”.

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subcontracting relations to have made an enormous contribution as the source of the development and competitiveness of Japanese manufacturing industry. These subcontracting relations are formed around subcontractors doing business with a comparatively small number of parent companies and accumulating resources, such as facilities and technologies, particular to such relations through continually doing business with these businesses over the long term (Fig. 2-4-2), while the parent companies use their subcontractors to supplement their production capacity, making use of the specialist technologies and production facilities built up through their long-term business relations (Fig. 2-4-3). In other words, the enterprises involved in a long-term subcontracting relationship, though they do business with each other through the market, are to an extent fixed. As a result, there forms a vertical collaborative network within which there is a division of labor between intimately interdependent enterprises that share resources particular to the relationship while maintaining their own individual independence.

3) Urata and Kawai (2002), for example, demonstrated that particularly small enterprises exhibit higher levels of TFP growth and TFP the competitiveness of Japanese manufacturing industry. Such vertical collaborative networks are not only to be found in manufacturing. According to the Distribution Economics Institute of Japan’s Survey on Services Trade between Business Operators, many SMEs are involved in subcontracting business, with 40.8% of SMEs in information services and 35.6% of SMEs in the road haulage business involved in such relations. Because business relations tend to continue over the long term, vertical collaborative networks therefore appear to form in such sectors as well as manufacturing (Fig. 2-4-4).

Amid the changes in the economic environment, however, there are also occurring changes in the subcontracting relations that have played such an important role to date. An examination of past trends in the subcontracting rate among SMMs reveals that it has been rising consistently, as of the 1990s. The subcontracting rate among SMMs reveals that it has increased over time. Amid the changes in the economic environment, however, there are also occurring changes in the subcontracting relations that have played such an important role to date. An examination of past trends in the subcontracting rate among SMMs reveals that it has been rising consistently, as of the 1990s.

4) These fixed relationships at the same time have the potential to provide parent companies with opportunities to abuse their superior position. Bills to amend the Law on the Prevention of Delay in the Payment of Subcontracting Charges and Related Matters and the Law on the Promotion of Subcontracting Small and Medium Enterprises were therefore recently submitted to expand their coverage to include enterprises in service and related sectors.

Fig. 2-4-2  Relationship between parent companies and subcontractors
Subcontractors have long-term relationship with small number of parent companies

<table>
<thead>
<tr>
<th>Number of parent companies</th>
<th>9.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of relationship with largest parent company in terms of value of business</td>
<td>31.1 years</td>
</tr>
<tr>
<td>Proportion of assets used for largest parent company in terms of value of business</td>
<td>47.2%</td>
</tr>
<tr>
<td>Proportion of enterprises whose technology development activities are affected by requests by parent companies</td>
<td>47.3%</td>
</tr>
</tbody>
</table>

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).
Notes: 1. The proportion of assets used for largest parent company in terms of value of business indicates the proportion of total assets that could not be diverted to other uses in the event of business with the parent company concerned ceasing.
2. Figures indicate the averages for subcontractors.

Fig. 2-4-3 Policy toward outsourcing
Parent companies value resources specific to relationship of subcontractors

<table>
<thead>
<tr>
<th>Percent of parent companies</th>
<th>70.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depend on outsourcing to cover insufficient production capacity</td>
<td>57.4</td>
</tr>
<tr>
<td>Use specialist technologies and production facilities of subcontractors</td>
<td>38.2</td>
</tr>
<tr>
<td>Order from high-performing enterprise even if no business relations at present</td>
<td>41.1</td>
</tr>
<tr>
<td>Outsource main to current contractors</td>
<td>24.3</td>
</tr>
<tr>
<td>Perform related work and processes in-house as far as possible</td>
<td>9.5</td>
</tr>
<tr>
<td>Maintain current outsourcing ratio</td>
<td>4.5</td>
</tr>
<tr>
<td>Increase outsourcing to specific contractors</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Notes: 1. Contractors in this survey are not entirely the same as the subcontractors described in the main text.
2. Total exceeds 100 due to multiple responses.
been in decline since peaking in 65.5% in 1981 (Fig. 1-1-42), and similar trends are apparent in every industry except the food and chemical industries (Appended Note 2-4-1). This long-term trends in the subcontracting rate of SMMs raises two questions. The first is: Why are many SMEs involved in subcontracting? And the second is: Why did the subcontracting rate begin to decline from the 1980s?

2. Changes in the advantages of subcontracting

(1) Why is the subcontracting rate high?
As noted in the preceding paragraph, even today many SMEs are subcontractors, and the proportion has in the past exceeded 60% at times. Given that the weakness of a subcontractor’s position in its dealings with its parent enterprise has been frequently noted, why should such business networks continue to exist?

We may surmise that they continue to exist because subcontractors themselves perceive there to be advantages to subcontracting, or because it is more advantageous to their survival to function as subcontractors as opposed to non-subcontractors. In reality, subcontractors identify subcontracting as having a variety of advantages, the most commonly given being “stability of volume of work” (Fig. 2-4-5). As is also apparent from Appended Note 2-4-2, there is less variation in the sales of subcontractors than non-
subcontractors taking into consideration enterprise size and enterprise age, which corroborates the existence of this advantage.

The next commonest advantage given is “no need to undertake independent sales activities”. An examination of the sales staff ratios and advertising spending intensity (advertising spending to sales) of subcontractors and non-subcontractors reveals these to be clearly lower at subcontractors (Fig. 2-4-6).

These two advantages mean that subcontractors do not need to focus their resources on sales or advertising as they can obtain a stable quantity of work from their parent companies, and so are interrelated.

But while subcontractors can enjoy advantages such as these, it is also a fact that a smaller proportion of subcontractors than non-subcontractors are in profit (Fig. 2-4-7). This is probably because subcontractors pay their parent companies a portion of their earnings as “compensation” for enjoying the advantages of a stable supply of work and lower spending on sales activities.

In other words, as subcontractors tend in general to be averse to risk in the sense that they are less able than their parent enterprises to resist fluctuations in sales and prefer lower risks, even where earnings are lower, than higher risks and higher earnings⁷, there is a trade-off between earnings and stability of volume of work. Hence there is a highly advantageous “insurance-like” element to subcontracting whereby enterprises obtain a stable supply of work in exchange for sacrificing part of their earnings⁸.

Parent companies too not only gain access to the specialist technologies and production facilities built up by subcontractors through their long-term business relationship as described above as “compensation” for providing stable orders to subcontractors. By doing long-term business with subcontractors, they also share information regarding, for example, costs and technology as a part of the resources particular to the relationship with a subcontractor, which helps to ensure that its activities proceed more smoothly and at the same time allow it to increase profits⁹. Parent companies therefore

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**Fig. 2-4-6** Subcontractors do not need to undertake own sales activities

Low sales staff ratio and advertising spending intensity at subcontractors

![Graph showing sales staff ratio and advertising spending intensity at subcontractors](image)


**Notes:**
2. Advertising spending intensity = advertising spending / sales x 100

---

**Fig. 2-4-7** Average subcontractors and non-subcontractors

Subcontractors are smaller and have less earning power

<table>
<thead>
<tr>
<th></th>
<th>Subcontractors</th>
<th>Non-subcontractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of regular workers</td>
<td>27.1</td>
<td>44.3</td>
</tr>
<tr>
<td>Sales per regular worker</td>
<td>¥12,180,000</td>
<td>¥21,640,000</td>
</tr>
<tr>
<td>Operating profit per regular worker</td>
<td>¥720,000</td>
<td>¥970,000</td>
</tr>
<tr>
<td>Proportion of enterprises in profit</td>
<td>71.2%</td>
<td>73.3%</td>
</tr>
<tr>
<td>Proportion engaged in R&amp;D</td>
<td>9.2%</td>
<td>19.4%</td>
</tr>
</tbody>
</table>


**Notes:**
1. Enterprises in profit are enterprises whose sales minus cost of sales minus selling, general and administrative expenses are not negative.
2. The differences between subcontractors and non-subcontractors are all significant at the 1% level.

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⁷) See Appended Note 2-4-3 for an examination of this point in detail.

⁸) The existence of this insurance-like element to subcontracting has been noted by numerous researchers. Asanuma (1984) and Aoki (1988), for example, demonstrate theoretically the existence of the “insurance-like element” to subcontracting, while Kawasaki and McMillan (1987) and Asanuma and Kikutani (1992) empirically confirm its existence. Yun (1999) demonstrates that similar findings can be observed in the Korean automobile industry.

⁹) Regarding this point, Aoki (1988) argues that the rise in the efficiency of communication of information particular to a sustained relationship between a parent enterprise and subcontractor gives rise to benefits that are peculiar to the subcontracting relationship (Aoki calls this benefit the “quasi-rent from continuous relations”), and that parent enterprises take on part of the risk of a subcontractor that is highly averse to risk in exchange for receiving greater quasi-rent as a form of insurance premium.
function as insurers in subcontracting relations, resulting in a mutually beneficial insurance function\(^\text{10}\).

(2) Change and decline in advantages of subcontracting
Subcontracting thus has its own advantages even though it may require the loss of a portion of earnings, leading to the existence of numerous subcontractors. Now, however, the advantages of subcontracting have taken on a somewhat different aspect (Fig. 2.4-5).

Firstly, although “stability of volume of work” remains the most commonly cited advantage, the proportion of businesses citing this as an advantage is falling. Instead, the importance of “no risk regarding transactions”, “no need to develop or plan original products” and “access to technical guidance” has increased. The advantages of subcontracting are thus gradually shifting from the traditional ones of stability of volume of work and redundancy of independent sales activities to the benefits of risk-free transactions and access to technical guidance. The fact that the importance of stability of volume of work as an advantage is declining also suggests that the insurance-like element of subcontracting may be weakening.

In other words, although subcontracting continues to offer advantages, the exact nature of these advantages is changing compared with in the past. What this means is that subcontractors in manufacturing are becoming unable to maintain a stable foundation on which to do business solely on the basis of subcontracting relations with small numbers of parent companies. This appears to be one factor behind the decline in the proportion of subcontractors in manufacturing.

3. Subcontractors confronted by economic globalization

The traditional advantages of subcontracting are thus fading. But what are the reasons for this change? One possible important factor is economic globalization and the impact of “hollowing out”, which has generated concern in recent years. According to the SME Agency’s Survey on Alliance Activities of SMES, 43.1% of subcontractors have parent companies that have established operations overseas\(^\text{11}\) in one form or another since 1998, and 34.8% of subcontractors have parent companies that scaled back domestic production and shifted production overseas (Fig. 2.4-8).

As well as a large proportion of subcontractors whose main customers expanded overseas production or procurement of parts from overseas that are negatively affected in terms of orders received as a result, as shown in Fig. 2.4-9, the analysis described in Appended Note 2-4-4 reveals that the movement of plants overseas by parent companies has a negative impact on the sales of subcontractors. In other words, such actions by parent companies have a major impact on the orders and sales of subcontractors.

Globalization is thus dramatically changing the behavior of parent companies. When they did not have the option of establishing operations overseas, parent companies could not choose to completely sever their business with the subcontractors who took their orders and had to constantly maintain a certain level of business with them. Within such “closed networks”, the criticism of a parent company that committed a “treacherous” act could

Fig. 2.4-8 Actions adopted by parent companies (1998 onward)
Subcontractors face overseas expansion of parent companies

<table>
<thead>
<tr>
<th>Action</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer of plant overseas</td>
<td>24.8</td>
</tr>
<tr>
<td>Establishment of new plant overseas</td>
<td>15.1</td>
</tr>
<tr>
<td>Reorganization of subcontracting relations</td>
<td>9.8</td>
</tr>
<tr>
<td>Withdrawal from business for economic reason</td>
<td>6.2</td>
</tr>
<tr>
<td>Establishment of new plants overseas</td>
<td>33.2</td>
</tr>
<tr>
<td>No response</td>
<td>49.1</td>
</tr>
</tbody>
</table>

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).

Notes: 1. “Establishment of operations overseas” indicates the proportion of enterprises that answered “yes” to one of the following: transfer of plant overseas, shift of production overseas, establishment of new plant overseas.

2. “No response” includes both companies that adopted only an action other than one of the six given, and companies that did not respond to the question.

3. Total except for “establishment of operations overseas” exceeds 100 due to multiple responses.

\(^{10}\) However, this allocation of risk between parent enterprise and subcontractor can lead to the abuse by a parent enterprise of its superior position to a subcontractor. Fair trade is therefore enforced under the Law on the Prevention of Delay in the Payment of Subcontracting Charges and Related Matters.

\(^{11}\) The establishment of operations overseas by parent companies here takes three forms: the closure of domestic plants and movement overseas, reduction of domestic production and shift of production overseas, and establishment of new plants overseas with no impact on the operations of domestic plants.
hinder its business with other subcontractors, which as a result served to prevent “treacherous” acts by parent companies. Nowadays, however, parent companies are able to rely on plants overseas instead of subcontractors in Japan to handle their orders. As a consequence, there is a growing focus among parent companies on quality, costs and delivery times in addition to a continuing emphasis on past business relations (Fig. 2-4-10). In short, the emergence of overseas competitors due to globalization may be transforming these traditional “closed networks”.

One manifestation of this situation is to be found in the die and mold industry, where there are cases of the plans for dies—i.e. intellectual property incorporating the know-how of the die maker—submitted to parent companies being leaked to overseas enterprises without 13). One reason why parent companies have become able to act in this way appears to be the increase in the technological level of enterprises in host countries overseas. Baba and Onishi (2001), for example, found in a study of recent years in the die and mold industry that whereas between the late 1980s to the 1990s many set manufacturers sourced dies and molds from Japan even when they had established operations in Asia, procurement from local sources has increased in recent years due to factors such as the improvement in the technological level of local die and mold makers in the region.

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12) Coase (1988) argues that enterprises effectively curb opportunistic behavior through use of long-term contracts in particular, as opportunistic behavior leads to the loss of future business opportunities.

13) One reason why parent companies have become able to act in this way appears to be the increase in the technological level of enterprises in host countries overseas. Baba and Onishi (2001), for example, found in a study of recent years in the die and mold industry that whereas between the late 1980s to the 1990s many set manufacturers sourced dies and molds from Japan even when they had established operations in Asia, procurement from local sources has increased in recent years due to factors such as the improvement in the technological level of local die and mold makers in the region.
the consent of the die maker concerned. As can be seen from Fig. 2-4-11, subcontractors are less aware than non-subcontractors of the importance of protecting things such as new products that they have developed or improved themselves through the assertion of intellectual property rights, such as patents. As the figure only shows the means that enterprises use to protect their interests from competitors, it is possible that subcontractors are even less aware of the need to take action to protect their interests from the parent companies with which they share business resources, including technical information, based on a relationship of trust. However, developments such as those observable in the die and mold industry suggest that conventional “closed networks” are changing not only in terms of the receipt of orders by subcontractors, but also in respect of the business resources, such as knowledge and know-how, that are shared on a relationship of trust and which form the foundations for the formation of traditional vertical collaborative networks. As a consequence, it is becoming more necessary that subcontractors recognize the importance of protecting their own intellectual property.

4. Way forward for subcontractors

(1) Improvement of ability to meet cost demands and enhancement development capabilities

Based on what we have seen so far, the environment faced by subcontractors appears to be growing increasingly severe. Below, therefore, we examine ways in which subcontractors can survive and grow amid concerns over the impact of changes in the actions of parent companies and changes in business networks resulting from increasing hollowing out, and also the changing advantages of subcontracting. We begin with the views of subcontractors themselves. What we find is that the abilities that many enterprises in manufacturing want to strengthen are “technological and production management ability to reduce costs”, “ability to develop own products” and “development and strengthening of specialized processing technologies and know-how” (Fig. 2-4-12).

Working to reduce the cost of products and strengthening related specialist resources are important strategies. This is because in manufacturing in particular, while demands from parent companies for subcontractors to reduce their costs are growing as enterprises establish operations overseas in an effort to cut costs (Fig. 2-4-10), the fact remains that the trust built on past relations is still regarded as being extremely important. It is also important that subcontractors have development capabilities, as even where parent companies do establish operations overseas, the development of high value-added products has a positive effect on sales (Fig. 2-4-13).

Fig. 2-4-11 Important means of ensuring returns from newly commercialized products, etc.

Little desire to use intellectual property rights, commercialization ahead of other companies seen as most important strategy

<table>
<thead>
<tr>
<th>Means of Commercialization</th>
<th>Subcontractors</th>
<th>Non-subcontractors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercialization before other companies</td>
<td>7.9%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Prevention of brain drain</td>
<td>26.7%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Concealment of technical data</td>
<td>28.4%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Complex product design</td>
<td>34.7%</td>
<td>36.7%</td>
</tr>
<tr>
<td>Possession of existing production facilities</td>
<td>27.8%</td>
<td>28.8%</td>
</tr>
<tr>
<td>Possession of new production facilities</td>
<td>24.4%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Possession of new sales and service network</td>
<td>39.7%</td>
<td>32.1%</td>
</tr>
<tr>
<td>Protection by patents</td>
<td>15.8%</td>
<td>20.9%</td>
</tr>
<tr>
<td>Protection by intellectual property rights other than patents</td>
<td>5.8%</td>
<td>7.1%</td>
</tr>
</tbody>
</table>


Notes: 1. The above figures include only SMMs that commercialized products, etc. that they developed.
2. Totals exceed 100 due to multiple responses.

14) In its “Guidelines on the Prevention of Unintended Outflow of Die Plan and Die Processing Data” (July 12, 2002), METI signaled its concern that the continuation of such practices could weaken the international competitiveness of the die and mold industry. The guidelines also noted that behind the provision of die plans by die makers lies not only their relationship of trust with parent companies, but also the psychological strain associated with refusing to submit plans and demanding compensation for plans from parent companies because of their position as a subcontractor and fear of losing future orders as a result of such action.

15) However, protection of interests through the use of intellectual property rights is not necessarily effective in all fields of industry. Cohen et al. (2000) found in their survey of the effectiveness of the means of retaining exclusive possession of technologies in 34 fields of industry that the effective means of doing so varied according to industry, as did their degree of effectiveness.

16) A large proportion of SMEs involved in subcontracting in industries such as the service sector also seek to “reduce costs”, “develop markets” and “develop new services in existing fields of business”, indicating that the emphasis on reducing costs and developing products and services is to be found in all industries.
Another important strategy is to aim to reduce the level of dependence on a particular parent company by diversifying business relations based on the abilities raised through these actions. Many subcontractors enjoy the advantages described above having developed stable, long-term business relations with a small number of businesses. However, this has served to restrict the opportunities for contact with diverse technologies and knowledge (i.e. learning opportunities). Accordingly, increasing the number of businesses with which an enterprise does business in order to remedy the lack of learning opportunities has the potential to stimulate engagement in business innovation activities\(^{17}\), leading to a subcontractor’s own growth.

\(^{17}\) A questionnaire survey conducted in 2002 by Nomura Research Institute of enterprises with business innovation plans that have been approved under the Law on Supporting Business Innovation of Small and Medium Enterprises found that the proportion of respondents that were subcontractors was 30.1%, which is smaller than the proportion of SMMS that are subcontractors.
Case 4-1  Stabilization of business through diversification of parent enterprises

Targeting of primary subcontracting
Located in Saitama Prefecture and with a workforce of 13 employees, C Ltd. is a machinery manufacturer founded in 1979 that makes mainly experimental products, jigs and tools. It started out as a secondary subcontractor after being put in touch with a business through a friend of the president in order to make use of the president’s own lathe skills. Because of his constant concern about not receiving payment because of being lower down the chain than a primary subcontractor, the president decided to look for ways of becoming a primary subcontractor. While a drawback of being a primary subcontractor is that it cannot refuse an order from a manufacturer, the risk of non-payment is relatively smaller. Buoyed by his complete confidence in his company’s technology and the increase in orders from leading manufacturers during the period of the economic bubble, primary subcontracting work for leading manufacturers now accounts for 95% of the company’s orders.

Stability of subcontracting work
Having achieved its goal of supplying leading manufacturers directly, C Ltd. has since steadily worked to meet manufacturers’ demands for higher quality and shorter delivery times. Its approach regarding delivery times is particularly rigorous. By making effective use of outsourcing while at the same time securing man-hours through the overtime of skilled craftsmen, the company is able to specialize in processing technologies that only it can offer. Sales managers, plant managers and the president also meet twice a day to monitor processes in progress within the company and accurately determine the company’s overall spare capacity, and customers are informed right from the start if the desired order would be impossible to meet.

This straightforward approach has won it plaudits with leading manufacturers, says the president. As a result, manufacturers have allowed delivery times to be extended from the outset in some cases, helping to develop healthy relations with customers and building trusting relationships.

Changes in advantages of subcontracting
C Ltd. too used to feel that a major advantage of subcontracting was that it ensured a stable supply of work. This is accentuated by the fact that C Ltd.’s three main customers are in completely different industries, which protects it from the vagaries in business conditions in particular industries. Amid the prolonged slump following the collapse of the bubble economy, however, customers have grown increasingly reluctant to make any commitments regarding the future or, even if they do so, increasingly provide inaccurate forecasts. As a result, the advantages of the stability of work offered by subcontracting are rapidly diminishing.

Difficulty of new strategy for stability
As a result of the reduced stability of work, C Ltd. decided to embark on finding new core customers in addition to its existing ones. Its strategy is to achieve stability by dispersing its core customers. During recessions such as the present one, however, such a strategy runs into difficulties. With the number of orders declining in the first place, businesses have less work to contract out to existing contractors, reducing the incentive to look for new outside contractors. Although C Ltd. did manage to make one new customer two years previously, most of its business with it has been conducted on a spot basis, and it is far from being a core customer.

Ambition of developing own products
The president says, “As long as I’m involved in manufacturing, I want us to have our own products”, and he has also had experience of attempting to develop new products in the past. However, finding a market and the market research that precedes development were the biggest obstacles, and he had to abandon past development efforts due to learning during development of the existence of similar products on the market or receiving a poor response from expected sources of demand.

Nevertheless, the company has not abandoned its dream of developing its own products. Although his overriding strategy is to achieve stability, the president along with his son and successor hopes to develop his own products if the idea and opportunity arise.
Case 4-2 Diversification of customers through introduction of 3D CAD

O Ltd. (Nagano Prefecture, 55 employees) is a precision sheet metal processor of information devices and industrial equipment established in 1972. Almost 100% of sales are subcontracting orders (including both primary and secondary subcontracting), and orders from core customers account for 50% of sales.

Introduction of 3D CAD
It was about one year ago that O Ltd. resolved to introduce 3D CAD. In the industry to which O Ltd. belongs, introduction of CAD has been underway for some while, and the president constantly felt that the introduction of 3D CAD would be both useful and necessary, having seen it in use on visits to enterprises in Europe and North America. Given increasing globalization and the international intensification of competition, he was also keenly aware of the need to adopt new techniques. The president therefore enthusiastically set about studying 3D CAD, and decided to introduce it once he felt that he would be able to use it.

Development of internal setup
Just introducing the necessary software is insufficient to achieve the full benefits of 3D CAD. It is also necessary to develop the infrastructure to enable its use across LAN connecting in-house production facilities as well as the transfer of 3D data from customers, and this is what O Ltd. did. However, little 3D data was in fact received from customers until very recently. Although one would expect customers to take steps to adopt 3D CAD capabilities, the slow uptake by subcontractors appears to have resulted in 3D CAD being limited to in-house use in the interests of internal compatibility, with the data for orders being converted back from 3D to 2D data for subcontractors.
The president believes this to be extremely wasteful. O Ltd. has therefore put in place a system for actively converting 2D data to 3D data and enabling it to immediately respond to customers’ demands for 3D data at any time. Recently, a number of companies have begun to provide it with 3D data, enabling O Ltd. to gradually reap the benefits of 3D CAD.

Use of 3D CAD
O Ltd.’s use of 3D CAD has not been limited to its introduction as part of the production setup. Instead, 3D CAD’s greatest significance to O Ltd. is as a sales tool. Sales staff use notebook computers equipped with 3D CAD software to give presentations to customers. The president was strongly impressed by a presentation that he was given by a German design company over 20 years ago, and has introduced the use of 3D CAD into sales activities based on the techniques that he saw used then.

Effects of introduction of 3D CAD
Having thus introduced 3D CAD in both production and sales, O Ltd. is at last seeing the effect on orders. In particular, sales activities using 3D CAD make it possible to show clients the state of O Ltd.’s facilities and the level of design simultaneously, thereby stimulating their interest. In actuality, O Ltd. has succeeded in winning around 10 new clients after the adoption of 3D CAD. It is also being increasingly requested to participate in design and planning by existing clients. Although O Ltd. could not yet be described as having developed sustainable relations with these new clients, the president aims to increase the number of its core clients, if only by one, by continuing its sales solution-based active sales activities.

On the production front as well, the effects of the advent of solid models is becoming apparent. For example, the time traditionally spent poring over 2D design plans has been substantially reduced and work efficiency dramatically improved. As a result of the transmission of 3D data to production machinery via the company’s LAN, employees using production facilities are given an intuitive insight into work, thus increasing production efficiency.

In the future, the president says he aims to make increased use of 3D CAD, and in particular to increase opportunities for participation in design and planning with clients and to enter strategic alliances with them.
M Ltd., a company in Kanagawa Prefecture with 49 employees, was a subcontractor that made pressure vessels under contract. When the ex-president fell seriously ill in 1995, however, it laid off its entire workforce and became a real estate management company. In 1996, it reemployed its employees, and made a fresh start, expanding into a new field of business and leaving its former subcontracting line of business.

**Decision to cease subcontracting**
Before making a fresh start, subcontracting orders from enterprises (mostly from a leading electrical machinery manufacturer and other enterprises in the same group) accounted for 100% of M Ltd.’s sales. Following the collapse of the bubble economy, however, one after another of the parent companies began to establish operations overseas or manufacture in-house, resulting in a precipitous drop in sales. The current president therefore decided to seek to stabilize sales through the company’s own efforts by developing its own products as well as taking subcontracting orders, which are affected by the circumstances of parent companies, when relaunching the company.

**Development of own products**
M Ltd. first internalized processing of machinery parts that was previously outsourced in order to expand the range of its own technologies. While this was a risky move that required the establishment of a new plant, the president says that the company pushed ahead with the move believing it to represent a turning point. Fortunately, having identified the need for processing of difficult-to-machine materials as a result of its past business with one parent company, M Ltd. was able to cultivate its technological strength in this area and win orders from that company.

The first real step toward the development of its own products was its entry into the IT-related vacuum system business. This was a result of having sought to enter IT-related fields related to its own basic technologies at the time of the IT boom in 1998. Technologies that M Ltd. lacked were supplemented using other companies’ resources. The deterioration of its partner’s performance during this process, however, led to M Ltd. taking onboard its engineers.

Having thus acquired the technology for machinery parts processing and vacuum systems, M Ltd. combined this technology with the can-making technology that it had cultivated as a result of subcontracting work in the past to develop a new kitchen waste carbonization recycling system, and entered the environmental equipment business. The reason why it chose to focus on this field in the first place was that it could then apply the knowledge of manufacturing centrifuges that it had acquired as a subcontractor.

Industry-university-government partnerships and joint R&D with other companies too made major contributions in the development process. By thus combining the various technologies that it had acquired with external knowledge resources, the company at last succeeded in developing its own product seven years after making a fresh start.

**Importance of parent companies as market**
Although M Ltd. now had its own products, it initially lacked any development staff or facilities and a marketing division for selling the products developed. M Ltd. therefore actively advertised for outside external resources to fill the gaps in its resources.

While M Ltd. thus established a sales team and actively sought a market for its own products, its sales to parent companies as a subcontractor also grew. Using the sales networks of existing customers and parent companies was much more efficient than M Ltd. finding a market itself, and for customers such as parent companies with their eyes on the environmental business it offered mutual advantages for both sides, such as enabling the expansion of product lineups without companies having to develop products themselves.

**Subcontracting undertaken to acquire markets**
Subcontracting orders from existing parent companies now account for 30% of M Ltd.’s sales. M Ltd.’s regards the continuation of its subcontracting business as an important strategy for securing the demand of parent companies for expanding sales of its own products.

It continues to concentrate on the development of new products, and aims to sell its own products through channels it has established itself and stabilize sales through its own efforts. It is now in a transitional period, and is working around the clock to achieve a successful transition.
The case of C Ltd. demonstrates that increasing the number of customers and developing one’s own products is not an easy process. But despite the many difficulties, C Ltd. continued with its efforts out of a sense that subcontracting’s stabilizing effect on orders was waning. The case of O Ltd. is that of a company that increases its customers by taking action of benefit both to itself and its parent companies. These measures to strengthen relations with parent companies created attractive business resources from the point of view of other companies, leading to the growth of the subcontractor itself.

The case of M Ltd. demonstrates that marketing one’s own products to parent companies is another effective option, as it enables the effective use of relations built up in the past at the same time as reducing dependence on parent companies. However, it can sometimes be difficult for subcontractors, which by nature lack business resources, to take such action independently. In such cases, it is important that they make up for the gaps in their resources by, for example, undertaking joint collaborative activities with other enterprises and organizations, such as through joint development with other enterprises and industry-university-government collaboration. M Ltd., for instance, skillfully collaborated with other enterprises through joint R&D instead of acting alone on development of its own products.

Subcontractors are not the only ones that encounter a shortage of business resources that makes it difficult to act independently when undertaking business innovation, and it is important that enterprises of all kinds, both subcontractors and non-subcontractors, make use of external business resources through such collaborative activities with other organizations. In the following section, therefore, we examine business collaboration activities.

Section 2  Horizontal collaborative networks

The subcontracting relations looked at in the preceding section have been the subject of various forms of studies examining them as one typical form of doing business used by SMEs. Regarding the business collaboration activities of SMEs, on the other hand, there has not been a great deal of research on the state of activities such as joint R&D and joint advertising undertaken through loose, non-systematized business collaboration activities between enterprises, although there has been some research on the formation of joint business operations, chiefly through the formation of associations and joint use of facilities.

However, now that change is occurring in the vertical collaborative networks typified by subcontracting, the development by SMEs of horizontal collaborative networks with other organizations offers an important means of achieving business innovation. In this section, we analyze the horizontal collaborative networks formed by SMEs so that they can share and fill the gaps in their business resources irrespective of whether or not they have business relations with each other. In the process, we clarify the state of engagement in business collaboration activities by SMEs and the attributes of enterprises, and look at what impact business collaboration activities have on the performance of enterprises and what kinds of enterprises achieve results from business collaboration activities. We also examine in detail the cross-industry exchange activities that serve as the seedbed for such business collaboration activities. We in addition look at the attributes of SMEs involved in collaboration with outside research organizations (i.e. industry-university-government collaboration activities) and means of ensuring that such collaboration is successful.

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18) Takahashi (1997) argues that subcontractors are slower than non-subcontractors to take steps to develop new technologies and products due to the gap in learning ability between the two, which arises from the gap in learning opportunities due to the smaller number of businesses with which subcontractors do business. In order to improve their learning ability, subcontractors need to increase the number of businesses with which they do business, and the use of strategic alliances and industry-university-government collaboration is an important strategy for achieving this goal.

19) “Business collaboration activities” are here defined as concrete business activities undertaken jointly with other enterprises for the purpose of sharing shareable business resources that do not encroach on the independence of the enterprises involved (i.e. not capital partnerships or mergers, etc.). Participation in meetings organized to enable the exchange of information and personnel that do not involve the actual joint implementation of business, for example, is therefore not included.
1. Characteristics of enterprises engaging in business collaboration activities

(1) State of involvement in business collaboration activities

Let us start by looking at the state of involvement in business collaboration activities by SMEs, and the types of collaborative activity in which they engage.

According to the SME Agency’s Survey on Alliance Activities of SMEs, 25.0% of SMEs are involved in inter-enterprise business collaboration activities (Fig. 2-4-14), indicating that SMEs’ involvement in such activities has risen considerably compared with fiscal 1997 (Appended Note 2-4-6). While there is no marked difference in involvement between industries, the proportion of enterprises involved in such activities does increase with size.

Behind this difference due to size exists the difference due to size in the types of business collaboration activity engaged in (Fig. 2-4-15). For while a greater proportion of enterprises of all sizes embark on joint R&D than other activities, the proportion of enterprises engaging in joint R&D increases with size. Conversely, the proportion of enterprises engaging in activities such as joint purchasing, joint sales, joint receipt of orders, joint advertising and joint introduction of IT decreases with size.

Why then does there arise this difference due to size? One possible reason is that the purpose of business collaboration differs according to the type of business collaboration activity concerned. Fig. 2-4-16 shows the purposes of business collaboration activity according to type, and from this it can be seen that whereas an overwhelming proportion of enterprises have as their objective of joint R&D activities “complementation of knowledge and know-how lacked by own company”, the most commonly given aim of joint purchasing and joint logistics is “reduction of business costs”. In other words, while many enterprises engage in joint R&D in pursuit of economies of scope rather than economies of scale, activities such as joint sales are commonly motivated by the pursuit of economies of scale. As a consequence, comparatively large enterprises that can achieve considerable economies of scale independently tend to engage in joint R&D in pursuit of economies of scope, and comparatively small enterprises that find it harder to achieve economies of scale independently are more likely to engage in activities in pursuit of economies of scale.

Fig. 2-4-14 Proportion of enterprises involved in business collaboration activities

Proportion declines in tandem with size, but no major difference between industries

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).
Notes: 1. Small: enterprises with 20 or fewer employees in manufacturing, etc., and five or fewer employees in wholesaling, services and retailing.
2. Totals exceed 100 due to multiple responses.

20) Numerous studies, such as those by Mansfield (1964), Scherer (1965), Acs and Audretsch (1987) and Doi (1993), have demonstrated there to be no economies of scale in R&D undertaken independently by one company. Moreover, Okamuro (2001) shows through an empirical analysis the importance of synergies (economies of collaboration) generated by the sharing and use of outside business resources through inter-enterprise networks in joint R&D.
Fig. 2-4-15 Content of business collaboration activities
Difference in types of activities engaged in according to size and industry

Fig. 2-4-16 Purposes of collaboration according to type of activity
Large variation in purposes according to type of activity engaged in

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).
Notes: 1. See Fig. 2-4-14 regarding the definition of sizes of enterprises.
2. Totals exceed 100 due to multiple responses.

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).
Note: Totals exceed 100 as respondents gave multiple responses regarding the purpose of activities considered to be most important from a management perspective.
(2) Characteristics of enterprises engaging in business collaboration activities

As seen thus far, the types of business collaboration activity engaged in by SMEs differ according to enterprise size. Apart from enterprise size, then, what kinds of characteristics do enterprises that engage in a variety of business collaboration activities have?

Fig. 2-4-17 shows the characteristic attributes of enterprises engaged in business collaboration activities according to type of activity. As can be seen, there are no attributes that affect all groups, i.e. there are no attributes of enterprises that encourage business collaboration activities in general, and enterprise attributes differ according to the type of business collaboration activity engaged in.

The attributes common to the largest number of activities are involvement in R&D activities and participation in cross-industry exchange activities. The indicator for engagement in R&D activities (indicating technological level) was found to have a significantly positive effect in all groups except enterprises engaged in joint sales, etc., and the indicator for participation in cross-industry exchange groups (indicating the positiveness of their attitude toward acquiring information on other companies) was found to have a significantly positive effect on all groups except enterprises engaged in joint purchasing. This indicates that involvement in any kind of collaborative activity shows that a company is of a technological level that is attractive to other companies and aggressively communicates information about its “attractiveness” to other companies, and at the same time demonstrates the importance of actively seeking out information on the “attractions” of other companies.

2. Business collaboration activities and enterprise performance

(1) Performance of business collaboration activities differs according to type of activity

The next question we ask is: How do these business collaboration activities impact on the performance of enterprises?

Regarding first of all enterprises that engage in joint R&D and joint sales, etc., which we may surmise are mainly intended to increase sales, an examination of the relationship between growth in sales and enterprises’ involvement in business collaboration activities using the results of METI and the SME Agency’s Basic Survey of Commercial and Manufacturing Structure and Activity and the SME Agency’s Survey on Alliance Activities of SMEs reveals that although engagement in joint R&D has a significantly positive effect on the sales growth rate, engagement in joint sales was not found to have either a positive or a negative effect. Regarding enterprises that engage in joint purchasing and joint logistics, which we may assume are designed primarily to cut costs, it was found that although engagement in joint purchasing has a significantly positive effect on the operating profit ratio, the effect of engagement in joint logistics, while positive, is not statistically significant (Fig. 2-4-18, Appended Note 2-4-8). This indicates that simply engaging in business collaboration activities is not in itself sufficient to have a positive effect on enterprise performance21).

However, business collaboration activities are not always intended to increase sales and reduce costs. Fig. 2-4-19 shows the data in Fig. 2-4-16 classified into individual groups, and from this it can be seen that the only objective to be given by over 50% of respondents was “complementation of knowledge and know-how lacked

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21) The impact of such joint activities on the performance of enterprises has been the subject of an albeit still small number studies. However, these studies have produced varying results, and a consensus has yet to emerge. For example, while Okamuro (2000) (2001) finds that joint R&D significantly increases the ordinary profit ratio but other activities have hardly any effect or have a negative impact on the profit ratio, Vornotaros (1997) of the United States found that joint R&D has a negative impact on the profit ratio. (Vornotaros notes that there may be an inverse causal relationship at work, viz. that the participation of enterprises with low profit ratios in joint R&D results in profit ratios being lower.)
by own company” in the case of enterprises engaged in joint R&D, and although the commonest reason given by enterprises engaged in joint purchasing and joint logistics, anticipated to be intended primarily to cut costs, is “reduction of business costs”, the proportion in neither case is over 50%, revealing that many enterprises engage in these activities for other objectives. Accordingly, there is a strong possibility that enterprises that engage in activities not confirmed to have positive effects on sales or profit ratios in fact do so for unquantifiable reasons such as “complementation of knowledge and know-how lacked by own company” and to “strengthen position in relation to competitors and customers/suppliers”, and that these activities are effective in these terms.

(2) Successful examples of engagement in joint collaboration activities by SMEs
Thus neither enterprises that engage in activities that have been confirmed to be effective nor enterprises that engage in activities not confirmed to be effective necessarily succeed or fail in these activities. If we examine individual enterprises, then, what kinds of activities and what kinds of enterprises engaging in business collaboration activities do we find to be successful?

To answer this question, below we describe the actual cases of enterprises involved in business collaboration activities, and uncover the reasons for their success.

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**Fig. 2-4-18 Effects of business collaboration activities**

*Business collaboration activities improve performance of enterprises*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Proportion of enterprises seeing improvement in operating profit to sales (%)</th>
<th>Proportion of enterprises seeing increase in sales (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint R&amp;D</td>
<td>53.9</td>
<td>30.4</td>
</tr>
<tr>
<td>Joint purchasing, etc.</td>
<td>46.6</td>
<td>24.8</td>
</tr>
</tbody>
</table>


Notes:
1. “Enterprises seeing increase in sales” are enterprises that registered positive growth in sales in fiscal 1997–2001. “Enterprises seeing improvement in operating profit to sales” are enterprises that registered an improvement in their ratio of operating profit to sales over the same period (including enterprises registering a loss in fiscal 2001 whose loss decreased over the period).
2. Activities for which a statistically significant difference was found in the analysis described in Appended Note 2-4-8.

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**Fig. 2-4-19 Purpose of activities by group**

*Variety of purposes even within the same group*

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of enterprises</th>
<th>Purpose of activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint R&amp;D</td>
<td>30.4</td>
<td>Reduction of business costs, Reduction of business risk, Reduction of time required for business, Complementation of knowledge and know-how lacked by own company, Synergies from combining business resources with those of other companies, Strengthening of position in relation to competitors and customers/suppliers</td>
</tr>
<tr>
<td>Joint sales, etc.</td>
<td>24.8</td>
<td>Reduction of business costs, Reduction of business risk, Reduction of time required for business, Complementation of knowledge and know-how lacked by own company, Synergies from combining business resources with those of other companies, Strengthening of position in relation to competitors and customers/suppliers</td>
</tr>
<tr>
<td>Joint purchasing, etc.</td>
<td>46.6</td>
<td>Reduction of business costs, Reduction of business risk, Reduction of time required for business, Complementation of knowledge and know-how lacked by own company, Synergies from combining business resources with those of other companies, Strengthening of position in relation to competitors and customers/suppliers</td>
</tr>
<tr>
<td>Joint logistics, etc.</td>
<td>53.9</td>
<td>Reduction of business costs, Reduction of business risk, Reduction of time required for business, Complementation of knowledge and know-how lacked by own company, Synergies from combining business resources with those of other companies, Strengthening of position in relation to competitors and customers/suppliers</td>
</tr>
</tbody>
</table>


Note: Totals exceed 100 due to multiple responses.

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22) In joint R&D, the primary focus is on development of products, and what course enterprises subsequently take (e.g. marketing of the resulting product by the participating enterprises either jointly or independently) can vary. Okamuro (2002) and Fukukawa (to be published), for example, therefore classify the outcomes of joint R&D into technological successes and commercial successes.
J Ltd., a company in Hokkaido with 77 employees, is a wholesaler dealing in a broad variety of fields, ranging from private housing to public works, private sector construction and industrial machinery. Being engaged in such a wide range of fields, J Ltd. can make use of a diversity of information obtained from a variety of sources.

**Cue to engagement in joint development**

The chance arose around 20 years ago, when J Ltd. received an inquiry from the U.S. regarding a rubber balloon vending machine. As well as resulting in sales of over 1,000 units of the machine in the U.S., this inquiry also led to J Ltd. doing business with amusement facility operators in Japan, and J Ltd. realized that this could open up new markets.

Rubber balloons gave the president the idea of developing products with a “festival” theme, and he began to ponder the development of goods that conjured up images of festivals. The company teamed up with the vending machine manufacturer that it had done business with when it received the inquiry for selling rubber balloon vending machines to the U.S., and developed a prototype candyfloss vending machine. This was exhibited in the U.S., where it attracted interest. Although the companies erred in that the machine overheated due to greater than expected use, this experience led on to the joint development work in which J Ltd. is now involved.

**Joint development working primarily with outlets**

Sensing the potential for new markets, the president visited the amusement facility operators with which J Ltd. did business to discover their impressions of vending machines that could be installed in small amusement parks and similar sites that he considered to be likely sources of demand for “festival” goods. What emerged from this was a French fries vending machine with a built-in fryer. Having obtained a feel of what was wanted, the president decided to set about development.

However, J Ltd. is a wholesaler, and lacks its own means of development and production. J Ltd. therefore teamed up with a well-known local squid fishing equipment maker and a design company established as a spin-off by a former employee of J Ltd., and together the three companies embarked on development and production.

According to the president, each of J Ltd.’s partners agreed to take part in joint development as J Ltd. had obtained the prior agreement of amusement facility operators to the use of the equipment, thus ensuring a market for the products.

**Fryer failure and candy floss vending machine**

Although development of a frying vending machine was itself successful, factors such as the irregular quality of the ingredients caused problems, and the machine has yet to be produced and sold on a commercial basis. While J Ltd. is presently looking into commercializing it by changing the ingredients used, this raises another problem in that changing the ingredients causes severe wear of parts in the vending machine.

However, J Ltd. has also again developed a candyfloss vending machine through joint development with the same enterprises that it worked with on the frying vending machine. The success of this project too was down to J Ltd. ensuring that there existed a market for the device, which has already been commercialized and entered operation.

Throughout its development activities, J Ltd. collaborated with a local technology center and university, from which it obtained technical advice and access to equipment and materials, and the president explains that this made an invaluable contribution to the success of development.

**After successful development**

Although it is hard to envisage the continued additional sale of equipment after the sale of a product such as the vending machines described, J Ltd. developed a valuable scheme enabling the participating enterprises to enjoy continuous and additional benefits from their collaboration. In the above case, the granulated sugar required to make candyfloss was converted into stick form especially for the vending machine, and the specifications chosen so that the vending machine could not make candyfloss without these sticks. The partners are applying to patent these sticks, enabling them to enjoy continuous returns from the sticks.

Necessary to the success of joint development is that the scheme should enable all of the participating enterprises to enjoy returns and continue to maintain good relations.

J Ltd. intends to engage in fresh business making full use of the various information to which it has access, taking as a starting point first ensuring that there is a market for the products developed.
Case 4-5  Development of own core technologies and transmission of information essential to joint R&D

K Ltd., a company in Fukui Prefecture with 290 employees, is a machine tool manufacturer specializing in the manufacture of machining centers. With demand for machine tools in the doldrums, K Ltd. is working on the development of products in new fields in collaboration with other companies.

Pursuit of own core technologies
K Ltd. has long specialized in machining centers, which now account for around 90% of its sales. During this time, K Ltd. has constantly sought to develop high-speed machining technology in order to make "high-speed manufacturing" a reality. When the norm for other companies' products was 5,000 revolutions per minute, for example, K Ltd. focused on products that operated at 20,000 revolutions per minute.

K Ltd. has thus insatiably pursued the development of its core technologies. At the same time, however, it has turned its sights to non-contact machining, and began researching laser-processing technology around five years ago in order to provide itself with another core technology.

Approached by leading enterprise
Several years ago, F Ltd., a leading maker of housing-related equipment, conducted research on how to make molds more quickly and accurately. Aware that the key factor in manufacturing is mold making, it believed it necessary to shorten and improve the efficiency of the mold-making process, which requires almost one month using conventional techniques.

It succeeded in reducing the time required somewhat by using an optical modeling technique. However, no change was made to the conventional method of construction, and so the process was not made dramatically quicker or more efficient.

F Ltd. determined what skills and techniques were required to solve this problem, but lacked the ability to make an actual machine. F Ltd. therefore singled out K Ltd. to take on the task.

Publication of technical information and reputation
K Ltd. explains that it was selected for the task for the following reasons. A major reason, first of all, was K Ltd.'s past record of having supplied machining centers to F Ltd. and other enterprises in F Ltd.'s group. F Ltd. as a result not only learnt of K Ltd.'s specialization in high-speed processing technology, but also developed human relations and trust with K Ltd.

Another factor was K Ltd.'s regular publication of information on its latest advances and its present situation in bulletins distributed mainly to related businesses and organizations, and also via its company website. Information published in the past described K Ltd.'s focus on its core technologies and its start on development of laser processing technology.

Prototypes of the product developed jointly with F Ltd. have been completed, and this has already won plaudits at exhibitions. At present, K Ltd. is working on improving precision with the involvement of research organizations such as universities in order to launch the commercial finished product.

Keys to success of collaborative activities
In engaging in collaborative activities of this kind with large enterprises, SMEs commonly fear that they will end up being swallowed by their large partners. To counter this fear, K Ltd. says it is necessary to have confidence in one's core technologies and to be ready to sometimes turn down unreasonable demands made by leading enterprises. In order to ensure the success of collaboration, it is important to be confident that one's core technologies are absolutely necessary, and to constantly coolly monitor the position of one's technologies in the marketplace in order to support this confidence.

The basic approach of K Ltd., which follows this philosophy, is nothing special. It merely consists of not turning down a request, first checking things out and judging with one's own eyes, checking the facts, site and goods in question out directly, monitoring market needs, and establishing realistic targets.

Nothing special is required. According to the president, following and practicing this simple approach and always being interested in new things are crucial.
G Ltd., a company with 28 employees in Nagano Prefecture, specializes in the development, design and trial manufacture of machinery. Since its establishment in 1970, it has developed over 400 products, and it is now using the knowledge and know-how that it has accumulated to continue to develop new products.

Development through technical collaboration
Development is one of G Ltd.’s core activities, and its development strengths are its business lifeline. However, it is not easy to develop something completely new from scratch. G Ltd. puts it thus: “While creating something from nothing is certainly significant, this does not in itself lead to business. What we aim for is a development process to create ’10 from 1’.

By creating “10 from 1”, G Ltd. means the creation of products with different characteristics from conventional products and outstanding performance through the skilful combination of existing technologies. One example is the development of the ski gates used in the Winter Olympics, which were made by combining existing ski gate technology with the technology used for ship screws. It took an entirely different approach from that of its competitors, latching on to the fact that the technology capable of standing up to both the severe mountain winter cold and the special conditions of skiing events was already to be found in use in the Antarctic Circle in ship screws.

For a company like G Ltd. that adopts such an approach, it is important to have a number of contacts to be able to consult in the event of difficulties. Rather than undertaking everything within the company, G Ltd. has accessed existing knowledge from outside the company to create a variety of products in a range of fields.

Attractiveness of enterprise increased by development capabilities
G Ltd. normally sells the machinery and systems that it develops itself. Although it makes active use of outside knowledge if it encounters technical questions that it cannot solve by itself, it ordinarily undertakes development work itself.

As a result of having created a variety of products and many of the products that it has developed enjoying a high reputation, its business resources appear extremely attractive to other enterprises that do not have G Ltd.’s development capabilities. It is therefore not unusual for requests from other companies to evolve into joint R&D.

Joint R&D through introduction by third party
Recently, G Ltd. has been involved in joint R&D as a result of having been introduced to a company by METI’s Kanto Bureau of Economy, Trade and Industry in 2000.

The company concerned, L Ltd., sought to develop a small transportable container for medical use, but was unable to undertake R&D independently. A leading enterprise that it approached regarding development turned it down, and it consulted the Kanto Bureau of Economy, Trade and Industry as a last resort. G Ltd. decided on the basis of its wealth of development experience that development of what L Ltd. required was feasible, and engaged in joint development.

Such business collaboration would normally be unlikely to occur unless the parties involved were acquainted with one another. Reaching the implementation stage would be even more unlikely due to the uncertainties regarding, for example, the other party’s development capabilities. Because of G Ltd.’s obvious development track record in a range of fields, however, this hurdle was cleared.

Joint R&D has now reached the stage of completion of a test model, and R&D successfully concluded. L Ltd. is grateful to G Ltd., and feels it would have been impossible to product what it wanted without G Ltd.’s assistance.

Use of external organizations for own benefit
While G Ltd. has business resources that are attractive to other companies, G Ltd. faces numerous problems similar to those of many other SMEs regarding finding a market for the products that it develops. Because of this, G Ltd. makes use of enterprises with the strength in marketing that it lacks through joint sales of products that it expects to be able to sell in a sufficiently large volume.

In this way, G Ltd.’s core development capabilities are used by outside organizations, while at the same time it makes active use of the business resources of other companies that it lacks in order to actively expand its business activities.
Case 4-7  Development of new products through network and varying levels of enthusiasm of network members

P Ltd. is a sake maker in Miyagi Prefecture with 160 employees that was established in 1973 as a joint venture by four nearby sake makers. With the sake market in the doldrums, P Ltd. has led the way in pioneering a fresh approach, and has achieved strong performance as a result.

Formation of network
It all began in 1968 as a result of an encounter between the present chairman, who was one of the central figures in establishing P Ltd., and the present president of X Ltd., a sake maker in Kagawa Prefecture, who knew each other at university though they were in different years. Discussing the future of sake, they were both concerned about the industry’s future, and felt that something new had to be tried. The chairman of P Ltd. decided to shake up thinking in the industry focusing on the younger generation, and the president of X Ltd. decided to undertake research in new directions.

P Ltd.’s chairman shortly after formed P Ltd. together with three other nearby sake makers as one way of embarking on something new in an industry in which tradition was still deep-rooted and there was little encouragement to innovate. Increasing in scale provided the strength to engage in new things, and this also laid the foundations for the subsequent formation of a network.

Following a visit to Europe, the present chairman explains, “It is necessary to stop thinking within the framework of sake, and to go back to the underlying brewing and fermenting technology. There are amazingly few fences between the wine and beer fields, which are based on the same brewing and fermenting technology. One should be able to say the same about sake”. He has therefore continued to think outside the box without being constrained by traditional technology and conventional ways of doing things. It was from this way of thinking that the president of X Ltd. developed new products.

With the additional backing of a sake wholesaler holding the same view, the chairman, who continued to vigorously challenge the ways of thinking of sake makers around the country, and the president of X Ltd., who vigorously continued to pursue R&D, formed a network, A in 1984, which was dissolved in 1999 to form the present network, Q.

Measures by network organization
Network Q’s activities are largely concentrated in two areas. The first area is the support of R&D by X Ltd. and the shared use of the new technologies thus created. Member enterprises can not only make use of existing patents with commercial applications, but also enjoy access to new technologies developed in the future. Q’s other main role is advertising. SMMs face numerous obstacles to finding markets and increasing their name recognition by themselves regarding new products, and these can be reduced by working together.

The main product to have emerged from Q’s activities so far is low-alcohol sake. Although there is increasing interest in low-alcohol products in the industry, the manufacturing patent for low-alcohol sake was originally acquired by X Ltd. Member enterprises sell their own brands of low-alcohol sake made using technology patented by X Ltd. P Ltd., which plays the central role in the network, has already seen its new product range grow to make up 10% of overall sales in terms of value and around 15% in terms of volume, thus making up for the slump in the sake market.

Varying levels of enthusiasm of network members
There are currently 32 members of the Q network, which has spread to include enterprises from prefectures such as Aomori to Yamaguchi and Ehime. However, members do not all have the same level of enthusiasm. Some produce new related products one after another like P Ltd., while others, though they produce low-alcohol sake, sell it through outlets in the same way as conventional products without taking any other special steps.

This difference in the enthusiasm of enterprises toward the development of new products is also visible to an extent in differences in performance. While P Ltd.’s positive action has borne fruit and it has performed well despite the poor state of the market, there also exist enterprises whose performance reflects the severe state of the industry.

At present, sake produced using a new rice extract developed by X Ltd. that “keeps the stomach functioning healthily” as well as low-alcohol technology is being commercialized. This technology is also attracting the interest of leading brewers, which have incorporated it into their own products. In the future, the network intends to continue to breathe fresh air into the industry, and is working toward joint sales through shops marketing pilot products.
A major factor contributing to J Ltd.’s success in the case above is that it took action after itself first confirming the existence of likely sources of demand. It was then more able to approach enterprises with the requisite capabilities for development and encourage them to collaborate. In K Ltd.’s case, one important factor enabling it to approach large enterprises was its posture of always taking on new challenges within the company and its consequent constant involvement in R&D activities. Another important factor was that it had a clear idea of its core technologies and built up knowledge and know-how that other companies lacked by continuing to focus on its core strengths over the long term. Like K Ltd., G Ltd. too built up its core development capabilities in-house through constant development activities, making it attractive to other companies and leading to introductions to third parties. Accumulating resources lacked by other companies is thus of enormous importance.

It is also important for an enterprise to actively commit itself to business collaboration activities, as in the case of P Ltd. Simply participating in business collaboration activities is of little benefit to an enterprise, even if the activities concerned have the potential to be effective.

3. Cross-industry exchange activities as seedbeds

(1) SMEs participating in cross-industry exchange activities

According to the SME Agency’s Survey on Alliance Activities of SMEs, the proportion of enterprises participating in cross-industry exchange activities is 13.7%. Of these, 37.7% also participate in business collaboration activities at the same time as participating in cross-industry exchange activities. This is considerably higher than the 20.8% of enterprises not participating in cross-industry exchange activities that are involved in business collaboration activities (Fig. 2-4-20). Moreover, 22.0% of enterprises participating in cross-industry exchange activities experienced business collaboration as a result. In other words, cross-industry exchange activities function as a seedbed for the involvement of individual enterprises in business collaboration activities.

So what kinds of enterprises participate in cross-industry exchange activities, and what kinds of enterprises see participation evolve into business collaboration activities. The enterprises participating in cross-industry exchange activities may be characterized first of all as in many cases having 1) a higher enterprise age, 2) more competitors, 3) a higher operating profit ratio, 4) an active approach to involvement in R&D activities, and 5) subcontracting relations (Fig. 2-4-21). While some factors, such as age, cannot be altered, an enterprise can engage in R&D if it so desires, and enterprises that enthusiastically engage in such activities also enthusiastically participate in cross-industry exchange activities.

Fig. 2-4-20 Participation in cross-industry exchange activities and proportion of enterprises engaged in business collaboration activities

Cross-industry exchange activities function as seedbed for business collaboration activities

<table>
<thead>
<tr>
<th>Participation in cross-industry exchange activities</th>
<th>Proportion of enterprises participating in cross-industry exchange activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13.7</td>
</tr>
<tr>
<td>Participation in cross-industry exchange activities</td>
<td>Proportion of enterprises engaged in business collaboration activities</td>
</tr>
<tr>
<td></td>
<td>37.7</td>
</tr>
<tr>
<td>Non-participation in cross-industry exchange activities</td>
<td>20.8</td>
</tr>
</tbody>
</table>

Source: SME Agency, Survey on Alliance Activities of SMEs (November 2002).

Fig. 2-4-21 Characteristics of enterprises participating in cross-industry exchange activities

<table>
<thead>
<tr>
<th></th>
<th>Participants</th>
<th>Non-participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of enterprise</td>
<td>47.4</td>
<td>43.2</td>
</tr>
<tr>
<td>Operating profit to sales</td>
<td>3.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Number of competitors</td>
<td>25.5</td>
<td>22.2</td>
</tr>
<tr>
<td>R&amp;D activity</td>
<td>58.9%</td>
<td>42.5%</td>
</tr>
<tr>
<td>Subcontracting</td>
<td>38.3%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Years since appointment of entrepreneur</td>
<td>18.1</td>
<td>16.9</td>
</tr>
<tr>
<td>Age of entrepreneur</td>
<td>57.7</td>
<td>58.8</td>
</tr>
</tbody>
</table>


Note: Items regarding which there was found to be a statistically significant difference in the analysis described in Appended Note 2-4-9.

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23) “Cross-industry exchange activities” are defined as group activities engaged in between enterprises from different industries or fields for the purpose of solving business or technical problems, etc., information exchange, development of new products and new technologies, etc., and the development of businesses, etc.
Looking at the characteristics of enterprises whose cross-industry exchange activities evolve into business collaboration activities, we find that they tend to 1) be smaller in size, 2) have lower operating profit ratios, and 3) engage actively in R&D activities (Appended Note 2-4-9). These findings suggest that enterprises that are relatively more agile are better placed to develop business relations out of cross-industry exchanges, and that enterprises with lower operating profit ratios tend more to engage in business collaboration activities in order to improve their performance. In order for the collaboration stage to be actually reached, it is also necessary for a company to itself engage in R&D activities and possess resources that make it attractive to other companies. Thus although there is no difference in terms of scale regarding enterprises’ participation in cross-industry exchange activities, the enterprises that see their involvement actually evolve into business collaboration activities are those that are small or have low operating profit ratios, and constantly engage in R&D activities that give them something that other companies lack. This indicates that for such enterprises, cross-industry exchange activities may provide a forum where they can actively seek out partners for business collaboration.

From the above, it can be seen that participation in cross-industry exchange activities is highly significant, as such activities serve as a seedbed for SMEs’ involvement in business collaboration activities. At the same time, however, it is necessary to note that simply participating is not effective by itself. Enterprises can only enjoy the fruits of such cross-industry exchange activities if they have a clear awareness of their objectives and act positively.\(^{24}\)

(2) Importance of sales methods in cross-industry exchange activities

Next we look at involvement in cross-industry exchange activity groups.

The number of groups undertaking cross-industry exchange activities, although exhibiting signs of a very slight decline in recent years, has remained relatively constant at around 3,000 (Fig. 2-4-22). However, the number of enterprises participating is on the increase, reflecting growing involvement in cross-industry exchange activities by SMEs.

The purpose given by the majority of enterprise for participation in cross-industry exchange activities is personnel exchanges, though there are also a considerable number of enterprises that participate for the purpose of joint business or development of new products. Cross-industry exchange activities for the latter purpose in particular are characterized by 1) being comparatively new, 2) being comparatively small in scale, and 3) having high annual membership fees (Fig. 2-4-23).

Next let us examine the factors behind the success of the development of new products engaged in as a group cross-industry exchange activity. While in order to succeed technically it is important for there to be collaboration with organizations outside the group, universities, technical colleges and national research centers, commercial success requires joint market access,

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\(^{24}\) Nakayama (2001) suggests that SMEs must have 1) the ability to recognize resources, 2) organizational learning ability and 3) speedy management in order to make effective use of cross-industry exchange activities.

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Fig. 2-4-22 Trends in number of cross-industry exchange groups and number of participating enterprises

Number of groups has remained stable in recent years, but number of participants on the increase

![Graph showing trends in number of cross-industry exchange groups and number of participating enterprises](source: JASMEC, Report on the Fiscal 2001 Group Information Survey (2002)).

Fig. 2-4-23 Characteristics of cross-industry exchange activity groups by purpose

<table>
<thead>
<tr>
<th>Characteristics of cross-industry exchange activities differ according to purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current purpose</td>
</tr>
<tr>
<td>Number of members (companies)</td>
</tr>
<tr>
<td>Year of establishment</td>
</tr>
<tr>
<td>Annual membership fee (¥)</td>
</tr>
<tr>
<td>Proportion of enterprises with websites</td>
</tr>
<tr>
<td>Participation in regular meetings</td>
</tr>
</tbody>
</table>

such as through the taking order of orders for group products via websites, joint business measures, and joint sales activities (Fig. 2-4-24). In other words, joint activities with outside organizations in the form of business collaboration activities as well as the actions of individual enterprises are important to ensuring the success of such groups.

While the objectives of cross-industry exchange activities are naturally not only joint business and the development of new products, taking on the challenge of developing products through cross-industry exchange activities, regardless of its success, serves to stimulate the development of new products by individual enterprises (Fig. 2-4-25). Engagement in cross-industry exchange activities can thus actively encourage efforts by individual enterprises to engage in business innovation.

4. Use of university resources by SMEs

(1) Gap between enterprises that engage in industry-university-government collaboration and enterprises that achieve results

So far we have looked at business collaboration activities between enterprises. However, other enterprises are not the only source of outside knowledge for SMEs. Below, therefore, we examine industry-university-government collaboration, i.e. collaborative activities with bodies such as universities and public research institutes, which comprises one form of network with outside knowledge resources.

If we look first of all at the results of the SME Agency’s Fact-finding Survey on Business Management Strategy, we find that 35.9% of SMEs are involved in some form of industry-university-government collaboration. Looking next at the partners with which SMEs collaborate, we find that the majority are prefectural public research institutes (Fig. 2-4-26). Like universities, then, effective use is made of public research institutes as nearby partners by SMEs.

The next question we ask is: What kinds of enterprises engage in such collaboration, and what kinds of enterprises achieve results?

To answer this question we use the results of the SME Agency’s Fact-finding Survey on Business Management Strategy and METI’s Basic Survey of Japanese Business Structure and Activities. These show that among enterprises that engage in industry-university-government collaboration, those that achieve high sales growth rates, i.e. those that achieve results, tend to be those that 1) are younger, 2) are smaller, and 3) have...
entrepreneurs involved in fields other than research, technology or development. If we look at what kinds of enterprises engage in such collaboration, however, we find that enterprises that 1) are older, 2) are larger, 3) do not engage in subcontracting, 4) have or intend to go public, and 5) have entrepreneurs responsible for fields such as research, technology or development are more likely to engage in industry-university-government collaboration (Fig. 2-4-27, Appended Note 2-4-11).

These findings suggest that while enterprises that have achieved a certain size and degree of experience whose entrepreneurs themselves are involved in fields such as research find it easier to form “human networks” with entities such as universities and tend in many cases to engage in industry-university-government collaboration (Fig. 2-4-27, Appendix Note 2-4-11).

These findings suggest that while enterprises that have achieved a certain size and degree of experience whose entrepreneurs themselves are involved in fields such as research find it easier to form “human networks” with entities such as universities and tend in many cases to engage in industry-university-government collaboration, younger, smaller enterprises that find it easier to achieve results as a result of collaboration and whose entrepreneurs are involved in fields other than research are less likely to reach the stage of engaging in such collaboration in the first place. As a consequence, government agencies and entities such as universities need to step up their efforts to make it easier to form “human networks” (e.g. with universities) in order to promote the active involvement of SMEs that find it easier to form such networks.
particularly difficult to engage in such collaboration. As in the case of business collaboration activities, however, the results of industry-university-government collaboration are not limited to their effects on performance, such as the sales growth rate. As Fig. 2-4-28 demonstrates, not a few SMEs say that industry-university-government collaboration’s effects include the absorption of new knowledge, establishment of new technologies, and creation of new personal connections. In these respects too, industry-university-government collaboration is a valuable activity for SMEs, and it is to be hoped that active use of such collaboration by SMEs increases in the future.

(2) Obstacles to use of TLOs in Japan
SMEs’ involvement in conventional industry-university-government collaboration activities with universities and similar entities on a one-to-one basis has been limited by factors such as the time such activities require. It was to remove these obstacles that the TLO Law was introduced in 1998, and it is hoped that the TLOs (technology licensing offices) established under this law will lead to increased technology transfers. The 31 approved TLOs approved under the TLO Law as of March 2003 are gradually making their presence felt, and their activities led in fiscal 2001 to 1,145 patent applications and royalty revenues of ¥300 million.

In the U.S., technology transfers have occurred since the enactment of the Patent and Trademark Act Amendments of 1980, or Bayh-Dole Act. Although the different historical backgrounds make direct comparisons impossible, there still appears to exist a large gap between the two countries. In the U.S., there were 142 TLOs in 2000 and the total number of patents implemented between fiscal 1998 and fiscal 2000 was 9,988, compared with a total of 356 in Japan by the end of fiscal 2001.

What issues must then be addressed to further boost the activities of TLOs in Japan?

The biggest problem from the point of view of SMEs is the inability to obtain necessary information on TLOs, followed by the lack of desire to make use of TLOs (Fig. 2-4-29).

From the point of view of TLOs, the problem that almost all face is a shortage of staff, and many TLOs have insufficient knowledge of enterprises’ needs (Fig. 2-4-30). Solving problems such as these faced by TLOs themselves is necessary in order to increase use of TLOs by SMEs. At the same time, SMEs need to see industry-university-government collaboration as an option in business, and make active use of TLOs as a tool for such activities.

Fig. 2-4-29 Reasons for SMEs not using TLOs

Biggest reason is shortage of information on TLOs

<table>
<thead>
<tr>
<th>Reason</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortage of information on TLOs</td>
<td>40.1</td>
</tr>
<tr>
<td>No intention to use</td>
<td>36.0</td>
</tr>
<tr>
<td>Own lack of technology</td>
<td>10.3</td>
</tr>
<tr>
<td>Shortage of funds</td>
<td>8.2</td>
</tr>
<tr>
<td>Geographically distant</td>
<td>3.3</td>
</tr>
<tr>
<td>Lack of legislation</td>
<td>0.9</td>
</tr>
</tbody>
</table>


Notes: 1. SMEs whose main line of business is manufacturing from which responses were obtained.
2. Total exceeds 100 due to multiple responses.

Fig. 2-4-30 Problems faced by TLOs

Human resources are biggest problem, enhanced links with enterprises also sought

<table>
<thead>
<tr>
<th>Problem</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortage of staff</td>
<td>22</td>
</tr>
<tr>
<td>Insufficient determination of enterprises’ needs</td>
<td>15</td>
</tr>
<tr>
<td>Shortage of PR and publication of information on TLO</td>
<td>8</td>
</tr>
<tr>
<td>Few or no patents attractive to enterprises</td>
<td>3</td>
</tr>
<tr>
<td>Lack of personal networks with enterprises</td>
<td>7</td>
</tr>
<tr>
<td>Cannot explain how patents are connected to business</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
<tr>
<td>Lack of support by specialists (e.g. patent attorneys)</td>
<td>3</td>
</tr>
<tr>
<td>None in particular</td>
<td>1</td>
</tr>
</tbody>
</table>


Note: Actual number of responses from the 24 approved TLOs.

25) An example of one university taking active steps to form such networks is Cambridge University in the U.K. Cambridge’s colleges, facing a chronic shortage of research funding, formed their own networks modeled on the success of the science park established by Trinity College (Cambridge’s largest college) in the 1980s, which provided a strong incentive for leading institutions to collaborate with industry. As a consequence, it has come to be regarded as important to form and utilize networks that are attractive to participants such as enterprises (Nishiguchi and Tsujita (2002)).

26) Known officially as the Law Promoting Technology Transfer from Universities to Industry.

27) There also exist TLOs that have not been officially approved under the TLO Law.
Y Ltd. is a manufacturer based in Oita Prefecture with 297 employees that develops cutting-edge products as well as developing hardware and software for electronic equipment systems. It does business in a wide range of fields, including semiconductors, semiconductor manufacturing equipment, medical equipment such as hyperthermia equipment, and optical modeling.

Approach by TLO

Y Ltd. has always been actively engaged in R&D activities in order to develop new products and modify and improve existing products. In the process, it has engaged in collaboration by consulting with organizations such as local universities as well as conducting R&D by itself. When Y Ltd. was thus once engaged in improving a compact optical modeling device sold primarily to educational and research institutions, due in part to requests from users for improvements in the precision and speed of modeling, it received an interesting proposal from the TLO of university Z, which was located far away and with which Y Ltd. had not previously had any contact. The TLO approached it regarding the use of an optical modeling patent belonging to a member of the university’s staff. Although Y Ltd. had a general idea of the technology from academic sources, it did not feel it to be especially attractive and had until then taken no particular action regarding it.

Because it was now trying to improve an optical modeling device, combined with its intrinsically positive approach to research activities, however, Y Ltd. visited Z’s laboratories.

Prompt decision to enter technology licensing agreement

In March 2000, Y Ltd. visited Z’s laboratories, where it saw an actual model formed using the technology. Y Ltd. felt there and then that this technology would help it to improve the optical modeling device that it was then working on. It therefore decided immediately to use the technology under license, and in May 2000 signed a technology transfer agreement.

Y Ltd. is highly appreciative of the fact that the TLO chose and approached it to license a technology leading directly to the development of a commercial product.

Path to commercialization

However, the technology licensed by Y Ltd. was still at the stage of requiring considerable improvement before it could be used to produce a commercial product. Y Ltd. hoped to receive follow-up support from the TLO at the subsequent stage of technological improvement, and expected the TLO to liaise between itself and university Z in order to ensure that their collaboration proceeded smoothly. However, Y Ltd. felt the actual follow-up provided was a little lacking, and believes this needs to be remedied to improve the TLO’s future activities. Nevertheless, the company succeeded in developing a prototype applying the technology licensed through collaboration with the academic concerned, and this was exhibited at an exhibition in July 2001, around one year after the technology was licensed. In March 2002, the first commercial model was delivered.

Applying this technology, Y Ltd. improved the precision and speed of the device, much to the satisfaction of the educational and research institutes that comprised its existing customers, and it has received a steady stream of orders since delivery of the first unit. The fact that Y Ltd. not only improved the device but also engaged in development work licensing technology from university Z’s TLO has also played well with customers, revealing that technological transfers by TLOs offer this benefit as well. The product itself is for specialized use and difficult to sell in large quantities, but orders for it continue to grow.

Future policy

Y Ltd. feels the advantages of having used a TLO to have been considerable. Although it had past experience of industry-university collaboration, mainly in the form of seeking technical advice, such collaboration was more for maintaining ties than for their practical business purposes. As a result of the success of its recent collaboration, however, it has come to regard such activities as an important part of business strategy, and now intends to engage in such collaboration more wholeheartedly.

Although the above technology transfer was the result of being approached by a TLO, Y Ltd.’s president explains that in the future it intends to approach TLOs itself and make more effective use of them through being more aware of them on a day-to-day business basis.
The above describes the case of a technology transfer as a result of an active approach by a TLO, and is indicative of the effectiveness of the operating activities of TLOs directed at enterprises as a means of promoting technology transfers. In the U.S., an extremely great emphasis is placed on operating activities centered around marketing activities designed to ascertain details of the technologies required by enterprises, and the vast majority of licensing associates reportedly study one field in depth or a number of fields at institutes of higher education\textsuperscript{28}. In Japan, many TLOs still suffer a staff shortage, as observed above, and there is presently a shortage of licensing associates with such knowledge.

If such marketing activities by TLOs can be strengthened in the future, enterprises will have greater access to transfers of technology leading directly to commercial products, and the use of TLOs will lead to smoother commercialization and improved performance. METI is currently providing support to shore up the functions of TLOs by providing grants to fund their technology transfer activities and supplying specialists (such as experts in intellectual property, lawyers and accountants). In order to promote the active and effective use of TLOs by enterprises, however, the environment for TLOs must be urgently developed.

**Section 3 Industrial clusters as network incubators**

So far we have analyzed the impact of vertical collaborative networks and horizontal collaborative networks on SMEs. In this section, we look at the role of industrial clusters as incubators that give birth to these various networks. We also describe elsewhere commercial clusters\textsuperscript{30} that, while industrial clusters, differ in nature from manufacturing clusters, and consider the question of how to revitalize such clusters.

### 1. Advantages of industrial clusters

An analysis of industry shows quite clearly the phenomenon of “industrial clusters”, where individual industries and related industries concentrate in specific regions, is universal to many countries. The advantages of such industrial clusters have tended to be described in terms of the saving in transportation and raw material purchasing costs and ease of procurement of human resources due to the geographical concentration of enterprises (establishments)\textsuperscript{31}. Now, however, the emphasis is coming to be placed on the more intangible benefits of the clustering of human resources, facilitation of information exchange due to the formation of spaces for cooperation, reduction of uncertainty, and knowledge spillover\textsuperscript{32, 33}.

In actuality, there can be observed a change in the perceived advantages of clustering by SMEs between 1991 and 2002 (Fig. 2-4-31). Whereas in 1991 the most commonly given advantage was “horizontal division of labor in region”, the advantage cited by the largest proportion of enterprises in 2002 was “access to market and technical information, etc. through face-to-face exchange”. Industrial clusters thus function to promote information exchange between enterprises, and the importance of this role is increasing.

This facilitation of information exchange stimulates business collaboration between enterprises. Fig. 2-4-32

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\textsuperscript{28} Regarding the importance of such operating activities, numerous studies have noted that the emphasis placed on marketing activities is one of the reasons for the success in terms of number of technology transfers and royalty revenues of Stanford University’s TLO.

The importance of human resources with knowledge of both marketing and technology has also been remarked upon.

\textsuperscript{29} Sumikura (2002) surveyed the TLOs of universities whose licensing revenues were in the top 25th percentile according to AUTM statistics, and found that at least 40% of licensing associates hold undergraduate degrees in both the sciences and humanities.

\textsuperscript{30} A variety of studies have identified shopping districts as a typical type of commercial cluster. These differ in nature from industrial clusters in the following respects: 1) the form of the complementary relationship between enterprises in clusters, 2) the existence or otherwise of organizational functions to achieve complementarity within the cluster, and 3) the impact of inferior enterprises on the reputation of the cluster as a whole (Ishihara (2002)).

\textsuperscript{31} Marshall (1920), for example, gave as the causes of the clustering of industries in particular regions the reduction in transportation and raw material purchasing costs. Krugman (1991) found an advantage of clusters to be that the pooling of skilled workers in a particular region enabled the efficient allocation of human resources without skilled workers being left unused where there existed variation in performance between enterprises.

\textsuperscript{32} Knowledge spillover is the spread of the results of R&D investment and technological innovation by particular enterprises to enterprises that did not bear the cost of such activity.

\textsuperscript{33} Pioneering theories in this field are the local milieu theory of Camagni (1991) of Italy, and the learning region theory of Florida (1995) and collective learning process theory of Keeble and Wilkinson (1999) of the U.S.
shows the involvement in business collaboration activities and cross-industry exchange activities of enterprises in clusters and enterprises not in clusters. From this it can be seen that whereas 26.9% of enterprises in clusters are involved in business collaboration activities, the figure for enterprises not in clusters is 23.2%. Regarding also the proportion of enterprises participating in cross-industry exchange activities, 14.6% of SMEs in clusters participate in such activities, which is significantly higher than the proportion of SMEs not in clusters that participate (12.7%). There is also a difference in the number of types of business collaboration activities engaged in, with enterprises in clusters being involved in more types than enterprises not in clusters.

As for geographical proximity, although this appears not

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**Fig. 2-4-31 Advantages of clustering**

**Increase in importance of advantages of contribution to information exchange between enterprises**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Value 3</th>
<th>Value 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>49.4</td>
<td>29.0</td>
<td>24.3</td>
<td>38.8</td>
</tr>
<tr>
<td>2002</td>
<td>56.2</td>
<td>39.5</td>
<td>21.1</td>
<td>36.3</td>
</tr>
</tbody>
</table>


**Note:** Total exceeds 100 due to multiple responses.

**Fig. 2-4-32 SMEs in clusters and business collaboration activities**

**Clusters function as incubators for business collaboration activities**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value of enterprises engaged in business collaboration activities</th>
<th>Value of enterprises engaged in cross-industry exchange activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clusters</td>
<td>26.9</td>
<td>14.6</td>
</tr>
<tr>
<td>Non-clusters</td>
<td>23.2</td>
<td>12.7</td>
</tr>
</tbody>
</table>

**Source:** SME Agency, *Survey on Alliance Activities of SMEs* (November 2002).

**Notes:**
1. Enterprises are classified as being located in clusters according to whether they feel that enterprises are clustered in the region in which they are located. Enterprises whose head offices, sales offices and factories, etc. are located in clusters are here classified as belonging to the cluster group.
2. The differences are statistically significant at the 1% level for involvement in business collaboration activity, and at the 10% level for participation in cross-industry exchange activities.

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34) According to the SME Agency’s *Survey on Alliance Activities of SMEs*, a comparison of the enterprises engaged in business collaboration activities shows that enterprises in clusters are engaged in 1.64 types of activities and enterprises not in clusters are engaged in 1.56 types.
to have any impact on relations between one enterprise and another once they have been established, clusters can function to bring enterprises into contact with one another while relations are still immature. In other words, the existence of industrial clusters encourages exchange between enterprises and provides an environment in which it is easier for enterprises to engage in business collaboration activities, and in this sense they function as incubators fostering horizontal collaboration between enterprises.\(^{35}\)

R Ltd. in the case described below is a prime example of an enterprise that engages in business collaboration activities taking advantage of its location in a cluster. Two factors making R Ltd.’s activities possible are 1) the presence nearby of large numbers of technologically competitive enterprises, and 2) the high external reputation of the cluster. R Ltd.’s case provides some indication of the functions of industrial clusters.

\(^{35}\) As the saying “clusters attract clusters” suggests, industrial clusters are also said to function as incubators for startups. For example, it was commented in the 2002 *White Paper on Small and Medium Enterprises in Japan* (pp.65-66) that the higher the establishment density, the higher the entry rate.
Case 4-9 Business collaboration activities of local enterprise utilizing name recognition of cluster

R Ltd. is a bookbinder in Nagano Prefecture with 150 employees that specializes in attractive, durable hardbacks. In 1999, it became the first company in the industry to receive approval for its business reform plan and introduced a deluxe line made using the latest in computerized control technology as it focused its resources on its specialist field.

Recognition of advantages of industrial cluster
Realizing that bookbinders capable of producing deluxe books are not to be found throughout the country, R Ltd. was quick to undertake marketing activities targeted at printers in other prefectures. In doing so, it found that it was often requested to introduce printers in Nagano Prefecture. Nagano Prefecture, where R Ltd is located, has a well established local printing industry, due in part to the movement of many printing-related businesses from Tokyo after the Great Kanto Earthquake. These requests arising during R Ltd.’s marketing activities were made because of this clustering of printing businesses in the prefecture.

Launch and full-scale development of business collaboration activities
Having become aware of the high name recognition of Nagano’s printers outside the prefecture, R Ltd. decided to collaborate on taking orders with specialist printing businesses similar to itself instead of introducing companies. R Ltd. approached five local companies with which it did business, and started collaboration in 1994. The benchmark it used when approaching these companies was their technological level. However, it was not until 2001 that collaboration became full-fledged. Though it took some time to reach this stage, full-scale collaboration finally emerged because 1) a trusting relationship developed between the companies involved over the time that elapsed between then and the start of collaboration; 2) the deterioration in demand led to a decline in work, resulting in the companies having spare capacity; and 3) the digitalization of the bookbinding process enabled printing data to be converted to digital data and exchanged in digital form, reducing physical distribution costs. Another factor in addition to these changes in the situation of the participating enterprises was that R Ltd., which was at the center of collaboration, succeeded in employing a specialist from a major printing company, providing R Ltd. with the resources to manage the collaborative network itself.

Benefits of business corporation for participants
A total of six companies were involved in collaboration, which was led by R Ltd. These consisted of a compositor specializing in the processing of various data, a specialist bookbinder, three printers with strengths in three different fields, and R Ltd. which was responsible for bookbinding and delivery. All of the participants were located within the same city. In addition to promising to give each other priority regarding prices and scheduling, the participants were able to use each other’s facilities as their own due to the end-to-end management of operations through to delivery by R Ltd., which is responsible for the final process. All the participants except R Ltd. have on average around 30 employees, and this setup has enabled them to take orders in excess of their own individual capacities.

While the participants each specialize in one process in the printing process, their participation in this collaboration has enabled them to take orders for everything up to and including the final bookbinding stage. They are as a consequence now able to participate in the public tenders of prefectures and cities, and the range of their orders has increased considerably. R Ltd. too is now able to take orders for stages of production prior to the printing stage, increasing the overall volume of orders taken.

Future growth plans
Production capacity is currently a problem, and orders received as a result of collaboration are accepted only from a limited geographical area. Nevertheless, orders are expected to continue to increase. R Ltd. is currently looking into nationwide expansion, which would require increasing the number of partners and further strengthening R Ltd’s own network management setup. R Ltd. explains that, playing the leading role in overall process management, it has developed its network management resources, and absolutely no problems have occurred between the participants. It therefore intends to actively push ahead with collaboration activities in the future.
2. Revitalization of shopping districts (commercial clusters)

The slump and decline of shopping districts in recent years have been regarded as creating problems in a variety of respects. According to METI’s Census of Commerce (Statistical Table of Location Environment Characteristics), the number of stores in commercial clusters is in decline, although not to the extent of stores in other areas (Fig. 2-4-33). In some parts, the majority of stores in shopping districts are not open for business, resulting in what are known as ghost-town-like “shuttered” shopping districts, and urgent action is required to restore their fortunes.

A number of measures have consequently been taken by shopping districts to revitalize, and below we look at which of the measures taken have proved to be effective. The revitalization of shopping districts can be measured in various ways, such as the increase in the number of visitors to shopping districts or increase in the number of new stores. Here, however, we look at how the number of new stores can be increased, i.e. how the “metabolism” of shopping districts can be increased, and what kinds of strategies adopted to this end by shopping districts have proved effective.

If we analyze what factors affect the number of new stores based on data from the Shoko Research Institute’s Survey on Store Openings and Closings on Shopping Streets\(^{36}\), we find that effective ways of attracting new entrants are by 1) making effective use of internal resources (currently within the shopping district), such as by using vacant stores (implementation of “internal resource utilization” measures), and 2) developing the business environment within the shopping district by, for example, providing support for new entries (implementation of “business environment development” measures). We also find that 3) shopping district programs that combine “internal resource utilization” measures and “business environment development” measures generate synergies as a result. Also important are 4) increasing the rate of membership of stores in shopping district associations, and 5) developing an environment that facilitates store innovation by existing stores. On the other hand, “external resource attraction” measures, such as activities to actively attract resources from outside the shopping district, were not shown to be effective (Fig. 2-4-34, Appendix Note 2-4-12).

While the effects on the revitalization of shopping districts differ according to the types of measures taken, an examination of the types of programs actually undertaken by shopping districts reveals that activities 1) to 5) are not necessarily the most commonly implemented\(^{37}\). In the future, therefore, implementation of types 1) to 5) needs to be strengthened\(^{38}\).

The results of the above survey may also be used to examine the motives given by new entrants over the past five years for entering their present shopping district according to type of shopping district (large city shopping district, key regional city shopping district and small/medium regional city shopping district). What we find is that by far the greatest reason given by new entrants in all types of shopping district is the attractiveness of the location. In small/medium regional city shopping districts in particular, however, a striking proportion (45.7%) give preferential treatment for tenants using vacant stores as their motive (Fig. 2-4-35). This indicates that the use of measures to facilitate new entries through preferential measures of use of vacant stores, as typified by the reduction of rents and assistance with refurbishment expenses, is extremely effective due to the large number of entries by new startups compared with other shopping districts, corroborating the foregoing analysis.

36) This survey was of 2,243 shopping district development associations. According to METI’s 1997 Census of Commerce (Statistical Table of Location Environment Characteristics), however, the number of shopping districts in Japan is 14,070. It should therefore be borne in mind that the majority of shopping districts are not organized into associations, and that the results of the analysis described here cover only those shopping districts that are organized into associations.
37) Iwasawa (2001), for example, identifies provision of shared parking facilities, shopping district gift certificates and points programs for shoppers as typical examples of continuous programs designed to revitalize shopping districts.
38) As this survey does not cover all shopping district programs, it does not reflect measures to keep customer loyalty, such as the introduction of IC cards. Such measures may also therefore be effective.
Fig. 2-4-34 Number of new store entrants by type of measure
Combination of internal resource utilization and business environment development measures accelerates regeneration

(1) Difference according to implementation of measures

- Attraction of external resources: 3.5
- Internal resource utilization: 4.8
- Business environment development: 3.8
- None of the above: 2.7
- Average for all shopping districts (3.4)

(2) Difference due to combination of measures

- Attraction of external resources only: 2.7
- Internal resource utilization only: 2.6
- Business environment development only: 3.0
- Attraction of external resources and internal resource utilization: 2.5
- Attraction of external resources and business environment development: 6.3
- Internal resource utilization and business environment development: 2.6
- Attraction of external resources and business environment development: 5.2
- All of the above

Source: Shoko Research Institute, Survey on Store Openings and Closings on Shopping Streets (2002) (recompiled).
Notes: 1. "Attraction of external resources" consists of activities to attract new stores. "Internal resource utilization" consists of operation of lacking types of business using vacant stores. "Business environment development" consists of support for new entries, etc.
2. The number of new entrants over the past five years in each shopping district is converted to the number per 100 stores in order to calculate the average per type of measure.
3. As respondents were allowed to give multiple responses, the figures in (1) do not, for example, indicate whether parties that undertook "attraction of external resources" undertook "internal resource utilization".

Fig. 2-4-35 Reasons of new entrants for opening stores
Major reason for locating in small/medium regional city shopping districts is preferential treatment for tenants using vacant stores

Source: Shoko Research Institute, Survey on Store Openings and Closings on Shopping Streets (2002) (recompiled).
Notes: 1. "Large cities" are the 23 wards of Tokyo and ordinance designated cities, etc. "Key regional cities" are prefectural capitals and cities with a population of 200,000 or more. "Small/medium regional cities" are cities with populations of under 200,000.
2. Totals exceed 100 due to multiple responses.
In City D in Tokyo, shopping districts have formed along the streets radiating out from the station, each of which is prospering in its own way. Store association E is located in the midst of them, and has undertaken a variety of measures to give the city a distinctive image.

Creation of positive neighborhood image 1: street lighting
E was established in 1962, and was formed by the unification of shopping districts on either side of a road whose amalgamation had been delayed due to the width of the road running between them. After the amalgamation, E set about actively creating a positive image for the area. One way it did this was by providing street lighting. In 1985, lighting throughout the shopping district was standardized using streetlights imported directly from France in order to create a fashionable image. The streetlights were well received, and the city has already put up streetlights of the same kind on other streets in the area without stores in order to create a consistent image.

Creation of positive neighborhood image 2: bright and spacious shopping district
Since the beginning of the 1990s, the association’s activities have been designed in large part to create an attractive townscape in the area. For example, the association gets the owners of tenant buildings to voluntarily set back and build their buildings to a certain height when rebuilding occurs in order to make the streets wider. It has also set about protecting the cherry trees lining the street that blossom every spring, and provides benches and cultivates plants around the base of trees. The winter illuminations along the streets around the station, which are one of the city’s tourist attractions, also form a part of E’s activities to raise the area’s profile and create a positive image. Although the city authorities were not initially especially cooperative, they now actively cooperate, and the illuminations feature in local information brochures for young people, and the area is steadily developing a higher profile.

Obtaining members’ cooperation
Measures such as these do not lead directly to increases in the sales of individual stores in the shopping district. E takes these measures from a longer-term perspective, and as a result has succeeded in attractive stable numbers of visitors. In order to be able to take such measures, the cooperation of the stores in the shopping district is essential, and E raised its membership by the following means.

The first method was to approach the owners of tenant buildings and have them recommend to new entrants that they join the association. The other method was through tenacious negotiating. It spent three years negotiating with a restaurant affiliated to a major capital group that did not as a rule join associations in other shopping districts, for example, and managed to persuade it to join. At present, almost all of the stores making up the shopping district are members of E. Although E’s ¥4,500 monthly membership fee is by no means cheap, the money goes toward essential programs for promoting the shopping district’s image, such as maintenance of the streetlights and the illuminations described above. Members are therefore happy to cooperate, and there appears to be no dissatisfaction with the association’s activities.

Results of image-making activities
As a result of E’s activities, the rate of store entries and exits has accelerated over the past few years. There has been a particular increase in the number of stores attracted by the image created by the shopping district, and the strategy of developing the area’s image has been an undoubted success. Activity in the shopping district remains lively, with several new stores joining the district every year. However, E is still concerned as there are too few distinctive stores due to most new stores being opened as a part of moves to branch out, which has reportedly created a mismatch with the shopping district’s image to date. Although E wants to see more distinctive stores opening in the shopping district, one tricky problem is that such stores find conditions to be tougher.

In the future, E says it will continue with its image-building activities while considering measures to address such problems.
Case 4-11 Revival of shuttered shopping district

Decline of city center shopping district
The center of city B in Hokkaido has experienced severe hollowing out. The central area around the railway station prospered for many years as an administrative, economic and cultural center, but from the 1980s both the population and businesses moved to the northeast. Compounded by the effects of the establishment of a large shopping center around the newly developing commercial district, this resulted in the hollowing-out of the city center shopping district.

In 1999, therefore, B drew up a basic plan for revitalization of the city center. The entity given responsible for promoting the plan was I Ltd., which was a new company established as a “third-sector” venture led by the city, chamber of commerce and industry, and shopping district development association.
I Ltd. was especially welcomed by small and medium traders in the area concerned. This is apparent from the far greater than expected number of local small and medium traders interested in investing in I Ltd., which resulted in greater investment than originally planned and was a concrete manifestation of how much these small and medium traders looked forward to the revitalization of the area.

Revitalization measures see light of day
I Ltd. plans to reposition the city center by improving the tenant mix over an initial regeneration period of five years. It began by taking steps to deal with the number of vacant stores. An unused building in city center was fitted up by the city and I Ltd., and an incubator facility established in it for IT-related business in accordance with city policy. A university’s satellite office was opened in the same building, providing a base for industry-university collaboration.
I Ltd. also launched a “Challenge Shop” program using vacant stores. This involves I Ltd. renting vacant stores into which move a number of new startups. For new startups, this offers the advantage of rents at lower than market rates. Use of the Challenge Shop program is in principle for less than one year. To date, seven businesses have moved out of the Challenge Shop. While three have started up elsewhere, four have established independent stores in the city center, and the program seems to have got off to a good start.

Shopping district’s shutters opened
One conspicuous example of hollowing out is what is known as “Shutter Street” in the city center, whose circumstances are so severe that it has even been reported on television. I Ltd.’s Challenge Shop was established in the middle of this street in an effort to restore at least some vitality to the area. The establishment of the Challenge Shop provided just the impetus that was needed. When the shop was established, a store opened on Shutter Street, and this was followed one after another by more entries. Although there still remains a large vacant lot left after the withdrawal of a large store, the sight of stores with their shutters still down has vanished, and the area around the Challenge Shop along Shutter Street is functioning once again as a shopping district.

Future activities
I Ltd.’s strategy for dealing with the number of vacant stores is thus achieving a certain degree of success. Nevertheless, stores will continue to close as long as the economy remains in difficulties, and the overall number of vacant stores has yet to be significantly reduced.
However, positive action is now being taken by businesses in the private sector, and construction of large new facilities has begun.
At the same time as continuing with measures to deal with vacant stores, therefore, I Ltd. is working to increase customer drawing power through events and other activities, and construction of amusement facilities is also under consideration. The provision of parking facility services is being planned in order to eliminate the parking shortage that is a common complaint made of shopping districts and at the same time provide a revenue stream for I Ltd. In order to revive and make the district attractive to consumers again, I Ltd. will be continuing its various activities in the future.
Thus we conclude our analysis in this 40th White Paper on Small and Medium Enterprises in Japan. We have seen how SMEs have remained a stalwart presence, primarily in the field of diverse small-lot production, at a time of massive qualitative and quantitative economic change over the past 40 years, and how through their activities SMEs have underpinned the foundations of the Japanese economy.

In order for the Japanese economy to recover after more than a decade mired in recession, it is necessary that SMEs display their “strengths”. One is frequently impressed when one visits small workshops by the pride that SME entrepreneurs have in their work. As one factory owner put it, “We’re the only place you’ll find this technology in Ota-ku”. The landlady of a certain traditional Japanese bar displayed the same sort of pride when she said, “The secret’s in the soup stock. That’s why this is the best dish in Osaka”. These little technological innovations and nuggets of wisdom of individual entrepreneurs are in themselves quite modest. In aggregate, however, they are what the Japanese economy needs.

In Part II, Chapter 3, we looked at the financial status of SMEs in 1998 and 2001 (Fig. 2-3-45). As we saw, SMEs, being by nature hugely dynamic, have the potential to achieve rapid change in just a short period.

That is not to say, however that all SMEs can accomplish such change spontaneously. As Chapter 1 (Fig. 2-1-18) and Chapter 2 (Figs. 2-2-48~51) of Part II showed, steady effort in an enterprise’s core business is the key to survival and growth.

An entrepreneurial society of this kind, in which large numbers of SMEs play an active economic role, will lead to Japan’s economic regeneration. Such an entrepreneurial society will allow many people to experience the joy of self-fulfillment through business. This is because in order for large numbers of people to achieve self-fulfillment in business, enterprises are needed that will accommodate and accept many types of values. Such conditions are difficult to meet in a society centered around large organizations where the values of the people who work there tend to be uniform. SMEs, by contrast, allow diversity.

Last year, If the world were a village of 100 people became a bestseller. Imagine, then, that that village is formed by a single enterprise, where there is one president with 99 subordinates, and everything is judged according to the uniform values of that company. Now imagine a village made up of 100 self-employed people who work in accordance with 100 different senses of values, allowing many people to achieve self-fulfillment through their work.

Considered in this way, it can be seen that an entrepreneurial society in which dynamic and highly motivated SMEs play an active role offers a short cut to self-fulfillment through work.

The “neighborhood entrepreneurs” playing the leading role in such an entrepreneurial society must constantly take many weighty decisions. SME entrepreneurs must personally take serious decisions that can affect a company’s very survival and the fates of its employees and their families, with whom they are often acquainted. At large enterprises, it is rare for a single individual to have to make a decision that affects whether it sinks or swims.
In this sense, the decision of an SME entrepreneur with 10 employees is weightier than the decision of the director of a large enterprise with 100 subordinates.

In addition, SME entrepreneurs must struggle to become familiar with new technologies, such as CAD and CAM, as technology advances, even though they may be in their fifties or sixties.

It is these SME entrepreneurs, able to take tough decisions and constantly absorb new technologies, who have the real role to play in leading the regeneration of the Japanese economy.

On a final note, it was noted in this white paper that neither insolvency nor bankruptcy has to mark the end for a business or entrepreneur. Likewise, while the Japanese economy is currently in extreme difficulties, it is certainly not the beginning of the end. The U.S., which in the 1970s was beset by the “twin deficits” of budget deficits and trade deficits, has since the 1990s achieved a remarkable recovery, showing that there is plenty of scope for Japan’s own recovery. Instead of being caught up in pessimism, therefore, Japan needs to push steadily ahead with economic structural reform to achieve the regeneration of the Japanese economy.
SME Policies Planned for Fiscal 2003
This section gives only a broad outline of program content and spending. Details are subject to change.
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Chapter 1  Introduction

With unemployment high and capital investment in decline, the Japanese economy remained in a serious condition at the beginning of fiscal 2003. Business conditions also remained extremely severe among small and medium enterprises (SMEs), where output is on a downward trend and financial positions are tight. Bankruptcies among SMEs are at a high level and the entry rate remains below the exit rate, suggesting that the metabolism of the economy is slowing.

As part of moves to implement structural reforms as smoothly as possible in order to increase the latent growth potential of the economy, there is a strong need to open up new opportunities for SMEs, which will form the backbone of the Japanese economy after structural reform.

In view of these conditions, the focus of SME policy in fiscal 2003 will be placed on the following four priorities, and measures in these and other areas actively implemented from a unified perspective.

The first priority is on developing a secure financial safety net to ensure that the disposal of non-performing loans and pursuit of other structural reforms do not lead to the knock-on bankruptcy of dynamic, capable SMEs. The second priority is to support the revitalization of SMEs by expanding the establishment of “SME Revitalization Support Councils” launched under the fiscal 2002 supplementary budget to cover the entire country, and providing finely tailored support suited to the features of SMEs (viz. their diversity and strong local character) by, for example, developing the environment to enable SMEs to pursue rapid business improvements.

The third priority is to nurture dynamic, capable SMEs providing the driving force for economic revitalization and the expansion of employment by providing strong multifaceted support—in terms of funding, human resources and technologies—as well as launching focused support for new programs to match up small and medium ventures and top former employees of enterprises, organizing trade fairs for startups in new markets, and developing technologies in basic and strategic fields of Japanese manufacturing for one-person startups and SMEs entering new fields of business.

The fourth and final priority is the revitalization of city centers and shopping districts, which give neighborhoods their character. This is essential given the severe state of the nation’s regional economies. Fine support tailored to the needs of individual regions, such as measures to support large store vacancies in city centers, will therefore be provided.

Chapter 2  Enhancement of the financial safety net for SMEs

The financial and economic conditions faced by SMEs have continued to deteriorate since the start of fiscal 2003 due, among other factors, to the disposal of non-performing loans and progressing deflation.

To ensure that the financing of dynamic, capable of SMEs is not impeded, a secure safety net for SME financing will be developed, and efforts made to expand new means of financing in order to diversify SME financing.

1. Enhancement of safety net guarantee and loan programs

With the safety net guarantee and loan programs having been enhanced under the fiscal 2002 supplementary budget, their increased use will be promoted. Regarding safety net guarantees, coverage will be expanded to include 1) SMEs facing a decline in borrowing due to considerable business rationalization (e.g. closure and merger of branches) by financial institutions, and 2) SMEs with the potential for recovery whose loans have been transferred to the Resolution and Collection Corporation. Steps will also be taken to encourage active use of this program.

Regarding the provision of safety net loans by government-affiliated financial institutions, enhancements have been made by, for example, raising the limit on the value of loans and providing exceptions for exemptions from security requirements, and these measures will continue to be steadily implemented in fiscal 2003.

In order to reduce the burden of repayment of past borrowing by SMEs and ease their financing, the Refinancing Guarantee Program for Facilitating Financing (Refinancing Guarantees) was launched on February 10, 2003, and positive use of this program will also be encouraged.
2. Enhancement of the Receivable-Backed Loan Guarantee Program

In order to assist the move away from dependence on land collateral and diversify and facilitate the financing of SMEs, the convenience of the Receivable-Backed Loan Guarantee Program established in December 2001 has been increased through improvements to the program and reductions in the guarantee rates on three occasions, and the lifting of the special bans on the transfer of receivables to the Government and prefectures, etc. has been pursued. In order to promote wider use of this program in the future, further steps will be taken to lift special bans on the transfer of receivables and publicity activities undertaken.

Measures are now being taken by the Shoko Chukin Bank to support the scheme for securitization of receivables by SMEs to provide a new means of financing using receivables, and steps will continue to be taken to expand the diverse methods of financing available to SMEs through methods that contribute to facilitating such new forms of SME financing.

3. Promotion of DIP finance

Measures will be steadily implemented to support DIP finance (loans for enterprises in the process of reconstruction through legal procedures) for SMEs (see Chapter 3, Section 2).

4. Use of DIP Guarantee System (for business rehabilitation)

The Small Business Credit Insurance Law was partially amended and the DIP Guarantee System (for business rehabilitation) established during the 155th extraordinary session of the Diet, and active use of this program will be promoted (see Chapter 3, Section 2).

5. Enhancement of credit support programs

The financial foundations of the Japan Small and Medium Enterprise Corporation (JASMEC) and credit guarantee corporations will be further strengthened.

6. Lending plans of government-affiliated financial institutions

Chapter 3 Support for recovery of SMEs

There are concerns that the accelerating disposal of non-performing loans by financial institutions could impact on SMEs. SMEs are numerous and diverse, and their lines of business and the problems they face are strongly influenced by regional factors.

Reflecting the conditions faced by SMEs and their special features, comprehensive measures will be undertaken to provide flexible and finely tailored support for the recovery of SMEs.
Section 1  Promotion of support for recovery of SMEs under the Revised Industrial Revitalization Law

1. Support through SME Revitalization Support Councils

Regarding the SME Revitalization Support Councils launched under the fiscal 2002 supplementary budget, the Law Partially Amending the Law on Special Measures for Industrial Revitalization (hereafter referred to as the “Revised Industrial Revitalization Law”) strengthens the overall setup for mobilizing the various measures for supporting the revitalization of SMEs facing a deterioration in business, and measures finely tailored to local conditions will be taken to support the revitalization of SMEs (¥1,849 million budget).

2. Support for revitalization through the SME Revitalization Support Fund

Under the Revised Industrial Revitalization Law, exceptional operations such as the acquisition of the pecuniary claims of enterprises whose business is deteriorating were added to the permissible operations of limited partnerships for venture capital investment, and use as revitalization support funds was enabled. An exception was also made to add investment to the JASMEC’s activities. This will facilitate the provision of financial support for the revitalization of SMEs.

Section 2  Facilitation of revitalization financing of SMEs

Enterprise reconstruction loans were launched on February 3, 2003 in collaboration with private financial institutions to provide better support than under conventional lending programs to SMEs needing to undertake business improvement or business reconstruction measures on condition that such enterprises formulate enterprise reconstruction plans, and steps will be undertaken to ensure steady implementation of this program. Regarding the DIP finance program, coverage has been expanded to include businesses engaged in recovery in accordance with private resolution guidelines and the like, interest rates have been lowered and exceptions to requirements to provide security expanded, and this program will continue to be steadily implemented in fiscal 2003. Active use of the DIP guarantee system (for business rehabilitation) established last year will also be promoted.

Section 3  Support for formation of business paths

JASMEC will develop a “business monitoring support site” on J-Net21 to enable objective financial analyses to be made using resources such as the SME Credit Risk Database (CRD) so as to develop the environment to enable SMEs to swiftly and objectively determine their own business situation at no cost. (¥186 million budget)

Section 4  Support for finding successors and M&A matching

1. Successor matching programs

The Central Federation of Societies of Commerce and Industry will establish a “successor recruitment” site in order to provide a virtual plaza where entrepreneurs looking for successors and those interested in becoming successors can publish information online. Prefectural federations of commerce and industry associations, commerce and industry associations and chambers of commerce and industry will also organize local exchange meetings and accumulate know-how and information on cases of entrepreneurs who find successors. (¥136 million budget)

2. M&A matching support program

JASMEC will develop an M&A database accessible via J-Net21 to facilitate smooth access at the national level to information on M&As held by some public and private institutions. (¥17 million budget)
Chapter 4  Support for startups and business innovation

Section 1  Legislative support for startups and business innovation

1. **Temporary Law Concerning Measures for the Promotion of the Creative Business Activities of Small and Medium Enterprises (SME Creative Business Promotion Law)**

   In order to support SMEs that are pioneering new fields of business through business entries, R&D and commercialization of research, the following forms of support will be provided for SMEs engaged in activities in accordance with R&D and business plans approved by prefectural governors under the SME Creative Business Promotion Law:

   1) Subsidization of technology research (regional revitalization creative technology R&D projects)
   2) Debt guarantee program of credit guarantee corporations (insurance for development of new business, etc.)
   3) System of direct finance support from venture foundations
   4) Low-interest loan program for investment in facilities and long-term working capital by government-affiliated financial institutions

2. **Support under the Law on Supporting Business Innovation of Small and Medium Enterprises**

   The necessary measures will be taken under the Law on Supporting Business Innovation of Small and Medium Enterprises in order to support business innovation and help strengthen the business base underlying the self-help efforts of SMEs.

(1) **Support of business innovation**

   Support including the following will be provided for projects undertaken under “business innovation plans” approved by the government or prefecture:

   1) Subsidization of development of new goods or new services, development of new outlets and development of human resources, etc. (¥1,394 million budget)
   2) Low-interest loan program for provision of plant funds and long-term working capital by government-affiliated financial institutions
   3) Special tax measures, such as tax cuts for capital investment
   4) Special bonuses for job creation in new and growth fields
   5) Subsidization of the wages of newly hired workers, including those aged under 45, through approval under the Law for Securing Labor Power at Small and Medium Enterprises where an enterprise newly hires one or more workers aged 45 or over under the Temporary Law on Special Employment Measures

(2) **Support for enhancement of business base**

   Among other measures, “business base strengthening plans” prepared by SMEs as members of organizations such as commerce and industry associations in industries where business conditions are deteriorating due to marked changes in the economic environment or similar factors (“specific industries”) will be approved by the competent minister, and special tax measures, such as a system of extra depreciation for machinery, etc., and low-interest loans for plant funds and long-term working capital provided by government-affiliated financial institutions will be provided for business undertaken in accordance with such plans.

Section 2  Facilitation of supply of funds for startups and business innovation

(1) **New startup loan program**

   A new startup loan program was launched in January 2002 to accurately investigate business plans and provide unsecured, unguaranteed loans (without the need for personal guarantees), and measures to lower interest rates for new startups by women and middle/old-aged entrepreneurs and new entries utilizing IT were introduced in February 2003. Startups will continue to be promoted and jobs created through the implementation of this program in the future.

(2) **Investment in investment enterprise partnerships**

   A program has been in place since 1999 for investment in limited partnerships for venture capital investment by JASMEC to promote investment in ventures in Japan in the early stages, and more active use will be made of this program to promote business following revision of the law during the 155th extraordinary session of the Diet. (JASMEC approved budget)
Section 3  Support for enhancement and development of human resources

Mechanisms and networks will be developed to match the business know-how and skills of former employees of enterprises and entities such as national research institutes to the needs of startups and business ventures and SMEs, and support provided for the development of human resources to expand the range of startup and business innovation activities.

1. Enhancement of human resources (resource matching support)

(1) Support for SMEs using former employees of enterprises, etc.
JASMEC and the Japan Chamber of Commerce and Industry will help match up former employees with useful skills with SMEs by finding human resources (such as former employees of enterprises) that SMEs and business ventures tend to lack but need to expand in business, such as former employees of enterprises capable of providing advice on business strategy, and publish an online database (at JASMEC’s J-Net21) containing information on former employees and information on SMEs seeking to engage in new business using former employees. (¥533 million budget)

(2) Successor matching support program (see Chapter 3, Section 4 1.)

2. Support for development of human resources

Support for development of business management skills will be provided for would-be entrepreneurs, and human resource development activities will be enhanced to assist the development of enterprises undertaking pioneering business innovation.

(1) Organization of national startup and venture forum
In order to raise social recognition of startups and business ventures, raise entrepreneurship among the general population and create conditions conducive to producing large numbers of entrepreneurs, experienced entrepreneurs and experts will be assembled for a nationwide awareness-raising campaign designed to showcase and raise entrepreneurship. (¥285 million budget)

(2) Startup classes, startup courses and startup seminars
The Central Federation of Societies of Commerce and Industry and the Japan Chamber of Commerce and Industry will greatly expand the number of locations where “startup classes” (10 day/30 hour classes teaching practical skills required for startup) can be taken. In addition, commerce and industry associations and chambers of commerce and industry will organize “startup courses” for small numbers of participants (around 10) in order to help solve specific problems encountered leading up to startup. Prefectural support centers for SMEs will organize “startup seminars” to help people acquire basic knowledge about startups. (Startup classes: ¥821 million budget, startup courses: ¥200 million budget, startup seminars: ¥31 million budget)

(3) Organization of business innovation courses and business innovation seminars
Business innovation courses for small numbers of participants (around 15) will be held at commerce and industry associations and chambers of commerce and industry on individual subjects in order to help solve specific problems encountered in business innovation. Business innovation seminars will be held for SMEs interested in business innovation at prefectural support centers for SMEs in order to support the development of the basic skills required in order to embark on steps toward business innovation. (Business innovation courses: ¥200 million budget, business innovation seminars: ¥31 million budget)

(4) Business classes and business planning seminars
JASMEC will organize practical business seminars for startups and venture businesses concerning business strategy and every stage from the preparation of business plans to going public. (¥51 million budget)

(5) New startup support training
JASMEC will provide training for people planning to establish new startups to equip them with the requisite knowledge, etc. (¥116 million budget)

(6) Startup follow-up seminars
JASMEC will organize follow-up seminars for people who have completed startup support training programs provided by supporting organizations, such as prefectural support centers for SMEs and chambers of commerce and industry in order to take them toward achieving startup, and publish collected reports on cases of startups. (¥39 million budget)
Section 4 Organization of fairs for startups and development of new business

(1) New market startup support program
In order to support startups in new markets by SMEs taking on new challenges, trade fairs will be organized focusing on specific fields in which there exists the potential for the creation of new markets by SMEs (robotics, medical and welfare services, content), and support provided to bring together a wide range of pioneering SMEs, users and buyers from Japan and overseas to open up new markets and expand business. (¥249 million budget)

(2) Business fairs
Support will be provided for business match-making and the development of networks composed of enterprises approved under the Law on Supporting Business Innovation of Small and Medium Enterprises (Business Innovation Law) by introducing examples of business innovation, such as the new products and technologies developed by enterprises approved under the Business Innovation Law and newly established businesses. Action will in addition be taken to raise awareness of business innovation among exhibitors and visitors in order to encourage engagement in concrete business innovation. (¥196 million budget)

(3) Venture plaza activities
Venture plazas will be established throughout Japan (divided into nine blocks) in order to provide forums for matching ventures with sources of finance and business partners. (JASMEC approved budget)

(4) Venture fair activities
Venture fairs will be held to prominently exhibit and showcase top-level services and prototypes, etc. and help ventures raise funds and open up new markets to them. (JASMEC approved budget)

Section 5 Support for IT-based systematization in SMEs

1. Promotion of acquisition of IT skills at SMEs

(1) Implementation of seminars and training programs
1) e-learning (training program using IT)
The National Federation of Small Business Associations will provide practical training courses in e-commerce that can be taken via the Internet in the home or office by SMEs (especially small enterprises) in cooperation with the Japan Chamber of Commerce and Industry and the Central Federation of Societies of Commerce and Industry. (¥190 million budget)

2) IT seminars and IT training
Using experts in the introduction of IT, prefectural support centers for SMEs will organize seminars for SME entrepreneurs, and provide practical training in IT in order to enable participation in e-commerce. (Seminars: ¥82 million budget. Training: ¥47 million budget)

3) IT festival
JASMEC will organize an “IT festival” to hold keynote speeches by experts, showcase SMEs that have introduced IT and succeeded in business innovation, and exhibit new products and technologies that use IT in order to promote the wider use of IT (“IT revolution”) by SME entrepreneurs. (¥36 million budget)

(2) Dispatch of IT experts
1) Dispatch of IT advisers
JASMEC will dispatch experts to advise on the introduction of IT at the request of SMEs. (¥75 million budget)

2) Project to stimulate strategic investment in IT (ITSSP—IT Solution Square Project)
In order to support investment in IT by SME entrepreneurs, use will be made of experts such as IT coordinators, and exchanges organized between entrepreneurs seeking to invest in IT so they can engage in dialogue and draw up their own IT investment plans, and study groups will be organized for entrepreneurs seeking to implement business strategies through the use of IT where they can formulate concrete systems development plans. (¥500 million budget)

2. Support for business innovation using IT

(1) IT-based business innovation models
In order to promote business innovation using IT by SMEs in the regional areas, support will be provided for the development and introduction of collaborative network systems between enterprises capable of serving as regional models. (¥705 million budget)

(2) Fusion of manufacturing and IT
The adoption of IT by small and medium manufacturers (“Digital Meister project”) will be promoted and the manufacturing base strengthened through the promotion of projects to objectify, classify in manual form and digitize the skills of experienced engineers and technicians in manufacturing, and the development of
shared frameworks (platforms) for integrating CAD, CAM and CAE. (¥325 million budget)

3. **Promotion of information provision using IT**

   (1) e-SME Agency and network project (see Chapter 16, Section 2 1.)

   **(2) SME support portal site management (J-Net21)**

   JASMEC will run an Internet portal site where visitors can search for all kinds of information on SME support, giving SMEs and those in SME support roles smooth access to the necessary sources of information. (¥341 million budget)

Section 6 Development of business incubator facilities

   **(1) Support for development of business incubator facilities**

   In order to expand the creation of jobs and new businesses in the provinces, support will be provided for self-governing bodies and “third-sector” enterprises establishing business incubators in regions of high new business potential (advanced technology industrial zones and advanced research zones under the Law for Facilitating the Creation of New Business, specific city centers under the Law on Improvement and Vitalization in City Centers and infrastructure industry revitalization zones under the Regional Agglomeration Revitalization Law). (¥1,053 million budget)

   **(2) Establishment of business incubator facilities by the Japan Regional Development Corporation**

   The Japan Regional Development Corporation (JRDC) will establish business incubator facilities in an advanced research zone or advanced technology industrial zone under the Law for Facilitating the Creation of New Business. (¥2,300 budget (industrial investment special account))

   **(3) Establishment of university-affiliated business incubator facilities by the Japan Regional Development Corporation**

   The Japan Regional Development Corporation will establish university-affiliated business incubator facilities adjacent to or on university campuses in order to promote the establishment of new ventures emanating from universities and new business ventures by SMEs utilizing the technological “seeds” and knowledge of universities. (¥2,000 million budget)

Section 7 Support for regional industrial clusters and local industries

1. **Support measures under the Regional Agglomeration Revitalization Law**

   The following measures will be undertaken in order to revitalize industrial clusters:

   (1) Subsidization of the establishment of small rented offices and factories and test and research facilities for local SMEs by entities such as local governments and commerce and industry associations. (¥36 million budget)

   (2) Subsidization of projects to develop new products, etc. undertaken by SMEs whose plans for entry into new fields have been approved by the prefectural governor. (¥392 million budget)

   (3) Subsidization of operations to support local SMEs by support organizations listed in revitalization plans. (¥353 million budget)

2. **Promotion of local industries**

   In order to promote local industries, the following measures will be implemented:

   (1) Subsidization of projects to develop new products and open up new markets, etc. undertaken by entities such as associations to revitalize local industries. (¥358 million budget)

   (2) Subsidization of projects to develop new products and open up new markets, etc. undertaken by local SMEs in order to start up in new businesses using local resources. (¥356 million budget)

   (3) Subsidization of the necessary cost of the activities of groups such as research groups led by inter-industry and inter-field voluntary groups contributing to regional revitalization through, e.g., the creation of local industries. (¥586 million budget)

   (4) Organization of national local industry fairs to open up new markets for local industries. (¥129 million budget)
Chapter 5 Development of SME support structure

Section 1 Business support provided by SME support centers

1. Business support provided by national support centers for SMEs

The following programs will be provided by the eight national support centers for SMEs established around Japan in order to support business ventures considering going public and to help solve the various problems faced by SMEs, including advanced business problems. (¥1,571 million budget)

1) Advisory services
2) Dispatch of experts
3) Organization of business support courses
4) Support for startups and business innovation
5) Operation of general support centers
6) Dispatch of former employees of enterprises, etc.
7) SME human resource development network

2. Support provided by prefectural support centers for SMEs

The prefectural support centers for SMEs designated under the Small and Medium Enterprise Support Law, which are at the core of the system for implementing SME support programs undertaken by prefectures, will undertake the following programs in order to help SMEs secure business resources (¥3,309 million budget):

1) Development of support structure (improved training for support staff such as project managers)
2) Advisory services
3) Dispatch of experts
4) Human resource development and information services (training and seminars, etc.)

Section 2 Support for human resource development by the Institute for Small Business Management and Technology

Practical training in advanced business management that is difficult for prefectures to provide, such as training for entrepreneurs, extended training for SMEs, training on specific subjects such as financial affairs and business strategy, and training for persons responsible for SME support such as SME consultants, will be provided by the Institute for Small Business Management and Technology. Distance training will also be provided via the Internet in order to make it more convenient for SME entrepreneurs, etc. to participate in training. (¥1,291 million subsidy)

3. Support provided by local support centers for SMEs

Local support centers for SMEs, which are established to provide a nearby source of support where would-be entrepreneurs and local SMEs can easily obtain advice about matters such as business innovation, will undertake the following programs, finely tailored to help solve business issues faced by local SMEs, etc. (¥1,238 million budget):

1) Advisory services
2) Expert consultations with legal advisers, etc.
3) Dispatch of experts
4) Information services, etc.
5) Organization of courses, etc.

4. Support provided by regional platforms

In order to promote the development of regional platforms established by prefectures, etc. under the Law for Facilitating the Creation of New Business (organizations providing integrated and comprehensive support for the creation of new businesses, from R&D through to commercialization, utilizing regional potential), support will be provided for programs such as the identification of regional resources in regional platforms, exchanges between support organizations, ventures and SMEs, etc., and the formation of support networks through cooperation. (¥10,155 million budget)

Programs conducted by the Japan Association of New Business Incubation Organizations (JANBO), a national network of regional platforms, at the national level that cross regional boundaries, such as the development of information networks, development of human support resources and international cooperation, will be enhanced and strengthened.
Chapter 6 Measures for SMEs in commerce

Section 1 Measures for small and medium retailers

Given the severe economic situation in the regions, finely tailored support, including support to help meet new social needs, will be promoted in order to contribute to the development of dynamic and distinctive city centers.

1. Support for use of large store vacancies

Because of the rapid increase of withdrawals by large stores previously forming the nucleus of city centers, support will be provided for a maximum of three years for measures by organizations such as TMOs (town management organizations) to combat large store vacancies in order to restore city centers’ customer drawing power. (¥250 million budget)

2. Support for establishment of community facilities using vacant stores in shopping districts

Subsidies will be provided for a maximum of three years toward costs such as refurbishment costs and rent for entities such as shopping district development associations, non-profit organizations (NPOs) and social welfare corporations that establish and/or operate community facilities, such as day-care facilities and community facilities for the elderly, using vacant stores in shopping districts in order to make more active use of shopping districts as resources for the local community. (¥1,000 million budget)

3. Support for basic revitalization plans and initiatives developed by municipalities and TMOs, etc.

Subsidies will be provided for research required for the development of basic plans undertaken by municipalities and TMO initiatives and TMO plans undertaken by TMOs (town management organizations) under the Law on Improvement and Vitalization in City Centers. (¥399 million budget)

4. Support for TMO revitalization activities

In order to promote the activities of TMOs, support will be provided for forums organized by municipalities to bring together TMOs, local residents, small and medium businesses and others involved in city center revitalization and other activities to revitalize city centers. Support will also be provided for activities contributing to the revitalization of city centers undertaken by TMOs to establish a business base, such as the sale of special products and operation of parking facilities. (¥160 million budget)

5. Activities to promote public awareness of city center revitalization

In order to further promote TMO activities, public awareness of city center revitalization will be raised by providing and analyzing information on the activities of TMOs, and symposiums will be held throughout Japan to foster information exchange. (¥140 million budget)

6. City center and shopping center revitalization advice service

JASMEC will dispatch experts to give advice and provide analyses, assessments and advice regarding, among other things, the content, organizational structure and business fundamentals of TMO activities in response to the requests of organizations such as TMOs and shopping district development associations. (¥401 million budget)

7. Support for establishment of commercial infrastructure facilities and revitalization programs

Subsidies will be provided toward the necessary cost of the establishment of basic commercial facilities, such as the operation of arcades and laying of colored paving, by associations and organizations in city center shopping districts, etc., and programs to revitalize shopping districts through, for example, measures to find tenants for vacant stores and the introduction of IT. (¥4,929 million budget)

8. City Center Commercial Revitalization Promotion Program and Program to Strengthen Shopping District Competitiveness (funds)

Funds will be established in each prefecture for the revitalization of city centers and formation of competitive shopping districts financed by interest-free upgrading loans from JASMEC and contributions from prefectures, and the returns on the investment of these funds used to subsidize various programs and services. Funds for the program to strengthen the competitiveness of shopping districts will be increased in fiscal 2003 by ¥2,600 million. (Total value of funds: ¥139,100 million)
9. Support for development of new business models by small and medium businesses

Subsidies will be provided for feasibility studies and research to develop new business models in response to social needs emerging in recent years undertaking by small and medium businesses and other entities. Subsidies will also be provided for trials contributing to the objectives of such business models. (¥447 million budget)

Section 2 Measures to improve the logistical efficiency of SMEs

In order to support activities to improve logistical efficiency undertaken jointly by SMEs, support measures based on the Law Concerning the Promotion of Efficient Distribution Systems in Small and Medium Enterprises that entered into effect in October 1992 will continue to be pursued.

1. Program to improve the logistical efficiency of local SMEs

Subsidies will be provided to associations and voluntary organizations for development of joint logistics systems, research and the development of basic plans on subjects such as the development of order and delivery information networks, project planning and system design, and trial operation. (¥36 million budget)

2. Dispatch of expert advisers to improve logistical efficiency

JASMEC will dispatch experts to provide advice when SMEs look into ways of improving logistical efficiency. (¥31 million budget)

3. Support for the improvement of logistical efficiency and cooperation over a wide area between SMEs

Subsidies will be provided for national and regional associations and voluntary organizations undertaking projects to develop joint logistics systems, research and development of basic plans regarding, e.g., the development of order and delivery information networks, project planning and system design, and trial operation. (¥220 million budget)

4. Development of infrastructure for the use of IT in logistics by SMEs

Subsidies will be provided for programs such as those to develop systems providing useful information via websites on the development, maintenance and propagation of public databases on, e.g., the development of product codes and standard information systems, and the improvement of logistical efficiency. (¥130 million budget)

Chapter 7 Promotion of technological development and strengthening of manufacturing base

Section 1 Promotion of technological innovation

1. Small businesss innovation research (SBIR)

Under the Law for Facilitating the Creation of New Business, the relevant ministries and agencies will cooperate to designate subsidies and contracting fees for the development of new technologies leading to the creation of new industries as special subsidies, and set targets for expenditures on grants such as special subsidies for SMEs in order to increase opportunities for spending on SMEs. The commercialization of the results of technological development will also be supported by, for example, low-interest loan and special loan guarantees.

2. Activities to strengthen strategic core technologies

In core fields in which SMEs have a leading role to play and which are considered to be instrumental to strengthening the competitiveness of Japanese manufacturing and revitalizing the economy, technological themes deserving of strategic support will be selected and joint research entities consisting of SMEs, user enterprises (automobile and electrical machinery manufacturers, etc.) and universities, etc. commissioned by JASMEC to conduct research on these themes. In fiscal 2003, research will be concentrated on
technologies in the die/mold and robot parts fields. (¥3,194 million budget)

3. Subsidies for creative technology R&D and regional revitalization creative technology R&D

In order to promote R&D on new products and technologies undertaken by SMEs themselves and to raise the value added of typical SME products, the cost of obtaining the raw materials, machinery and equipment, and technical guidance required for R&D will be subsidized by one half where obtained directly from the Government (creative technology R&D subsidies) and by two thirds where obtained through prefectures (regional revitalization creative technology R&D subsidies). (Initial budget: ¥4,650 million)

4. Promotion of technological innovation on specified issues

In order to promote the creation of new businesses and jobs and to create a dynamic Japanese economy, it is essential to create new technologies to form the core of industry and to pursue the development of technologies more vigorously. The related ministries and agencies will therefore cooperate in indicating to SMEs and ventures areas of technological development meeting social and economic needs, and publicly inviting proposals. Research and surveys on the best proposals will be commissioned by JASMEC. (¥2,608 million budget)

5. Tax measures to strengthen the technological base of SMEs (see Chapter 12, Section 1 1.(2))

6. Support for standardization to strengthen the technological base of SMEs

Support will be provided for the preparation of draft JIS standards contributing to revitalization of SME business by collecting information on the technical know-how of SMEs and technical information forming the basis for the preparation of JIS standards, such as international standards, and picking out the most suitable technologies. Support will also be provided for research and survey activities, such as the collection of information, surveys and empirical testing, that are necessary for the preparation of draft JIS standards. (¥30 million budget)

7. Development of knowledge base of SMEs

Support will be provided for SMEs by developing and providing the knowledge base regarding, e.g., measurement standards, reference materials and safe management of chemicals for which there is a strong need in fields where a large proportion of enterprises are SMEs. The necessary knowledge base will also be developed to contribute to the development of technologically advanced SMEs, which will play a leading role in next-generation industries. (¥160 million budget)

8. Expansion of support for introduction of technologies by SMEs

(1) Further promotion of projects to encourage use of patent data

A free search engine will be provided for an Internet-based Industrial Property Digital Library (IPDL) to enable searches of the information held on approximately 48 million industrial property rights by the Patent Office, and use made of information on the industrial property rights of SMEs, business ventures, universities and other entities in order to stimulate R&D activity. (¥3,491 million budget)

In order to promote effective use of the IPDL, IPDL data search advisers will be dispatched to intellectual property centers in each prefecture to provide advice on how to search for patent information.

(2) Support for development and commercialization of technologies using open patents

1) Dispatch of patent licensing advisers

Patent licensing advisers with extensive specialist knowledge and experience of intellectual property and technology licensing will be dispatched in response to requests by prefectures and technology licensing offices (TLOs) in order to promote the smooth transfer of technologies using patents from entities such as enterprises, universities and public research institutes to SMEs. Advice services and information will also be provided via a national network of patent licensing advisers and specialists in order to revitalize regional industries.

2) Development of patent licensing database

Data on patents held by enterprises, universities and public research institutes that they are interested in licensing as open patents will be used to create an online public database, accessible via the Internet, to facilitate the distribution of open patents to SMEs and businesses ventures and accelerate their commercialization.

3) Production of patent licensing support charts

Leading enterprises and their patents will be systematically analyzed based on patent data on specific technological themes and the results published
on the Internet to provide SMEs with information to help them introduce technologies in other fields of industry. (Portion of ¥5,508 million budget)

9. **Subsidization of commercial development of industrial technologies**

The New Energy and Industrial Technology Development Organization (NEDO) will invite proposals from private enterprises and other entities involved in the commercial development of technologies in strategic or priority fields designated under the Science and Technology Basic Plan, and provide subsidies worth two thirds or one half of the cost of technological development for outstanding proposals. In selecting proposals, priority will be given to investment in ventures and enterprises such as spin-off ventures, business ventures originating from universities and enterprises engaged in the commercial development of technologies licensed from universities. (¥6,131 million budget)

### Section 2 Promotion of collaboration between industry, universities and government

The development and commercialization of technologies through collaboration between industry, universities and the government will be vigorously promoted through the following programs.

1. **R&D by regional regeneration consortiums (SME category)**

In order to promote the creation of new industries and new businesses in the provinces and regional economic regeneration, strong industry-university-government consortiums led by SMEs utilizing the technology “seeds” and knowledge of universities, etc. (“regional regeneration consortiums”) will conduct advanced R&D leading to the commercialization of technologies. (¥2,050 million budget)

2. **Promotion of collaboration between industry, universities and government on development of SME technologies**

In order to promote the revitalization of SMEs and creation of new industries, and to solve technological issues faced by local SMEs forming the backbone of manufacturing, the ability of local SMEs to develop technologies will be promoted and propagation of the results of technology research will be pursued through industry-university-government collaboration centered around public research institutes. (¥351 million budget)

3. **R&D on SME creative technologies at the National Institute of Advanced Industrial Science and Technology (AIST)**

Using the technologies and knowledge of the National Institute of Advanced Industrial Science and Technology (AIST) and research facilities throughout Japan, comprehensive technological support will be provided, including R&D to support and nurture dynamic SMEs, joint research with SMEs, and licensing of technologies to SMEs. (¥900 million budget)

4. **Subsidization of commercial R&D by university business startups**

Part of the cost of R&D undertaken jointly by enterprises and universities to commercialize the results of research by universities will be subsidized through TLOs managing R&D provided that SMEs contribute research funds and that there are clear commercialization plans. (¥2,405 million budget)

5. **University venture business support**

Specialists (in law, finance and management) will be dispatched via technology coordinators such as TLOs to university ventures that have outstanding technologies but tend to lack business know-how. (¥150 million budget)

6. **Subsidization of cost of promotion of technology licensing from universities**

In order to facilitate the licensing of the results of university research, subsidies will be provided to TLOs with approved plans for implementation (“approved TLOs”) to cover part of the cost of technology licensing under the Law Promoting Technology Transfer from Universities to Industry, which entered effect in 1998. (¥600 million budget)
Chapter 8 — Promotion of support for small enterprises

Section 1 Enhancement of small enterprise support programs

1. Enhancement of support for startups and business innovation

(1) Organization of startup classes (see Chapter 4, Section 3 2.(2)).
(2) Organization of startup and business innovation courses (see Chapter 4, Section 3 2.(2), 3).
(3) New startup loan program (see Chapter 4, Section 2 (1)).
(4) Local support centers for SMEs (see Chapter 5, Section 1 3.).

2. Successor matching support

(See Chapter 3, Section 4 1.)

3. Model programs for matching neighborhood entrepreneurs with sources of finance

Because of the importance of encouraging the diversification of means of finance open to SME entrepreneurs, prefectural federations of commerce and industry associations, commerce and industry associations and chambers of commerce and industry will organize model programs providing opportunities for raising funds through privately placed bonds for small numbers of investors and work to accumulate know-how and information on actual cases of such financing. (¥10 million budget)

4. Revitalization of regional economies and setup for wide-area projects

(1) Regional development and revitalization

Commerce and industry associations and chambers of commerce and industry will undertake publicly tendered regional revitalization projects to meet the needs of local small businesses, etc. (¥399 million budget)

(2) Development of young successors, etc.

Prefectural federations of commerce and industry associations and managing chambers of commerce and industry will organize advanced activities, such as training courses, over a wide geographical area in order to provide practical training in business know-how, etc., support the development of entrepreneurs, support business successions, and improve abilities. (¥987 million budget)

(3) Broad-ranging cooperation by commerce and industry associations and other regional development measures

Commerce and industry associations and chambers of commerce and industry will cooperate on the development of initiatives for a wide geographical area and on surveys and research to support small businesses within an area. (¥234 million budget)

Subsidies will also be provided to cover the cost of improvements and moving due to mergers in order to create conditions conducive to the merger of commerce and industry associations. (¥19 million budget)

(4) Promotion of measures undertaken by commerce and industry associations over wide areas

Prefectural federations of commerce and industry associations will organize programs such as training courses to promote the development of commerce and industry association and small business support plans. (¥288 million budget)

5. Expert bank program (support for strengthening management and technology)
Working in cooperation with organizations such as prefectural support centers for SMEs, prefectural federations of commerce and industry associations will provide appropriate advice on specific, practical matters when requested by small businesses dispatch experts to do so. (¥271 million budget)

6. Improvement of ability of business advisers

Business innovation support training will be provided at prefectural federations of commerce and industry associations and managing chambers of commerce and industry for business advisers, and spending on sending business advisers to take one-year SME consultant courses at the Institute for Small Business Management and Technology will be subsidized.

7. Promotion of guidance environment of commerce and industry associations, etc.

In order to promote activities by commerce and industry associations, etc. to propagate business improvements, the necessary cost of appointing secretaries-general will be subsidized (¥5,779 million budget)

8. Promotion of development of information networks to strengthen support structure

Sharing of data needed by business advisers, etc. to provide business support to small businesses will be promoted, and the business support structure will be enhanced using information networks to, e.g., collect up-to-date market data using various databases. (¥48 million budget)

Section 2 Loans for managerial improvement funds of small enterprises, etc. (“Marukei”)

Because of the poor state of the economy and severe employment conditions, necessary funds (¥550 billion) will be provided for the National Life Finance Corporation to provide unsecured, non-personal-guaranteed loans to small enterprises that have received business advice from business advisers at associations and chambers of commerce and industry so as to facilitate financing by small enterprises that lack collateral and credit. Special measures regarding lending limits and loan periods will also be continued.

Section 3 Small enterprise mutual aid projects

Small enterprise mutual aid projects will be continued under the Small Enterprise Mutual Relief Projects Law, the purpose of which is to contribute to the establishment of mutual aid programs for the discontinuation of business by small enterprises through the contribution of such enterprises in a spirit of reciprocal support between small enterprises and so increase the welfare of small enterprises. Activities to promote the spread and membership of such programs will also be vigorously pursued. Subsidies will be provided to the executing entity, JASMEC, to enable it to smoothly execute its duties. (¥6,115 million budget)

Section 4 Small enterprise plant funding programs

In order to promote the introduction of facilities necessary to establish small enterprises and strengthen their business fundamentals, the Plant Fund Loan Program and the Plant Lending Program will be continued. Under these programs, the lending capital created by transfers from loans from the State and transfers from the general accounts of prefectures are managed in the special accounts of prefectures, and interest-free loans made from these special accounts to lending institutions (foundations wholly owned by prefectures) to provide them with the necessary funds to enable them, as the implementers of the program, to supply small enterprises with interest-free loans for plant funds and with the equipment that they require under lease or purchase by installment contracts.

Scale of lending
Plant Fund Loan Program: ¥35,500 million
Plant Lending Program: ¥52,700 million
Chapter 9  Promotion of collaborative organizations of SMEs

1. Further use of SME association system

Due to the lack of minimum capital requirements and ease of acquisition of limited-liability corporation status, an increasing number of people such as retirees, older persons and housewives have been making use of SME associations in recent years as a means of easily starting up in business. There are also an increasing number of cases of SMEs pooling differing business resources, such as technologies and human resources, and cooperating on R&D.

The creation of jobs and industries by startups is a major component of SME policy, and modifications to the system will be made so that greater use is made of SME associations with characteristics such as the above, and a high priority placed on encouraging the spread of the association system.

2. Strengthening of functions of the National Federation of Small Business Associations

As well as the traditional need for guidance on the establishment and operation of associations, the National Federation of Small Business Associations meets a broad range of latent needs of associations to enable them to function as organizations facilitating business creation and business innovation by SMEs.

Because of the particular need for SMEs to be able to make online applications and take part in electronic procurement procedures ready for the digital government initiative targeted for fiscal 2003 and also the strong need to prepare for association and company administration by electromagnetic methods made possible by the Law on Submission of Documents in Electronic Format and the amended Commercial Law, particular emphasis will be placed on the following measures:

(1) The business issues faced by SMEs have grown increasingly specialized with the dramatic transformation of the environment, as exemplified by the IT revolution in recent years. In order to respond promptly to such changes in conditions, experts will be educated by, for example, raising the quality of advisers at the National Federation of Small Business Associations.

(2) A certification system will be established and operated in order to promote electronic certification services focusing on confirmation of the existence and server certification of associations and association enterprises, and activities undertaken to raise awareness and use among associations and SMEs.

Imperative to the spread of IT is a suitable supply of skilled human resources. As a shortage of such human resources is a major cause of the “digital divide”, support will be provided for the development of human resources capable of activities ranging from basic operations using IT to e-commerce. (¥2,155 million budget)

Chapter 10  Promotion of measures for small and medium subcontractors and public demand measures

Section 1  Measures for small and medium subcontractors

As the service sector’s contribution to the economy has grown, subcontracting relations in service-related industries have developed. In manufacturing as well, the economic slump and globalization of procurement practices have created a severe business environment for small and medium subcontractors. Given these circumstances, the following measures will be taken to strengthen the business fundamentals of small and medium subcontractors (including those in service-related industries) while at the same time improving subcontracting relations.

1. Support for cooperation with parent companies

The necessary measures will be taken under the Law on the Promotion of Subcontracting Small and Medium Enterprises to efficiently promote the strengthening of the business fundamentals of small and medium subcontractors.

(1) Advice and guidance under the Promotion Standards

The competent minister will provide advice and guidance in accordance with the “Promotion Standards” laid down under the Law on the Promotion of Subcontracting Small and Medium Enterprises to be followed by parent companies and subcontractors.

(2) Support regarding “Promotion Project Plan”

Finance and tax-related measures (including the fresh
introduction of low interest rate loans) will be undertaken to assist business activities undertaken in accordance with the “Promotion Project Plan” approved by the competent minister under the Law on the Promotion of Subcontracting Small and Medium Enterprises.

2. Support for self-help efforts of small and medium subcontractors

(1) Support with finding markets through business intermediary services and trade fairs, etc.

1) Business intermediary services
Enterprises seeking to place orders meeting the necessary requirements (e.g. enterprises’ situation, industry, facilities and technologies) will be looked for both within and outside the same prefecture and introduced to small and medium subcontractors seeking new customers. Information on the facilities and technological specialties of registered enterprises and information on receipt and placement of orders will be provided via a business matching system known as “Matchnet” (www.matchnet.zenkyo.or.jp/) making maximum use of the Internet to small and medium subcontractors that lack marketing resources and find it difficult to broaden their markets. (¥598 million budget)

2) Emergency wide-area business conventions
Emergency wide-area business conventions will be held to enable subcontractors to obtain orders and find new markets to counter the sharp decline in subcontracting work in venue regions and neighboring regions as a result of large-scale restructuring by large enterprises. (¥30 million budget)

3) SME’s Techno Fair
Outstanding technologies and products of small and medium subcontractors will be exhibited under one roof, the product development capabilities and processing technologies of small and medium subcontractors showcased, and increased opportunities provided for small and medium subcontractors to find new customers and win orders from a wider area through business conventions where they can be introduced to other businesses. (¥55 million budget)

(2) Training for SMEs seeking to cease subcontracting
Short intensive training will be launched for entrepreneurs and managers at small and medium subcontractors seeking to cease subcontracting to equip them with the know-how required to become independent (i.e. the necessary product development skills, marketing and business strategy, etc.). (¥20 million budget)

3. Fairness of subcontracting relations

In order to promote the fairness of subcontracting relations, the SME Agency and Fair Trade Commission will work in close cooperation to conduct written investigations of parent companies and subcontractors and on-the-spot inspections of parent companies pursuant to the Law on the Prevention of the Delay in the Payment of Subcontracting Charges and Related Matters (hereafter referred to as the “Subcontracting Charges Law”), and to direct the implementation of remedies in the event that a violation of the Subcontracting Charges Law is discovered.

(1) Subcontracting business improvement courses
In order to prevent violations of laws and ordinances, such as the Subcontracting Charges Law, relating to subcontracting by ensuring that all relevant parties are familiar with such legislation, courses will continue to be held for staff responsible for outsourcing at parent enterprises. A new course will also be launched for entrepreneurs in order to accelerate the development of in-house subcontracting arrangements. (¥49 million budget)

(2) Subcontracting business improvement seminars
Awareness of the need for ensuring the fairness of subcontracting relations in parent enterprises will be raised and arrangements for ensuring that subcontracting relations are fair will be developed by organizing a new seminar program for staff responsible for outsourcing at parent enterprises unable to participate in the above courses to enable them to obtain information on subcontracting-related legislation in a comparatively short time. (¥10 million budget)

Section 2 Pursuit of measures to ensure access to public demand

1. Access to public demand

The “Policy on State Contracts with Small and Medium Enterprises” will be passed by the Cabinet pursuant to the Law on Ensuring the Receipt of Orders from the Government and Other Public Agencies by Small and Medium Enterprises, and efforts will be made to further increase opportunities for SMEs to win orders. At the same time, the Small and Medium Enterprise Public Demand Securement Measures Promotion Council will
take steps to ensure compliance with the policy by both those placing and receiving orders.

2. Fair business opportunities

(1) Efforts will be made to ensure the proper provision of business opportunities for small and medium retailers through the administration of the Law on Special Measures for the Adjustment of Retail Business.

(2) Efforts will be made to ensure the proper provision of business opportunities for SMEs through the administration of the Law on Securing Business Opportunities for Small and Medium Enterprises by Adjusting the Business Activities of Large Enterprises.

3. Regulation of unfair business methods under the Antimonopoly Law

The Antimonopoly Law will be actively and strictly administered, and unfair business methods regulated in order to promote free and fair competition and to enable businesses to engage in business activities freely. Positive action will also be taken to deal with unfair methods of business that are unreasonably disadvantageous to SMEs, such as unfair price competition and the abuse of an enterprise’s superior position.

Chapter 11 SME business stability

Section 1 Prevention of SME bankruptcies

Specialist staff such as commerce and industry arbitrators and certified public accountants at 279 special bankruptcy prevention advice centers established by major chambers of commerce and industry and prefectural federations of commerce and industry associations around the country will provide advice and guidance (focusing on particular on financial mediation) for SMEs in financial difficulties. Measures to facilitate reconstruction using the advisory services of lawyers and other experts will continue to be provided to SMEs seeking to reconstruct under the Civil Rehabilitation Law. (¥280 million budget)

In order to stabilize the position of SMEs in business difficulties because of changes in the environment, such as the bankruptcy or curtailment of business activities by enterprises with which they do business, smooth funding will continue to be provided through emergency loans for necessary working capital by government-affiliated financial institutions (separate from ordinary lending) and through safety-net guarantees by credit guarantee corporations (separate from ordinary guarantees).

In addition to the continuation of mutual aid programs to prevent SME bankruptcies as a result of the bankruptcy of affiliated enterprises, activities to encourage use and expand membership will be vigorously pursued. Subsidies will therefore be provided to facilitate the execution of these operations to JASMEC, which is the implementing entity. (¥746 million budget)

Section 2 SME disaster relief

In order to facilitate the recovery of SMEs affected by disasters such as torrential rain and typhoons, advice centers will be established and disaster recovery loans provided by government-affiliated financial institutions to SMEs in regions where the Disaster Relief Law has been put into action. In addition, safety-net guarantees (separate from ordinary guarantees) will be swiftly provided to SMEs in regions affected by disasters whose sales fall by a certain amount. In the event of large disasters that meet certain criteria laid down under the Law concerning Special Fiscal Aid for Coping with Disasters and are designated as major disasters under the same law, special measures will be implemented and measures taken to lower interest on disaster loans offered by the government-affiliated financial institutions for SMEs (further to a cabinet decision).

Section 3 SME corporate pension measures

Programs undertaken in fiscal 2002 (provision of information on the new corporate pension system and determination of the state of compliance of SMEs) have revealed uncertainty among SMEs as to how to migrate to the new system. A collection of concrete case studies concerning the migration to the new corporate pension system required by SMEs will therefore be compiled in fiscal 2003.
Based on this collection of case studies, seminars will be organized for licensed tax accountants and certified social insurance labor consultant offices, and arrangements improved for providing necessary information to SMEs regarding the migration to the new corporate pension system.

Chapter 12 SME taxation

Section 1 SME-related taxation

In view of recent economic conditions, the following amendments will be made to the tax system in fiscal 2003 in order to strengthen the business fundamentals of SMEs and facilitate business succession.

1. Reinforcement of business fundamentals of SMEs

   (1) Cessation of taxation of accumulated earnings of family-run companies
   Suspension of taxation of the accumulated earnings of small and medium corporations (corporations with capital stock of ¥100 million or less) whose equity ratios (shareholders’ equity (including borrowing from relatives) / total assets) are 50% or under (until March 31, 2006).

   (2) Expansion of tax measures to strengthen the technological base of SMEs
   Increase in the tax deduction rate (from 10% to 15%; 3% of which being limited to three years) and increase in the upper limit of the tax-deductible amount (from 15% to 20% of the value of corporation tax; one year carry-over deduction of the amount in excess of the upper limit of the tax deductible amount allowed).

   (3) Establishment of special system for inclusion in expenses of the acquisition price of petty sum depreciable assets of SMEs
   Inclusion in expenses of the full amount of the acquisition price where SMEs acquire petty sum depreciable assets at an acquisition price of under ¥300,000 (until March 31, 2006).

   (4) Establishment of tax measures to promote investment in IT
   For the acquisition of certain IT-related equipment and applications (in eight categories, including software, electronic computers and digital copiers), enterprises will be allowed to choose between a tax deductible equivalent to 10% of the acquisition price and special depreciation equivalent to 50% of the acquisition price (until March 31, 2006).

2. Tax measures to facilitate SME revitalization

   Regarding the liabilities of companies in business difficulties, the operational requirements for exceptions to the calculation of income when a right of indemnity cannot be exercised in the event of the transfer of assets to discharge a guarantee liability in the event that an entrepreneur has transferred assets in order to discharge the personal guarantee liability regarding such liabilities will be clarified.

3. Expansion of exclusion from expenses of entertainment and social expenses

   Eligibility for a fixed ¥4,000,000 deductible will be expanded to include small and medium corporations with capital stock of ¥100 million or under, and the proportion of exclusion from expenses of the amount up to the fixed deductible amount lowered from 20% to 10%.

4. Taxation regarding SME business succession

   Regarding measures to reduce the taxable value for inheritance tax purposes of SMEs’ own stock, the requirements for choice of application of small housing lot special exemption (both usable up to a certain extent) and companies eligible (increase in common stock issued from under ¥1 billion to under ¥2 billion) will be revised, and coverage expanded to include own stock gifted under the inheritance settlement taxation system.

5. Expansion of startup support tax measures (angel tax system)

   Measures will be taken including the establishment of a special exemption, applicable under certain conditions, for the acquisition of specified shares in small and medium business ventures allowing for the deduction of expenditures on the acquisition of such shares from capital gains on shares in the year of acquisition.
Section 2 Measures to facilitate SMEs’ compliance with revision of consumption tax exemptions

In order to enable small businesses along with small and medium retailers and subcontractors to update their accounting and tax payment procedures and comply with requirements regarding passing on of prices with the revision of the special consumption tax exemption for small and medium businesses (revision of the tax exemption points system and simplified tax system) and the requirement that businesses indicate the full price of goods inclusive of consumption tax to consumers, close support will be provided by, among other things, publishing posters and pamphlets, organizing courses, and providing tax guidance. (¥3,738 million budget)

Chapter 13 SME globalization

1. Facilitation of overseas expansion

(1) Support for SMEs intending to expand overseas
Organizations such as JASMEC and Japan External Trade Organization (JETRO) will conduct surveys and provide information regarding overseas expansion by SMEs, organize seminars and provide advice and business-matching services.

(2) Support for Japanese SMEs overseas
The overseas branches of organizations such as JASMEC, the Japan Chamber of Commerce and Industry and JETRO will provide information and organize seminars for Japanese SMEs overseas. JASMEC and the Association for Overseas Technical Scholarship will in addition provide training for managers and employees of Japanese SMEs overseas.

2. Facilitation of trade
JETRO will provide support for participation in international trade fairs and exhibitions held overseas and help match businesses with promising enterprises overseas and support individual business talks of individual enterprises using coordinators based overseas to promote exports by SMEs.

3. International exchange, etc.
The Government will engage in dialogue on the development of business conditions for SMEs through international conferences such as APEC and the OECD. JETRO will promote industry exchanges with SMEs in APEC. International cooperation will also be provided to meet SME needs.

Chapter 14 Promotion of employment and welfare measures

Section 1 Promotion of labor measures

1. Stabilization and promotion of employment

(1) Employment measures
In order to create a labor market conducive to taking on fresh challenges and making comebacks, the focus of employment measures in fiscal 2003 will be on the following:

1) Strengthening of the reemployment support functions of the “Hello Work” employment program through e.g. the provision of systematic man-to-man reemployment support by full-time support staff specializing in rapid reemployment and the enhancement of career counseling services
2) Promotion of swift reemployment through trial employment of the middle aged/elderly, young, disabled, single mothers and homeless
3) Establishment of a system of support for various programs contributing to promoting reemployment undertaken through joint cooperation by regional labor and management organizations in the private sector
4) Promotion of comprehensive measures to develop the employment and occupational skills of young persons, e.g. through the promotion of job experience for junior and senior high school students in collaboration with schools and other educational institutions

These measures will be implemented alongside those incorporated in the fiscal 2002 supplementary budget to provide a complete range of employment measures to continue to vigorously combat unemployment in fiscal 2003.
2. Development of human resources

(1) Development of skills development programs of employers

1) Support for mechanisms for the development of occupational skills within enterprises, such as training courses and exchange forums for those responsible for occupational skills development.
2) Subsidization of the cost of occupational skills development within enterprises under the career formation subsidy program.
3) Establishment and operation of local occupation training centers and provision of information, advice and assistance regarding the development of occupational skills for SMEs.
4) Subsidies for SMEs organizing training in licensed occupations and employers that encourage their employees to take licensed occupation courses organized by licensed occupation training facilities.
5) Support for independent efforts at the local level to train skilled workers under the local human resource training initiative.

(2) Promotion of public occupational training

Promotion of occupational training for SME workers and persons changing or leaving jobs at SMEs.

Section 2 Promotion of welfare programs

1. Promotion of measures to reduce working hours and improve health and safety

(1) Measures to reduce working hours

1) Encouragement of employees to take annual paid leave
2) Reduction of overtime

(2) Measures to ensure health and safety of workers

1) Support for the creation of new employment opportunities utilizing the dynamism of SMEs

Regarding support measures undertaken under the Small and Medium Enterprise Labor Force Recruitment Law, the focus of employment support pertaining to the creation of employment opportunities will be on human resources contributing to the strengthening of business fundamentals. At the same time, active support will be provided for the activities of SMEs to recruit and train human resources and create an attractive workplace, such as startups and expansion into other industries, after organization and rationalization, such as the establishment of a support system for employers undertaking measures to improve labor management in order to assist the retention of workers in the workplace.

In order to encourage the creation of new employment opportunities in new growth fields and to facilitate the smooth movement of labor into these fields, comprehensive support, such as the provision of detailed information and advice, will be provided through various seminars and interviews with job seekers for enterprises in new and growth fields.

(3) Preservation of employment of workers

In order to prevent unemployment due to unavoidable retrenchment arising from changes in business conditions or other economic grounds and to ensure the stability of employment, standards on retrenchment will be eased and applied flexibly, while employment adjustment subsidies will be provided to businesses that maintain employment of workers by suspending operations or seconding employees.

(4) Improvement of employment of construction workers

Starting with the construction employment improvement subsidization program, comprehensive measures will be implemented with the priority being to further modernize the employment of construction workers, promote the development of occupational skills, promote the employment of younger workers and keep them in the industry, and develop the labor environment to enable the elderly and women to also play a part. (¥9,539 million budget)

(5) Employment of the elderly

1) Securement of employment to age 65 through raising the mandatory retirement age and establishing a program for continuing in employment.
2) Provision of subsidies for the employment of elderly workers.

(6) Employment of the disabled

1) Promotion of measures to achieve statutory employment rate.
2) Provision of subsidies for recruitment and continued employment of disabled workers.

2. Development of human resources

(1) Development of skills development programs of employers

1) Support for mechanisms for the development of occupational skills within enterprises, such as training courses and exchange forums for those responsible for occupational skills development.
2) Subsidization of the cost of occupational skills development within enterprises under the career formation subsidy program.
3) Establishment and operation of local occupation training centers and provision of information, advice and assistance regarding the development of occupational skills for SMEs.
4) Subsidies for SMEs organizing training in licensed occupations and employers that encourage their employees to take licensed occupation courses organized by licensed occupation training facilities.
5) Support for independent efforts at the local level to train skilled workers under the local human resource training initiative.

(2) Promotion of public occupational training

Promotion of occupational training for SME workers and persons changing or leaving jobs at SMEs.
2. Development of conditions to enable workers to balance the demands of work and family and to enable women to make use of their abilities

(1) Support to enable workers to balance demands of work and family
1) Smooth enforcement of the Law Concerning the Welfare of Workers Who Take Care of Children or Other Family Members, Including Child Care and Family Care Leave (unofficial translation)
2) Development of environment to make it easier for workers providing childcare or nursing care to remain in employment

(2) Creation of equal opportunities and treatment of men and women
1) Promotion of measures to ensure equal opportunities and treatment for men and women (¥231 million budget)
2) Promotion of positive action (¥292 million budget)
3) Promotion of measures to combat sexual harassment (¥219 million budget)

(3) Promotion of comprehensive measures to support part-time employment
Efforts will be made to ensure wider compliance with the Law Concerning the Improvement of Employment Management, etc. of Part-Time Workers and the guidelines laid down under it, and the following programs will be implemented:
1) Provision of subsidies for the improvement of employment management of part-time employees by SME employers and SME employers’ associations (¥545 million budget)
2) Enhancement of mechanisms for adjustment of labor supply and demand in relation to part-time labor

3. Comprehensive measures to promote employee welfare, etc.

(1) Promotion of spread of employee asset formation promotion schemes
(2) Promotion of spread of SME retirement benefit mutual aid schemes
(3) Promotion of activities of SME employee welfare service centers
(4) Promotion of welfare measures for young employees
(5) Promotion of employee refresher measures for improvement of personnel and labor management.
(6) Development of employee welfare facilities
(7) SME welfare programs, etc.

Subsidies provided for activities undertaken by prefectures to improve personnel and labor management. (¥303 million budget)

4. Measures to deal with the increasingly individualized and complex nature of labor relations

Use of the individual labor dispute resolution system and development of arrangements for the institution of a system for protection of human rights in the field of employment will be promoted.

Chapter 15 Special measures

Section 1 Special measures for specific industries

1. Measures for the textile industry

Due to the extreme severity of conditions in the Japanese textile industry caused by the slump in domestic demand for textiles (particularly in the apparel industry) and the increasing quantitative share of the market accounted for by cheap imports from countries such as China, the following measures will be taken:

(1) Enhancement of measures to revitalize the textile producing regions from a consumer perspective
1) Promotion of development of local industries, etc.
2) Support for revitalization of SMEs in the textile industry

(2) Model program to support structural reform of areas of production
(3) Development of human resources in areas of production and development of new markets
(4) Use of Fund for Revitalization of Areas of Textile Production

(2) Further promotion of BPR (business process reengineering) in textiles
1) Strengthening of support for introduction of IT

(3) Bolstering of international competitiveness of the fashion industry
1) Strengthening of development of human resources
2) Textile human resource development fund

2. Measures for the development of traditional craft industries

There are throughout Japan many areas of production where traditional craft products are manufactured using traditional skills and techniques. The development of these industries has long been promoted because of their contribution to the quality of life and distinctive character of local communities. Nevertheless, these industries now face a number of problems, such as the stagnation of demand for traditional craft products, declining numbers of employees, and a shortage of successors.

The following measures will therefore be implemented centered around the Law Concerning the Promotion of Traditional Craft Industries:

1) Designation of traditional craft products in consultation with the Industrial Structure Council after investigation and consideration of craft products for which applications for designation as traditional craft products have been made under the above law.

2) Subsidization of the following activities (¥1,026 million budget):

   1) Activities undertaken in regions of traditional craft production
      a. Programs to train successors and develop demand undertaken under development plans
      b. Joint programs to develop demand undertaken under joint development programs
      c. New production region revitalization programs undertaken under revitalization plans and cooperative revitalization programs
      d. Local human resource training and exchange support programs and production region producer programs undertaken under support plans

   2) Activities undertaken by traditional craft industry development associations
      a. National traditional craft festivals
      b. Human resource recruitment and training programs (registration of producers in areas of production, business matching, identification of future traditional craft products)
      c. Demand development programs
      d. National traditional craft product center programs
      e. Traditional craft production region survey and consultations, and education on traditional craft products for children and school pupils, etc.

3) The following promotional and public information campaigns will be undertaken to raise public awareness of traditional craft products in November each year, which will be designated as “Traditional Craft Month”:

   1) Traditional Craft Month national conference and regional conferences in eight regional blocks
   2) Traditional craft plaza
   3) Traditional Craft Month art and essay contests, etc.

3. Measures for the tortoiseshell industry

Subsidies will be provided for the following activities undertaken by the Japan Bekko Association in order to ensure supplies of raw materials for small and medium tortoiseshell businesses hit hard by the prohibition by the Government at the end of 1992 of imports of hawksbill shell, this being such businesses’ sole raw material (¥115 million subsidy):

   1) Preservation, breeding and cultivation of hawksbills in Japan
   2) Resource protection surveys of producer countries
   3) Visits to the Washington Convention Consultative Committee and related interational organizations

4. Measures for the small and medium general merchandise industry (design preservation activities)

In order to promote the development of Japanese manufacturers of everyday necessities (“general merchandise”), the bulk of which are SMEs and small enterprises, subsidies will be provided by the National Federation of Small Business Associations to organizations undertaking design preservation programs:

1) Improvement of internal and external data access
   Collection and provision of design-related books, magazines, catalogs and industrial property gazettes, etc. for internal and external access.

2) Development of system for protection of designs
   Advice centers will be established, manuals on countermeasures drawn up, awareness-raising programs conducted, and support provided for the acquisition of designs and trademarks overseas in order to enhance the system of protection for designs and trademarks.

3) Support for elimination of imitation designs
   Support will be provided for activities to prevent the distribution of imitation goods and to drive them off the market through the establishment of an industry design protection system.
5. Measures for the environmental sanitation business

(1) Measures for the environmental sanitation business

As in fiscal 2002, support will continue to be given in fiscal 2003 for the advancement of environmental sanitation services suited to contemporary needs by environmental health business guidance centers, which were established in order to maintain and raise hygiene levels and protect the interests of users and consumers by improving the soundness of management of environmental sanitation businesses. To achieve this, the following measures will be implemented:

1) Establishment of study groups under business base support programs to consider issues such as succession, protection of the environment, and collaborative and cooperative activities (¥4 million budget)

2) Programs for using consumer monitors and holding discussion meetings between consumers and environmental sanitation businesses to monitor and provide information on the state of environmental sanitation and services (¥5 million budget)

3) Urban development programs involving, e.g., the establishment of study groups to support the development of work and residential zones (such as shopping districts), conduct of opinion surveys, and sanitation mapping (¥8 million budget)

In addition, in order to support action to develop food recycling systems in the food service and hotel industries, contribute to the development of a dynamic sanitation industry and improve sanitation levels, support will be provided for voluntary development activities undertaken by organizations such as federations of environmental sanitation cooperatives. (¥214 million budget)

(2) Loans for environmental sanitation-related business

¥230 billion will be made available for environmental sanitation fund loans by the National Life Finance Corporation. In Okinawa Prefecture, the Okinawa Development Finance Corporation will provide loans worth a total of up to ¥4 billion.

1) Addition of items covered by special development interest rates
   a. Addition of hair and scalp counseling-related equipment (barber shops)
   b. Addition of construction, extension and reconstruction for new entries, independent entries and branch establishments to coverage of special interest rates for development loans.

2) Improvement of special exemption loans
   Special measures will be implemented regarding “passive smoking prevention facilities” operated by environmental health-related businesses (excluding meat distributors, poultry distributors, ice and snow distributors, and cleaning businesses)

3) Other measures

Regarding the acquisition of existing stores, etc., the establishment of branches and new entries not entailing remodeling will also be made eligible for loans.

6. Measures for SMEs in the agriculture, forestry and fishing industries

(1) Modernization of SMEs in the agriculture, forestry and fishing industries

1) Subsidies, etc. for enterprises in the agriculture, forestry and fishing industries
   a. In order to strengthen the role and functions of regional food industries, support will be provided for the commercial development of healthy foods and distinctive foods in collaboration with local agriculture to meet diverse consumer needs in accordance with new proposals for action utilizing the innovativeness of the food industry. Collaboration with local agriculture engaged in the production of “Brand Nippon” agricultural products will also be promoted. (¥230 million budget)
   b. Support will be provided for the development of technologies relating to the improvement of the processability and investigation of the functionality of domestically produced agricultural products to encourage their use in domestically produced foods in the food manufacturing industry, and the development of technologies including technologies for the sorting, transportation and collection of food waste in order to develop food recycling systems, advanced recycling and conversion technologies, ingredients and quality evaluation technologies, and technologies for utilizing containers and packaging made from biodegradable materials. Support will also be provided for the development of production technologies for producing food constituents offering new functionality by means of fermentation, and technologies for improving the quality and productivity of fermented food products in order to promote technological innovation, e.g. through the development and introduction of cutting-edge technologies, in the food industry. In addition, support will be provided through the organization of training courses for human resource development and the provision of technological information in order to further improve the level of management of food manufacturing processes (through hazard analysis and critical control point (HACCP) procedures) for small and medium food manufacturers. (¥936 million budget)
c. Steps will be taken to make food businesses fully aware of the purpose of the Law on Promoting the Use of Recycled Food Resources, and public information activities will also be undertaken in order to raise awareness of measures to promote reuse of recycled food resources. Support will also be provided for systematic reuse by food-related businesses and local governments, and model food recycling facilities will be established. (¥1,242 million budget) Support will additionally be provided for the organization of a working group to determine efficient methods of use of food waste generated by the food service industry, and for public information activities directed at consumers and led by the food service industry. (¥8 million budget)

A system for efficient collection of waste cooking oil generated by households will be established, and awareness-raising activities undertaken to make consumers aware of appropriate methods of using cooking oil. (¥13 million budget)

With regard to promoting the recycling of waste containers and packaging, measures will be taken to raise awareness and ensure widespread use of systems under the Law for Promotion of Sorted Collection and Recycling of Containers and Packaging (hereafter referred to as the “Container and Packaging Recycling Law”) among food manufacturers and distributors that are responsible for recycling under the Container and Packaging Recycling Law. (¥34 million budget)

In order to promote comprehensive steps to protect the environment in the food industry, support will be provided for action taken independently by the food industry to protect the environment, for example, through wider ISO14001 compliance, and steps will be taken to increase awareness and uptake in order to facilitate the steady implementation of the industrial waste control tagging system in compliance with the revised Waste Disposal and Public Cleansing Law. (¥11 million budget)

d. In order to promote the modernization of the food services industry, subsidies will be provided for research undertaken by organizations such as the Food Service Industry Research Center, the promotion of IT, and the promotion of food recycling. (¥62 million budget)

e. In order to generate new fields of business in the agriculture, forestry and fishing industries and stimulate agribusiness, support will be provided for the development of technologies through cooperation between enterprises in the private sector leading the commercialization of research using the facilities and human resources of universities and independent administrative agencies. (¥560 million budget)

f. In order to promote the use of wood, action will be taken to develop innovative new technologies and products by calling for ideas from private enterprises, develop environmentally friendly wood preserving technologies, and develop technologies for making effective use of lumber from thinning. (¥443 million)

g. In order to promote business innovation in the wood industry, necessary removal costs for the disposal of facilities resulting from the rationalization of operations will be subsidized, and the development of facilities required to protect the environment and rationalize processing and distribution operations will be promoted. (¥121 million budget)

h. In order to promote the use of local lumber in housing, action will be taken to encourage housing construction using lumber from traceable sources and the development of interior materials suitable for home renovation through collaboration between interested parties ranging from forest owners to home builders. (Portion of ¥488 million budget)

i. Steps will be taken to promote the introduction of HACCP procedures at marine product processing plants to provide consumers with safe and reliable marine produce. Comprehensive measures will also be taken to establish concrete standards to raise hygiene control at markets in areas of production, provide support to ensure their adoption, and draw up new manuals for the production of low salt, high water content marine products. (¥153 million budget)

j. Subsidies will be provided for activities to develop high-quality marine produce processing technologies, e.g. the development of technologies to improve the safety of marine produce at local government fishery test sites. (¥26 million budget)

In order to increase the efficiency of marine product processing and distribution processes, subsidies (¥10 million budget) will be provided for the development of techniques for rationalizing marine product processing and distribution, including the development of marine product distribution and processing techniques. Subsidies for the development of fishery resource recycling techniques to improve the efficiency of use of fishery resources will also be provided (¥20 million budget). Recycling technologies and systems for recovering in a very fresh condition and recycling and reusing in a more advanced manner leftovers from marine product processing that deteriorate particularly easily will also be developed. (¥10 million budget)

2) Loans for enterprises in the agriculture, forestry and fishing industries
a. Funds will be loaned by institutions such as the Agriculture, Forestry and Fisheries Finance Corporation to enable specific agricultural producers affected by the liberalization of the agricultural produce market to make business improvements in accordance with the Law on Temporary Measures to Improve the Business of Specific Agricultural Product Processors.

b. Loans will be provided by the Agriculture, Forestry and Fisheries Finance Corporation for the development of facilities required for the upgrading of control and manufacturing processes of food enterprises in order to promote the introduction of HACCP methods in accordance with the Law on Temporary Measures on Upgrading the Control of Food Manufacturing Processes.

c. Funds will be loaned by the Agriculture, Forestry and Fisheries Finance Corporation to promote the adoption of new uses for specific agricultural, forestry and marine produce and new varieties for processed raw materials.

d. Food manufacturers and businesses in the agriculture, forestry and fishing industries will build stable business relations, and the Agriculture, Forestry and Fisheries Finance Corporation will loan the funds for the development of the necessary agriculture, forestry and fishery facilities.

e. Institutions such as the Agriculture, Forestry and Fisheries Finance Corporation will provide loans to dairy farmers to improve their dairy facilities.

f. In order to rationalize the production and distribution of wood, loans will be provided by the Wood Industry Upgrading Promotion Fund, and loans of the necessary funds for improving management in the forestry and wood industries will be provided under the Forestry and Wood Industry Improvement Fund Subsidization Law (provisional name).

g. In order to maintain and improve the use of peripheral resources and strengthen the structure of the marine produce processing industry in response to changes in the conditions faced by the industry, loans will be provided from marine produce processing funds and marine product business improvement promotion funds.

(2) Rationalization of food and wood distribution

1) Activities will be undertaken through the Organization of Food Marketing Structure Improvement to provide education and guidance in and encourage the spread of knowledge and skills required to enable small and medium food distributors to adapt to the situation surrounding food distribution. Structural improvement will also be promoted in accordance with the Law to Promote Structural Improvement of Food Distribution. (¥82 million budget)

2) Support will be provided for joint activities, such as joint transportation and joint product development, undertaken by food distributors in collaboration with producers and wholesalers. (¥22 million budget)

3) Loans for the modernization of the retail of fresh food will be provided to food distributors by the National Life Finance Corporation. Loans for the improvement of the food distribution structure will also be provided by the Agriculture, Forestry and Fisheries Finance Corporation, the Japan Finance Corporation for Small Business and the National Life Finance Corporation.

4) Reorganization and rationalization of the dairy industry will be promoted, and subsidies provided for the development of dairy facilities enabling a high level of hygiene control (¥490 million grant-in-aid (use will also be made of funds allocated for the Agriculture and Livestock Industries Corporation)). In addition, comprehensive implementation of hygiene control in dairy facilities will be promoted.

5) In order to supply wood products of clear quality and performance at low cost to meet user needs, the organization of material producing entities, development of a system for supplying drying materials, development of processing and distribution hubs, and the introduction of leased machinery and equipment will be promoted. (Portion of ¥2,615 million budget)

7. Measures for SMEs in the transport industry

(1) Outline of measures for SMEs in the transport industry

Support will be provided for SMEs in the transport industry by, among other things, supporting the enhancement of business fundamentals and business innovation.

(2) Measures to support business innovation

Guidance and support will be provided for the enhancement of business fundamentals and business innovation under the Law on Supporting Business Innovation of Small and Medium Enterprises.

(3) Measures to improve logistical efficiency

Activities will be pursued to raise the efficiency of logistics operations through, for example, the development of shared delivery facilities by small and medium truck operators under the Law Concerning the Promotion of Efficient Distribution Systems in Small and Medium Enterprises.

(4) Measures for local SMEs
Support will be provided for the advancement and revitalization of shipbuilding-related industries concentrated in regions centered around shipbuilding under the Law on Temporary Measures for Activation of Specific Regional Industrial Agglomerations.

5) Measures for specific industries
1) Warehousing industry
   The modernization of facilities, upgrading of logistics functions, and development of joint warehousing operations will be promoted in order to meet more complex logistics needs created by changes in the social and economic environment.

2) Automobile wrecking and maintenance business
   In order to facilitate the raising of funds required for the modernization of automobile wrecking and maintenance operations, loan guarantees will be provided and interest covered by making appropriate use of the automobile maintenance modernization fund program.

3) Coastal shipping business
   Action will be taken to promote the construction of ships to meet policy objectives, such as measures to protect the environment, the development of more efficient and advanced logistics, and measures to deal with the falling birthrate and population aging, through the utilization of the joint shipbuilding operations of the Japan Railway Construction, Transport and Technology Agency (unofficial translation). (¥182 million government subsidy)

4) Port transport business
   In order to promote the smooth and steady implementation of the Cinderella Project (a temporary coastal shipping measure designed to promote the construction of vessels to replace old and inefficient vessels by, for example, not providing grants-in-aid for the dismantling from April 2003 of vessels that are more than 15 years old), support will be provided through the provision of government guarantees for funds required under the project. (¥37,000 million government guarantee budget)

5) Small and medium shipbuilding and ship industries
   Continuing from fiscal 2002, the necessary tax and finance-related measures will be taken to support activities undertaken by businesses in accordance with plans for the improvement of business fundamentals drawn up by industry associations in the small and medium shipbuilding and ship industries under the Law on Supporting Business Innovation of Small and Medium Enterprises in order to support activities by businesses to strengthen their business fundamentals.

In combination with these measures, action will be taken to establish a safety net to ensure business stability through, for example, measures to strengthen credit enhancement measures and measures to stabilize employment.

8. Measures for small and medium building contractors

1) Securement and training of human resources
   The Minister of Land, Infrastructure and Transport’s Award for Outstanding Engineering will be awarded to outstanding construction engineers, and measures to secure and train human resources will be pursued by the Fund for Construction Industry Promotion and the Construction Industry Education Center.

2) Organization and cooperation
   Measures will be taken to promote greater organization among business cooperatives of small and medium building contractors, and guidance will be provided on the rational management of joint business operations.

3) Business innovation and rationalization
   1) The use of support measures under the Law on Supporting Business Innovation of Small and Medium Enterprises will be promoted, and guidance and information provided to promote business innovation by small and medium building contractors.

2) In order to promote the spread of expertise in the unique bookkeeping and accounting practices of the construction industry, improve accounting skills, and contribute to the rationalization and modernization of business, construction business accountancy examinations will be held on a trial basis by the Fund for Construction Industry Promotion.

3) Measures will be taken to raise awareness of the Guidelines on the Preparation of Business Improvement Principles in Each Industry formulated in September 1990, and support and guidance will be provided concerning independent action to improve management (e.g., subsidies by the Fund for Construction Industry Promotion).

4) In order to strengthen the business fundamentals of small and medium building contractors, the Fund for Construction Industry Promotion will provide financial consultation services and programs to train successors in the construction industry.

4) Facilitation of financing
   Steps will be taken to promote the use of loans provided by government-affiliated financial institutions and
deposit loans provided by advance guarantee providers. Measures will also be taken to promote uptake of the subcontractor safety-net loan guarantee scheme following its expansion under the fiscal 2002 supplementary budget in order to prevent the deterioration of the financial position and knock-on bankruptcy of small, medium and middle-tier building contractors.

(5) Surveys and research
The Research Institute of Construction and Economy (RICE) and the Fund for Construction Industry Promotion will undertake surveys and research on issues facing the construction industry, and the Fund for Construction Industry Promotion will consider the expansion of the construction expert business strength index (proposed “step-up” index) and the industries covered.

(6) Rationalization of construction production systems
Action will be taken to further raise awareness of the “Principles for the Rationalization of Production Systems in the Construction Industry”. At the same time, the expert basic policy committee established under the Central Construction Production System Rationalization Promotion Council will actively consider rationalization of the diverse production systems currently in existence.

(7) Modernization of local small and medium homebuilders
In order to further the modernization of local small and medium homebuilders, comprehensive measures to promote construction of wooden housing will be taken, and support will be provided for business guidance, use of IT in design and calculations, and the training of skilled workers. Particular support will be given for the development of skilled workers as successors in order to help strengthen the structure for production of wooden housing using traditional construction methods.

9. Measures for small and medium realtors

(1) Development of the real estate market
In order to promote cooperation among small and medium realtors and contribute to the development of the real estate market, the functions of designated transaction organizations will be enhanced and their use promoted. Regarding the Real Estate Information Network System (REINS), it is necessary to raise interest among consumers as well as small and medium realtors and to raise consumer confidence in the system. Uptake of the system will therefore also be promoted.

(2) Financial measures for small and medium realtors
Loan guarantees and interest coverage will be provided for equipment fund loans to small and medium realtors by government-affiliated financial institutions for SMEs, and joint facility funds and funds for cooperation among business associations will be provided by the Real Estate Transaction Modernization Center.

Section 2 Response to energy and environmental issues

1. Support for rationalization of energy use by SMEs

(1) Provision of information on energy conservation by SMEs
JASMEC will cooperate with prefectural support centers for SMEs to organize courses and provide information to promote awareness of energy issues. (¥154 million budget)

(2) Support for promotion of introduction of facilities to rationalize energy use
JASMEC will cooperate with prefectural support centers for SMEs to provide advisory services and information on the introduction of facilities to rationalize energy use, and also dispatch experts. (¥525 million budget)

(3) Measures to rationalize energy use and improve logistical efficiency
Surveys and research, system design and trial operation of systems leading to the construction of joint logistics systems operated by associations formed by small and medium wholesalers will be supported, and experts will be dispatched when small and medium wholesalers investigate ways of improving logistical efficiency. (¥507 million budget)

(4) Subsidization of cost of rationalization of energy use and other technological improvements (promotion of technological innovation in priority fields)
The relevant ministries and agencies will cooperate to indicate to SMEs and ventures technological priorities pertaining to oil substitutes and rationalization of energy use to meet economic and social needs, and publicly invite research proposals in these areas. JASMEC will then commission research and development work on the best proposals. (¥703 million budget)

2. Provision of information to SMEs on environmental and safety issues
JASMEC will cooperate with prefectural support centers
for SMEs to provide information to SMEs through activities such as courses on environmental and safety issues (e.g., provision of information on creating an environmentally sustainable society, provision of information on control of chemical substances, provision of information on environmental auditing and management). (¥221 million budget)

Section 3 Promotion of human rights awareness

In order to propagate the idea of respect for human rights and cultivate awareness of human rights among SMEs, prefectures will be commissioned to organize activities such as lectures to raise awareness of human rights.

Section 4 Measures for SMEs in Okinawa

With regard to measures for SMEs in Okinawa, ¥71 billion will be allocated for loans to SMEs by the Okinawa Development Finance Corporation. The special loan program will also be expanded, and the terms of loans improved.

Chapter 16 Promotion of surveys and public information activities

Section 1 Surveys

Industrial production indices will be recompiled by size of enterprise and manufacturing production, shipment and inventory indices calculated by size. In addition, the following surveys and studies will be conducted:

1. Surveys of business conditions among SMEs, trends in capital investment by SMEs in the wholesaling, retailing and service industries, and bankruptcies among SMEs, etc.
2. Preparation of input-output tables by size of enterprise for industries such as manufacturing
3. Dynamic analysis of financing and business innovation among SMEs, etc.
4. Surveys concerning the assessment of SME policies

Section 2 Publicizing of measures

1. Public information activities conducted via media such as the Internet and radio

SME support organizations will cooperate to provide information directly to SMEs and would-be entrepreneurs on the latest measures using e-mail newsletters (“e-SME Net Magazine”). The “e-SME Agency & Network Project” will also be promoted to allow SMEs and others to give their views and suggestions regarding measures and ask for business advice via the Internet. Effective use will also be made of terrestrial and broadcasting satellite digital TV to publicize actual business problems faced and responses taken by SMEs in order to provide pointers regarding self-help efforts and future courses of action, and to raise awareness of SME measures. At the same time, information will be publicized on a trial basis via Internet streaming broadcasts.

2. Print media publications

“A Compendium of Measures for Small and Medium Enterprises” will be produced for distribution to local governments and organizations providing guidance for SMEs, etc. to explain and provide a resource for increasing awareness and use of SME measures implemented in fiscal 2003. In order to promote implementation and uptake of SME measures, a “Guide to Use of Measures” and leaflets will be produced explaining measures in concise, concrete terms, and these will be widely distributed to SMEs through local governments and other organizations working with SMEs.

3. “SME Agency for a Day” event

In order to directly determine people’s views and wishes concerning SME measures so that they can be reflected in future government policies, an “SME Agency for a Day” event will be held.
APPENDED NOTES
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Appended Note 1-1-1  Decomposition analysis of changes in SME financial position DI

1. Model
Dependent variable: Change from previous quarter in financial position DI (‘improved’ minus ‘worsened’)
Explanatory variables:
1) Ease of borrowing factor: one-quarter lag regarding change from previous quarter in ease of long-term and short-term borrowing DI (“easy” minus “difficult”) in manufacturing
2) Sales factor: change from previous quarter in sales DI (“increase” minus “decrease”)
3) Profitability factor: change from previous quarter in profitability (ordinary profit) DI (“improved” minus “deteriorated”)
This factor was not included for non-manufacturing as it was not found to be statistically significant.

2. Data set

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>SMMs</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
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</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>0.060</td>
<td>0.114</td>
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<tr>
<td>Ease of borrowing factor</td>
<td>0.136</td>
<td>0.047</td>
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</tr>
<tr>
<td>Sales factor</td>
<td>0.395</td>
<td>0.029</td>
<td>***</td>
</tr>
<tr>
<td>Profitability factor</td>
<td>0.144</td>
<td>0.043</td>
<td>***</td>
</tr>
<tr>
<td>DW ratio</td>
<td>2.426</td>
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<td></td>
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<tr>
<td>Estimation period</td>
<td>April-June 1982 to October-December 2002</td>
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</tbody>
</table>

Adjusted RSQ=0.902

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Small and medium non-manufacturers

<table>
<thead>
<tr>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>0.060</td>
<td>0.079</td>
</tr>
<tr>
<td>Ease of borrowing factor</td>
<td>0.231</td>
<td>0.035</td>
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<tr>
<td>Sales factor</td>
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<td>0.022</td>
</tr>
<tr>
<td>DW ratio</td>
<td>2.135</td>
<td></td>
</tr>
<tr>
<td>Estimation period</td>
<td>January-March 1982 to October-December 2002</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted RSQ=0.865

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 1-1-2  Estimation of capital investment and capital stock by size

(1) Size
Business corporations with capital of at least ¥100 million were defined as large enterprises. All other business corporations were defined as SMEs.

(2) Method of estimation of capital investment
Fresh investment under the “other tangible fixed assets” and “construction in progress” components of the change in fixed assets according to the Financial Statements Statistics of Corporations by Industry, Quarterly was defined as capital investment. Of this amount, capital of at least ¥100 million adjusted for inflation by a capital investment deflator was treated as that of large enterprises. Real capital investment by SMEs was calculated by subtracting the amount for large enterprises from the value of real private enterprise capital investment according to statistics on the capital stock of private enterprises (progress base).

(3) Method of estimation of capital stock
The value of capital stock of private enterprises in the benchmark year was apportioned according to the ratio of tangible fixed assets (excluding land) of large enterprises (capital stock of at least ¥100 million) to SMEs (other) according to the Financial Statements Statistics of Corporations by Industry, Annually. In the following and subsequent quarters, real capital investment in the current quarter calculated according to (2) above was added to stock in the previous quarter. While elimination of capital stock must also be taken into consideration, it is not possible to determine the elimination rates by size from the statistics. The elimination rates used were therefore calculated from capital investment and capital stock according to statistics on the capital stock of private enterprises for enterprises of all sizes.
(4) Method of calculation of elimination rate
Elimination rate = \[ \frac{I_t - (K_t - K_{t-1})}{K_t} \]
I: Capital investment  K: Capital stock

**Appended Note 1-1-3 Relationship between bankruptcies and exits**

![Diagram of bankruptcy and exit processes]

<table>
<thead>
<tr>
<th>Bankruptcy</th>
<th>Exit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconstruction</td>
<td>Filing for corporate reorganization</td>
</tr>
<tr>
<td></td>
<td>Filing for civil rehabilitation, etc.</td>
</tr>
<tr>
<td>Legal petition</td>
<td>Filing for insolvency</td>
</tr>
<tr>
<td></td>
<td>Filing for special liquidation</td>
</tr>
<tr>
<td>Suspension of bank transactions</td>
<td>Liquidation not by legal petition</td>
</tr>
<tr>
<td>Initiation of personal resolution</td>
<td>Liquidation</td>
</tr>
</tbody>
</table>

(Termination and withdrawal from business regardless of whether bankruptcy has occurred)

Source: Prepared by SME Agency.

**Appended Note 1-2-1 Trends in value of shipments and average prices of SMMs**

1. Decomposition analysis of value of shipments and average prices

   (1) If the factors are decomposed as follows
   
   SMM shipment value in year t / SMM shipment index in year t ..........Pt (P)
   Wholesale price index for typical SME manufactured goods in year t ...... Pt (L)
   SMM shipment value in year t / Pt (L) ....................................................Qt (P)
   SMM shipment index in year t ...............................................................Qt (L)
   SMM shipment value in year t ...............................................................PtQt

   then
   
   \[ PtQt = Pt(P) \times Pt(L) \times Qt(P) \times Qt(L) \]

   therefore
   
   \[ \frac{\Delta PtQt}{PtQt-1} = \frac{\Delta Pt(P) \times Pt(L)}{Pt-1(P) \times Pt-1(L)} + \frac{\Delta Qt(P) \times Qt(L)}{Qt-1(P) \times Qt-1(L)} \]

   furthermore
   
   \[ \sqrt{Pt(P)} \times Pt(L) = \sqrt{Pt(P)} \times \sqrt{Pt(L)} = \frac{\sqrt{Pt(P)} \times Pt(L)}{Pt(P)} \times Pt(L) \]

   therefore if
   
   \[ \sqrt{Pt(P)} \times Pt(L) = Pt(F) \]

   then
   
   \[ \frac{\Delta Pt(F)}{Pt(F)-1} = \frac{\Delta Pt(P) / Pt(L)}{Pt-1(P) / Pt-1(L)} + \frac{\Delta Pt(L)}{Pt-1(L)} \]

   Price factor  Volume factor

   Product lineup factor  Market factor
(2) Explanation of factors

1) Price factor
Rate of growth in average price calculated by dividing the value of shipments by the shipment index (Paasche price index) and geometric mean of the wholesale price index (Laspeyres price index).

2) Volume factor
Rate of growth in the volume of shipments calculated by dividing the value of shipments by the wholesale price index (Paasche volume index) and the geometric mean of the shipment index (Laspeyres volume index).

3) Product lineup factor
Component categories of the price index are treated as comprising the product lineup of industry, which expresses the trend in the shift in the percentage breakdown between products to high value-added products or low value-added products. The effect of changes in the product lineup can be examined by focusing on changes in quantity at a base point in time and a comparative point in time after first fixing prices. Because of differences in the methods of preparing price indices, this may be determined by calculating the ratio of the Paasche price index determined by dividing the value of shipments by the shipment index and the Laspeyres price index (wholesale price index).

However, changes in brand composition within the same product category cannot be determined due to the nature of the data available. Accordingly, increases in quality and functionality within the same item category are here included in 4) the market factor.

4) Market factor
The market factor is the rate of growth resulting from treating the wholesale price index as the market price.

2. Regarding establishments with at least four workers given in the Census of Manufactures for each year, the value of shipments of small and medium establishments (establishments with 300 or fewer workers) in each six-digit item category is determined to give the “SMM shipment value”.

Due to the determination of establishments in 1998, the value of shipments from that year are level corrected.

3. “Typical SME manufactured goods” are products shipped by industries defined under the Japan Standard Industry Classification in which small and medium establishments account for at least 50% of the value of shipments according to the “Value of Shipments” in the 1995 Census of Manufactures.

Appended Note 1-3-1 Experience of refusal of loan from financial institution and borrowing policy of SMEs

1. Model
Dependent variable: Dummy variable for reduction/non-reduction of borrowing regarding borrowing policy in following year (reduction = 1, other = 0)

Explanatory variables:
1) Natural log of enterprise age (2002 - year of establishment + 1)
2) Natural log of number of employees
3) Dummy variable for refusal/non-refusal of application regarding application for borrowing from main bank in past year (refused = 1, other = 0)
4) Equity ratio (latest fiscal year, same below)
5) Ordinary profit to sales
6) Industry dummies (construction, manufacturing, information and communications, transport, wholesaling, retailing, real estate, food services, services)

2. Data set
3. Results of estimates (estimated by probit model)

<table>
<thead>
<tr>
<th></th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
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<tr>
<td>Constant term</td>
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<td>0.126</td>
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<tr>
<td>Enterprise age</td>
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<tr>
<td>Number of employees</td>
<td>0.028</td>
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<tr>
<td>Refusal of borrowing</td>
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<tr>
<td>application dummy</td>
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<tr>
<td>Ordinary profit</td>
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<tr>
<td>Construction dummy</td>
<td>0.154</td>
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<tr>
<td>Manufacturing dummy</td>
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<tr>
<td>Information and</td>
<td>-0.004</td>
<td>0.162</td>
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<tr>
<td>communications dummy</td>
<td>0.039</td>
<td>0.120</td>
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<tr>
<td>Transportation dummy</td>
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<tr>
<td>Wholesaling dummy</td>
<td>0.190</td>
<td>0.084</td>
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<tr>
<td>Retailing dummy</td>
<td>-0.133</td>
<td>0.120</td>
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<tr>
<td>Real Estate dummy</td>
<td>-0.042</td>
<td>0.201</td>
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<tr>
<td>Food services dummy</td>
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<td>0.087</td>
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<tr>
<td>Services dummy</td>
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<td>Sample size</td>
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</table>

*** = 1% significance level    ** = 5% significance level    * = 10% significance level

Appended Note 1-3-2  Impact of cash flow on capital investment (SMMs)

1. Model
An estimate was performed as follows of enterprises whose capital investment in the current term exceeded cash flow in the current term.
Estimation formula: \( I = \alpha \cdot K_{i-1} + \beta \cdot CF + \gamma \)
(I: capital investment, CF: cash flow (ordinary profit \( \times \frac{1}{2} + \) depreciation expenses), \( K_{i-1} \): balance of tangible fixed assets at end of previous term)
In the actual calculations, both sides of the equation were divided by \( K_{i-1} \) in order to eliminate the effect of enterprise size. Enterprises regarded as outliers were excluded.

2. Data set

3. Results of estimates (estimated by least squares method)

**1997**

<table>
<thead>
<tr>
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<tr>
<td>Constant term</td>
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<td>0.016</td>
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<tr>
<td>Cash flow factor</td>
<td>1.009</td>
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<tr>
<td>Capital stock factor</td>
<td>87.679</td>
<td>5.228</td>
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<td>Sample size</td>
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*** = 1% significance level    ** = 5% significance level    * = 10% significance level

**1998**

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<th>Standard error</th>
<th>Significance level</th>
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<tr>
<td>Constant term</td>
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<td>0.023</td>
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<tr>
<td>Cash flow factor</td>
<td>0.805</td>
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<tr>
<td>Capital stock factor</td>
<td>25.430</td>
<td>3.002</td>
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*** = 1% significance level    ** = 5% significance level    * = 10% significance level

**1999**

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<th>Standard error</th>
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<tr>
<td>Constant term</td>
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<td>Cash flow factor</td>
<td>0.522</td>
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<tr>
<td>Capital stock factor</td>
<td>35.750</td>
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<tr>
<td>Sample size</td>
<td>2,332</td>
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</tbody>
</table>

*** = 1% significance level    ** = 5% significance level    * = 10% significance level
Appended Note 1-3-3 NPL rate and rate of growth in outstanding lending to SMEs

1. Model
Dependent variable: Rate of growth in outstanding lending to SMEs (end FY2000~end FY2001).
Explanatory variable: NPL rate (non-performing loans / total assets) (end FY2000).

2. Data set
Japan Financial News, Nikkin Shiryounenpou.
NPLs are defined as loans to bankrupt borrowers and past due loans. The types of financial institution used in the data set were city banks, regional banks, second-tier regional banks and credit associations. Financial institutions that merged or were involved in business transfers during fiscal 2001 were excluded. Values regarded as outliers were also excluded.

3. Results of estimates

<table>
<thead>
<tr>
<th>Year</th>
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<th>Significance level</th>
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<td>2000</td>
<td><strong>Constant term</strong></td>
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<td>0.011</td>
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<td></td>
<td><strong>Cash flow factor</strong></td>
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<td><strong>Capital stock factor</strong></td>
<td>51.972</td>
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<td><strong>Sample size</strong></td>
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<td>2001</td>
<td><strong>Constant term</strong></td>
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<td><strong>Cash flow factor</strong></td>
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<td><strong>Capital stock factor</strong></td>
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<tr>
<td></td>
<td><strong>Sample size</strong></td>
<td>2,051</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Adjusted RSQ=0.281

Rate of growth in outstanding lending to SMEs

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>Constant term</td>
<td>-0.025</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>Standard error</td>
<td>-0.535</td>
<td>0.125</td>
</tr>
<tr>
<td></td>
<td>Significance level</td>
<td>426</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Adjusted RSQ=0.039

Appended Note 2-1-1 Analysis of characteristics of fields in which SMEs have large presence

1. Model
Share of sub-MES establishments: share of value of shipments of establishments equal to or below the minimum efficient scale in each major group of industry (= average size of workforce in industry / 0.75) (1989-2001)
1) Industry scale: value of shipments of manufactured products in each major group of industry
2) Capital intensity: tangible fixed assets / number of workers
3) Return on sales: (value added - total cash earnings) / value of shipments of manufactured products
4) Demand risk: standard deviation (past five years) of ROA (= (value added - total cash earnings) / tangible fixed assets)
5) Advertising intensity: advertising spending / sales (average of past three years)
6) R&D intensity: R&D spending / sales (average of past three years)
7) Top four concentration: share of value of shipments in each major group of industry accounted for by top four
Method of estimation: multiple regression analysis

2. Data set
Dependent and explanatory variables: METI, Census of Manufactures, Basic Survey of Japanese Business Structure and Activities; Fair Trade Commission, Cumulative Industrial Concentration, Herfindahl Index and Cumulative Shipment Concentration.
3. Results of estimates (8) to 18) omitted

Adjusted RSQ=0.608

<table>
<thead>
<tr>
<th>Rate of growth in number of workers</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>13.602</td>
<td>1.950</td>
<td>***</td>
</tr>
<tr>
<td>Industry scale</td>
<td>-0.000</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>Capital intensity</td>
<td>-0.002</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>Return on sales</td>
<td>0.372</td>
<td>0.043</td>
<td>***</td>
</tr>
<tr>
<td>Demand risk</td>
<td>0.009</td>
<td>0.002</td>
<td>***</td>
</tr>
<tr>
<td>Advertising intensity</td>
<td>-1.269</td>
<td>0.223</td>
<td>***</td>
</tr>
<tr>
<td>R&amp;D intensity</td>
<td>-1.216</td>
<td>0.161</td>
<td>***</td>
</tr>
<tr>
<td>Top 4 concentration ratio</td>
<td>-0.046</td>
<td>0.026</td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>212</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-1-2  Relation between enterprise growth rate and engagement in development of new products

1. Model

Dependent variables: 1) Rate of growth in sales (= ln (sales in 2002 / sales in 1998))
2) Rate of growth in number of workers (= ln (number of workers in 2002 / number of workers in 1998))

Explanatory variables: 1) Engagement of development of new products dummy (yes = 1, no = 0), 2) Enterprise age, 3) Size of workforce, 4) Manufacturing dummy, 5) Wholesaling dummy, 6) Retailing dummy, 7) Services dummy

Method of estimation: Multiple regression analysis

2. Data set


3. Results of estimates

Adjusted RSQ=0.004

<table>
<thead>
<tr>
<th>Rate of growth in sales</th>
<th>Rate of growth in number of workers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.087</td>
</tr>
<tr>
<td>Engagement in development of new products dummy</td>
<td>0.036</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.061</td>
</tr>
<tr>
<td>Size of workforce</td>
<td>0.015</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.052</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.098</td>
</tr>
<tr>
<td>Retailing dummy</td>
<td>0.064</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.094</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,453</td>
</tr>
</tbody>
</table>

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-1-3  Impact of kinship to entrepreneur on enterprise growth

1. Model

Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)

Explanatory variables: 1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1999
3) Management kinship dummy (representative director in FY1999 relative of founder)
4) Industry dummies (reference value: retailing)
2. Data set


3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.011</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.002</td>
<td>0.007</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.018</td>
<td>0.011</td>
</tr>
<tr>
<td>Management kinship dummy</td>
<td>0.023</td>
<td>0.020</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.030</td>
<td>0.022</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.079</td>
<td>0.053</td>
</tr>
<tr>
<td>Services dummy</td>
<td>-0.033</td>
<td>0.046</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.033</td>
<td>0.046</td>
</tr>
<tr>
<td>Sample size</td>
<td>3,466</td>
<td>3,387</td>
</tr>
</tbody>
</table>

Adjusted RSQ=0.001
Adjusted RSQ=0.003

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-1-4 Impact of board kin ratio on enterprise growth

1. Model

Dependent variables:  
1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)

Explanatory variables:  
1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1999
3) Board kin ratio (proportion of directors other than representative director who are relatives of representative director in 2002)
4) Industry dummies (reference value: retailing)

2. Data set


3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.008</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.006</td>
<td>0.007</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.051</td>
<td>0.016</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.024</td>
<td>0.020</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.027</td>
<td>0.022</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.077</td>
<td>0.053</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.031</td>
<td>0.046</td>
</tr>
<tr>
<td>Sample size</td>
<td>3,428</td>
<td>3,355</td>
</tr>
</tbody>
</table>

Adjusted RSQ=0.003
Adjusted RSQ=0.005

*** = 1% significance level     ** = 5% significance level      * = 10% significance level
Appended Note 2-1-5  Impact of kin shareholding ratio on enterprise growth

1. Model
   Dependent variables:
   1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
   2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)
   
   Explanatory variables:
   1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
   2) Natural log of sales or number of regular workers in FY1999
   3) Kin shareholding ratio (proportion of number of shares issued and outstanding held by relatives of representative director (including representative director) in FY2002)
   4) Industry dummies (reference value: retailing)

2. Data set
   The sample was obtained by concatenating the data from SME Agency, Fact-finding Survey on Business Management Strategy (November 2002) and METI, Basic Survey of Japanese Business Structure and Activities (2000) to determine the enterprises for which data could be obtained for 2000 and 2002.

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.011</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.004</td>
</tr>
<tr>
<td>Sales</td>
<td>—</td>
</tr>
<tr>
<td>Kin shareholding ratio</td>
<td>-0.001</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.029</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.035</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.100</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.037</td>
</tr>
</tbody>
</table>

Sample size: 3,090 3,040

Adjusted R$^2$=0.003

Appended Note 2-1-6  Impact of appointment of outside directors on enterprise growth

1. Model
   Dependent variables:
   1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
   2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)
   
   Explanatory variables:
   1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
   2) Natural log of sales or number of regular workers in FY1999
   3) Appointment of outside director dummy (appointment of outsider to board of directors: yes = 1, no = 0)
   4) Industry dummies (reference value: retailing)

2. Data set
   The sample was obtained by concatenating the data from SME Agency, Fact-finding Survey on Business Management Strategy (November 2002) and METI, Basic Survey of Japanese Business Structure and Activities (2000) to determine the enterprises for which data could be obtained for 2000 and 2002.
3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Enterprise age</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.013</td>
<td>0.008</td>
<td>-</td>
<td>-0.023</td>
<td>0.011</td>
<td>-</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.002</td>
<td>0.007</td>
<td>-</td>
<td>-0.001</td>
<td>0.007</td>
<td>-</td>
</tr>
<tr>
<td>Sales</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Appointment of outside director dummy</td>
<td>0.009</td>
<td>0.009</td>
<td>—</td>
<td>0.040</td>
<td>0.013</td>
<td>—</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.022</td>
<td>0.020</td>
<td>—</td>
<td>-0.035</td>
<td>0.028</td>
<td>—</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.029</td>
<td>0.022</td>
<td>—</td>
<td>0.001</td>
<td>0.031</td>
<td>—</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.079</td>
<td>0.053</td>
<td>—</td>
<td>-0.004</td>
<td>0.076</td>
<td>—</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.050</td>
<td>0.046</td>
<td>—</td>
<td>0.132</td>
<td>0.073</td>
<td>—</td>
</tr>
</tbody>
</table>

**Sample size**: 3,466

Adjusted RSQ = 0.004

---

**Appended Note 2-1-7** Impact of presence of “right-hand man” on enterprise growth

1. **Model**

   Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
   2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)

   Explanatory variables: 1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
   2) Natural log of sales or number of regular workers in FY1999
   3) Presence of “right-hand man” dummy (“right-hand man” present = 1, no “right-hand man” = 0)
   4) Industry dummies (reference value: retailing)

2. **Data set**


3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Enterprise age</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.013</td>
<td>0.008</td>
<td>-</td>
<td>-0.023</td>
<td>0.011</td>
<td>-</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.001</td>
<td>0.007</td>
<td>-</td>
<td>-0.001</td>
<td>0.007</td>
<td>-</td>
</tr>
<tr>
<td>Sales</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Presence of “right-hand man” dummy</td>
<td>0.037</td>
<td>0.010</td>
<td>—</td>
<td>0.057</td>
<td>0.015</td>
<td>—</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.024</td>
<td>0.020</td>
<td>—</td>
<td>-0.032</td>
<td>0.028</td>
<td>—</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.029</td>
<td>0.022</td>
<td>—</td>
<td>-0.005</td>
<td>0.031</td>
<td>—</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.080</td>
<td>0.053</td>
<td>—</td>
<td>0.005</td>
<td>0.076</td>
<td>—</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.073</td>
<td>0.047</td>
<td>—</td>
<td>0.100</td>
<td>0.074</td>
<td>—</td>
</tr>
</tbody>
</table>

**Sample size**: 3,466

Adjusted RSQ = 0.005

---

**Appended Note 2-1-8** Impact of decision-making structure of representative director on enterprise growth

1. **Model**

   Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1997)
   2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1997)
Explanatory variables: 1) Natural log of enterprise age in FY1997 (1997 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1997
3) “Consensus building to a degree” dummy
4) “Consensus building until parties satisfied” dummy
   (reference value = “no consensus building” dummy)
5) Industry dummies (reference value: retailing)
Respondents chose one of the following options regarding “consensus building”:
1) Respect opinions of interested parties where no agreement is reached even after some attempt at consensus building
2) Respect opinion of representative director where no agreement is reached even after some attempt at consensus building
3) Continue consensus building until both parties are satisfied
4) Respect opinion of interested parties without consensus building
5) Respect opinion of representative director without consensus building
Dummy variables were therefore constructed as follows:
   “Consensus building to a degree” dummy = 1), 2)
   “Consensus building until parties satisfied” dummy = 3)
   “No consensus building” dummy = 4), 5)

2. Data set

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.030</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.009</td>
<td>0.005</td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consensus building to a degree dummy</td>
<td>0.094</td>
<td>0.021</td>
</tr>
<tr>
<td>Consensus building until parties satisfied dummy</td>
<td>0.101</td>
<td>0.023</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.022</td>
<td>0.018</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.037</td>
<td>0.021</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.001</td>
<td>0.043</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.173</td>
<td>0.039</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,607</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-1-9  Correlation between business philosophy and enterprise performance

1. Model
Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1997)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1997)
Explanatory variables: 1) Natural log of enterprise age in FY1997 (1997 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1997
3) Industry dummies (reference value: retailing)
4) Stakeholder-oriented only philosophy dummy (enterprise with stakeholder-oriented philosophy and without social-contribution-oriented philosophy = 1, other enterprise = 0)
Survey findings regarding business philosophies were classified as follows for the purpose of our calculations:
1) Stakeholder-oriented philosophy:
   Management for customers, management for employees and employees’ families, management for shareholders, management for development and perpetual growth of company
2) Social-contribution-oriented philosophy
Management to contribute to specific industries and culture, management aiming for innovation and progress, management to contribute to development of Japanese economy, management to contribute to world, management considering global environment

2. Data set

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.023</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.009</td>
<td>0.005</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.031</td>
<td>0.011</td>
</tr>
<tr>
<td>Stakeholders only</td>
<td>0.022</td>
<td>0.018</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.046</td>
<td>0.021</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.036</td>
<td>0.043</td>
</tr>
<tr>
<td>Services dummy</td>
<td>-0.102</td>
<td>0.036</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.102</td>
<td>0.036</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,758</td>
<td>4,583</td>
</tr>
</tbody>
</table>

Adjust RSQ=0.005 Adjusted RSQ=0.002

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

A similar analysis was performed exchanging explanatory variable 4) for the following:
- Social-contribution-oriented dummy (all enterprises with social-contribution-oriented philosophy = 1, other enterprises = 0)

4. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.023</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.008</td>
<td>0.005</td>
</tr>
<tr>
<td>Sales</td>
<td>-0.031</td>
<td>0.011</td>
</tr>
<tr>
<td>Social-contribution-oriented dummy</td>
<td>0.044</td>
<td>0.011</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.021</td>
<td>0.018</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.046</td>
<td>0.021</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.036</td>
<td>0.043</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.130</td>
<td>0.035</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,758</td>
<td>4,583</td>
</tr>
</tbody>
</table>

Adjust RSQ=0.006 Adjusted RSQ=0.006

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-1-10 Impact of innovativeness of products and services on enterprise performance

1. Model
Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1997)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1997)
3) Operating profit to total assets (operating profit in FY2001 / total assets in FY2001)
4) Operating profit to sales (operating profit in FY2001 / sales in FY2001)

Explanatory variables: 1) Natural log of enterprise age in FY1997 (1997 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1997
3) Industry dummies (reference value: retailing)
4) New for world dummy
5) New for Japan dummy
6) New for market dummy (reference value: new for own company)

2. Data set

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Enterprise age</th>
<th>Rate of growth in number of workers</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>-0.009</td>
<td>0.009</td>
<td>-0.038</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>Rate of growth in number of workers</td>
<td>-0.005</td>
<td>0.006</td>
<td>—</td>
</tr>
<tr>
<td>Sales</td>
<td>Rate of growth in number of workers</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>New for world dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.117</td>
<td>0.027</td>
<td>—</td>
</tr>
<tr>
<td>New for Japan dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.077</td>
<td>0.023</td>
<td>—</td>
</tr>
<tr>
<td>New for market dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.067</td>
<td>0.014</td>
<td>—</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.017</td>
<td>0.021</td>
<td>—</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.025</td>
<td>0.024</td>
<td>—</td>
</tr>
<tr>
<td>Services dummy</td>
<td>Rate of growth in number of workers</td>
<td>0.063</td>
<td>0.049</td>
<td>—</td>
</tr>
<tr>
<td>Constant term</td>
<td>Rate of growth in number of workers</td>
<td>-0.132</td>
<td>0.040</td>
<td>—</td>
</tr>
<tr>
<td>Sample size</td>
<td>Rate of growth in number of workers</td>
<td>3,571</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating profit to total assets</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise age</td>
<td>-0.008</td>
<td>0.003</td>
<td>**</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.011</td>
<td>0.002</td>
<td>***</td>
</tr>
<tr>
<td>Sales</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>New for world dummy</td>
<td>0.011</td>
<td>0.009</td>
<td>0.006</td>
</tr>
<tr>
<td>New for Japan dummy</td>
<td>0.010</td>
<td>0.008</td>
<td>0.009</td>
</tr>
<tr>
<td>New for market dummy</td>
<td>0.011</td>
<td>0.005</td>
<td>0.010</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.025</td>
<td>0.007</td>
<td>—</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>-0.020</td>
<td>0.008</td>
<td>—</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.005</td>
<td>0.017</td>
<td>0.008</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.122</td>
<td>0.014</td>
<td>—</td>
</tr>
<tr>
<td>Sample size</td>
<td>3,359</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appended Note 2-1-11 Impact of engagement in marketing on enterprise performance

1. Model
Dependent variables: 1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1997)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1997)
3) Operating profit to total assets (operating profit in FY2001 / total assets in FY2001)
4) Operating profit to sales (operating profit in FY2001 / sales in FY2001)
Explanatory variables: 1) Natural log of enterprise age in FY1997 (1997 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1997
3) Marketing expansion dummy (enterprises intending to expand marketing in future = 1, enterprises not expanding marketing = 0)
4) Industry dummies (reference value: retailing)
2. Data set


3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Rate of growth in number of workers</th>
<th>Rate of growth in sales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimated coefficient</strong></td>
<td><strong>Standard error</strong></td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.022</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.007</td>
</tr>
<tr>
<td>Sales</td>
<td>—</td>
</tr>
<tr>
<td>Marketing expansion dummy</td>
<td>0.100</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.029</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>0.046</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.018</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.180</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,863</td>
</tr>
</tbody>
</table>

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-1-12  Impact of engagement in marketing on commercialization of products

1. Model

Dependent variables: Successful commercial development or improvement of products dummy (successful enterprises = 1, unsuccessful enterprises = 0)
Explanatory variables:  
1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)  
2) Natural log of number of regular workers in FY1999  
3) Operating profit to sales in FY2001 (FY2001 operating profit / FY2001 sales)  
4) Industry dummies (manufacturing, wholesaling)

2. Data set


3. Results of estimates (estimated by probit analysis)

Log likelihood= -164.12231

| Enterprise age | -0.166 | 0.147 | |
| Number of regular workers | 0.274 | 0.144 | * |
| Operating profit to sales | 3.096 | 1.205 | * |
| Manufacturing dummy | 0.123 | 0.401 | |
| Wholesaling dummy | 0.020 | 0.427 | |
| Subcontractor dummy | -0.306 | 0.156 | * |
| Entrepreneur age | 0.004 | 0.009 | |
| Entrepreneur appointment period | -0.009 | 0.005 | * |
| Entrepreneur’s responsibility for R&D dummy | 0.273 | 0.270 | |
| Entrepreneur’s sales experience dummy | 0.226 | 0.157 | |
| Marketing expansion dummy | 0.384 | 0.145 | ** |
| Constant term | 1.078 | 1.065 | |
| Sample size | 2,598 | |

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-1-13  Impact of advertising intensity on enterprise performance

1. Model

Dependent variables:  
1) Rate of growth in number of workers (natural log of number of regular workers in FY2001 - natural log of number of regular workers in FY1999)
2) Rate of growth in sales (natural log of sales in FY2001 - natural log of sales in FY1999)
3) Operating profit to total assets (operating profit in FY2001 / total assets in FY2001)
4) Operating profit to sales (operating profit in FY2001 / sales in FY2001)

Explanatory variables:
1) Natural log of enterprise age in FY1999 (1999 - year of establishment + 1)
2) Natural log of sales or number of regular workers in FY1999
3) FY1999 advertising spending intensity (FY1999 advertising spending / FY1999 sales)
4) Industry dummies (reference value: retailing)

2. Data set

3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th></th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of growth in number of workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.013</td>
<td>0.008</td>
<td>*</td>
<td>-0.024</td>
<td>0.011</td>
<td>*</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.002</td>
<td>0.007</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
<td></td>
<td>-0.028</td>
<td>0.010</td>
<td>**</td>
</tr>
<tr>
<td>Advertising intensity</td>
<td>0.646</td>
<td>0.385</td>
<td>*</td>
<td>0.100</td>
<td>0.550</td>
<td></td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.027</td>
<td>0.020</td>
<td></td>
<td>-0.034</td>
<td>0.029</td>
<td></td>
</tr>
<tr>
<td>Wholesaleing dummy</td>
<td>0.033</td>
<td>0.022</td>
<td></td>
<td>-0.003</td>
<td>0.032</td>
<td></td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.081</td>
<td>0.053</td>
<td></td>
<td>0.004</td>
<td>0.076</td>
<td></td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.045</td>
<td>0.046</td>
<td></td>
<td>0.141</td>
<td>0.073</td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>3,466</td>
<td></td>
<td></td>
<td>3,387</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level   ** = 5% significance level   * = 10% significance level

<table>
<thead>
<tr>
<th></th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating profit to total assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.005</td>
<td>0.002</td>
<td>*</td>
<td>0.001</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.001</td>
<td>0.002</td>
<td></td>
<td>0.001</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
<td></td>
<td>-0.004</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Advertising intensity</td>
<td>0.370</td>
<td>0.108</td>
<td>**</td>
<td>0.482</td>
<td>0.092</td>
<td>**</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.004</td>
<td>0.005</td>
<td></td>
<td>0.003</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Wholesaleing dummy</td>
<td>0.001</td>
<td>0.006</td>
<td>*</td>
<td>-0.001</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.030</td>
<td>0.015</td>
<td>*</td>
<td>0.022</td>
<td>0.013</td>
<td></td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.041</td>
<td>0.013</td>
<td></td>
<td>0.010</td>
<td>0.011</td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>3,347</td>
<td></td>
<td></td>
<td>3,386</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level   ** = 5% significance level   * = 10% significance level

**Appended Note 2-2-1 Method of calculation of entry and exit rates**


(Example) Calculation of entry and exit rates based on number of establishments, 1999~2001

(1) Annual average number of entries of establishments
The MPHPT’s *Establishment and Enterprise Census of Japan* groups the number of establishments according to period of establishment. According to the 2001 *Establishment and Enterprise Census of Japan*, the number of new establishments since 2000 was 406,705. As the survey period from January 1, 2000 to the date of the survey on October 1, 2001 is 21 months, the number of new establishments (406,705) is divided by 21 and multiplied by 12.

\[406,705 \div 21 \times 12 = 232,403\]
(2) Annual average increase in the number of establishments
The annual average increase in the number of establishments is calculated by dividing the increase in the number of establishments from the date of the previous survey on July 1, 1999 to October 1, 2001 (-65,768) by the period between the surveys (27 months) and multiplying by 12.
\[-65,768 \div 27 \times 12 \equiv -29,230\]

(3) Annual average number of exits of establishments
The annual average number of exits of establishments is calculated by subtracting the annual average increase in the number of establishments from the annual average number of entries of establishments.
232,403 - (-29,230) = 261,633

(4) Entry rate
The entry rate is calculated by dividing the annual average number of entries of establishments (1) by the number of establishments at the time of the previous survey (6,184,829) and multiplying the result by 100.
\[232,403 \div 6,184,829 \times 100 \equiv 3.8\%\]

(5) Exit rate
The exit rate is calculated by dividing the annual average number of exits of establishments (3) by the number of establishments at the time of the previous survey, and multiplying the result by 100.
\[261,633 \div 6,184,829 \times 100 \equiv 4.2\%\]

(Example) Method of calculation of entry and exit rates based on number of establishments in 1996~1999

(1) Annual average number of entries of establishments, annual average number of exits of establishments
The MPHPT’s 1999 Establishment and Enterprise Census of Japan groups the number of establishments into new establishments, closed establishments and continuing establishments according to their status of change. The number of new establishments (i.e. entries) and the number of closed establishments are each divided by the period from the date of the previous survey on October 1, 1996 to July 1, 1999 (33 months) and multiplied by 12 to calculate the annual average number of entries of establishments and annual average number of exits of establishments.
740,389 \div 33 \times 12 \equiv 269,232
1,058,431 \div 33 \times 12 \equiv 384,884

(2) Entry and exit rates
The annual average number of entries of establishments and annual average number of exits of establishments (1) are each divided by the number of establishments at the time of the previous survey and multiplied by 100.
269,232 \div 6,502,924 \times 100 \equiv 4.1\%
384,884 \div 6,502,924 \times 100 \equiv 5.9\%
# 3. Data (non-primary industry)

## 1) Enterprises (sole proprietorships + business companies)

<table>
<thead>
<tr>
<th>Year</th>
<th>Survey interval (months)</th>
<th>No. of enterprises at start of period</th>
<th>No. of entries</th>
<th>Entry survey period (months)</th>
<th>Increase in no. of enterprises</th>
<th>Annual average increase in no. of enterprises</th>
<th>Annual average no. of entries</th>
<th>Annual average no. of exits</th>
<th>Entry rate (%)</th>
<th>Exit rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975 – 1978</td>
<td>37</td>
<td>4,738,331</td>
<td>661,775</td>
<td>29.5</td>
<td>299,246</td>
<td>97,053</td>
<td>277,332</td>
<td>180,279</td>
<td>5.9</td>
<td>3.8</td>
</tr>
<tr>
<td>1978 – 1981</td>
<td>36.5</td>
<td>5,037,577</td>
<td>739,996</td>
<td>30</td>
<td>318,925</td>
<td>104,852</td>
<td>295,998</td>
<td>191,146</td>
<td>5.9</td>
<td>3.8</td>
</tr>
<tr>
<td>1981 – 1986</td>
<td>60</td>
<td>5,365,502</td>
<td>1,039,351</td>
<td>54</td>
<td>72,096</td>
<td>14,419</td>
<td>230,967</td>
<td>216,548</td>
<td>4.3</td>
<td>4.0</td>
</tr>
<tr>
<td>1986 – 1991</td>
<td>60</td>
<td>5,426,598</td>
<td>853,991</td>
<td>54</td>
<td>-126,240</td>
<td>-25,248</td>
<td>189,776</td>
<td>215,024</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>1991 – 1996</td>
<td>63</td>
<td>5,302,358</td>
<td>967,779</td>
<td>81</td>
<td>-147,968</td>
<td>-28,184</td>
<td>143,375</td>
<td>171,559</td>
<td>2.7</td>
<td>3.2</td>
</tr>
<tr>
<td>1996 – 1999</td>
<td>33</td>
<td>5,154,380</td>
<td>507,531</td>
<td>33</td>
<td>-253,477</td>
<td>-92,173</td>
<td>184,557</td>
<td>288,147</td>
<td>3.6</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Number in 2001: 4,739,929

## 2) Business companies (independent establishments and head offices, not including branches)

<table>
<thead>
<tr>
<th>Year</th>
<th>Survey interval (months)</th>
<th>No. of enterprises at start of period</th>
<th>No. of entries</th>
<th>Entry survey period (months)</th>
<th>Increase in no. of enterprises</th>
<th>Annual average increase in no. of enterprises</th>
<th>Annual average no. of entries</th>
<th>Annual average no. of exits</th>
<th>Entry rate (%)</th>
<th>Exit rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975 – 1978</td>
<td>37</td>
<td>978,007</td>
<td>113,039</td>
<td>29.5</td>
<td>62,666</td>
<td>20,324</td>
<td>45,982</td>
<td>25,658</td>
<td>4.7</td>
<td>2.6</td>
</tr>
<tr>
<td>1978 – 1981</td>
<td>36.5</td>
<td>1,040,673</td>
<td>139,678</td>
<td>30</td>
<td>138,146</td>
<td>45,418</td>
<td>55,871</td>
<td>10,453</td>
<td>5.4</td>
<td>1.0</td>
</tr>
<tr>
<td>1981 – 1986</td>
<td>60</td>
<td>1,178,819</td>
<td>234,223</td>
<td>54</td>
<td>143,689</td>
<td>28,738</td>
<td>52,050</td>
<td>23,312</td>
<td>4.4</td>
<td>2.0</td>
</tr>
<tr>
<td>1986 – 1991</td>
<td>60</td>
<td>1,322,508</td>
<td>266,717</td>
<td>54</td>
<td>230,506</td>
<td>46,101</td>
<td>59,270</td>
<td>13,169</td>
<td>4.5</td>
<td>1.0</td>
</tr>
<tr>
<td>1991 – 1996</td>
<td>63</td>
<td>1,553,014</td>
<td>310,761</td>
<td>81</td>
<td>112,167</td>
<td>21,365</td>
<td>46,039</td>
<td>24,674</td>
<td>3.0</td>
<td>1.6</td>
</tr>
<tr>
<td>1996 – 1999</td>
<td>33</td>
<td>1,665,161</td>
<td>174,728</td>
<td>33</td>
<td>-6,801</td>
<td>-2,473</td>
<td>63,537</td>
<td>87,773</td>
<td>3.8</td>
<td>5.3</td>
</tr>
<tr>
<td>1999 – 2001</td>
<td>27</td>
<td>1,658,380</td>
<td>80,346</td>
<td>21</td>
<td>-50,570</td>
<td>-22,476</td>
<td>45,912</td>
<td>68,388</td>
<td>2.8</td>
<td>4.1</td>
</tr>
</tbody>
</table>

Number in 2001: 1,607,810

## 3) Sole proprietorships (independent establishments, head offices and branches)

<table>
<thead>
<tr>
<th>Year</th>
<th>Survey interval (months)</th>
<th>No. of enterprises at start of period</th>
<th>No. of entries</th>
<th>Entry survey period (months)</th>
<th>Increase in no. of enterprises</th>
<th>Annual average increase in no. of enterprises</th>
<th>Annual average no. of entries</th>
<th>Annual average no. of exits</th>
<th>Entry rate (%)</th>
<th>Exit rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966 – 1969</td>
<td>36</td>
<td>4,230,738</td>
<td>964,474</td>
<td>42</td>
<td>419,757</td>
<td>139,919</td>
<td>215,564</td>
<td>135,645</td>
<td>6.5</td>
<td>3.2</td>
</tr>
<tr>
<td>1969 – 1972</td>
<td>38</td>
<td>4,650,495</td>
<td>863,015</td>
<td>32</td>
<td>463,228</td>
<td>146,283</td>
<td>323,968</td>
<td>177,686</td>
<td>7.0</td>
<td>3.6</td>
</tr>
<tr>
<td>1972 – 1975</td>
<td>32.5</td>
<td>5,113,723</td>
<td>744,865</td>
<td>28.5</td>
<td>275,577</td>
<td>101,752</td>
<td>313,627</td>
<td>211,876</td>
<td>6.1</td>
<td>4.1</td>
</tr>
<tr>
<td>1975 – 1978</td>
<td>37</td>
<td>5,389,300</td>
<td>818,730</td>
<td>29.5</td>
<td>460,021</td>
<td>148,196</td>
<td>333,043</td>
<td>183,847</td>
<td>6.2</td>
<td>3.4</td>
</tr>
<tr>
<td>1978 – 1981</td>
<td>36.5</td>
<td>5,849,321</td>
<td>966,325</td>
<td>30</td>
<td>419,750</td>
<td>138,000</td>
<td>368,530</td>
<td>220,530</td>
<td>6.1</td>
<td>3.8</td>
</tr>
<tr>
<td>1981 – 1986</td>
<td>60</td>
<td>6,269,071</td>
<td>1,324,318</td>
<td>54</td>
<td>225,270</td>
<td>45,054</td>
<td>294,293</td>
<td>249,239</td>
<td>4.7</td>
<td>4.0</td>
</tr>
<tr>
<td>1986 – 1989</td>
<td>36</td>
<td>6,494,341</td>
<td>826,723</td>
<td>36</td>
<td>127,905</td>
<td>42,635</td>
<td>275,574</td>
<td>232,939</td>
<td>4.2</td>
<td>3.6</td>
</tr>
<tr>
<td>1991 – 1994</td>
<td>33.7</td>
<td>6,541,741</td>
<td>846,139</td>
<td>33.7</td>
<td>-9,761</td>
<td>-3,479</td>
<td>301,594</td>
<td>305,073</td>
<td>4.6</td>
<td>4.7</td>
</tr>
<tr>
<td>1994 – 1996</td>
<td>29.3</td>
<td>6,531,980</td>
<td>418,612</td>
<td>21</td>
<td>-29,056</td>
<td>-11,887</td>
<td>239,207</td>
<td>251,093</td>
<td>3.7</td>
<td>3.8</td>
</tr>
<tr>
<td>1999 – 2001</td>
<td>27</td>
<td>6,184,829</td>
<td>406,705</td>
<td>21</td>
<td>-65,768</td>
<td>-29,230</td>
<td>232,403</td>
<td>261,633</td>
<td>3.8</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Number in 2001: 6,119,061
4. Additional information

Another method of calculating the entry and exit rates using the MPHPT’s Establishment and Enterprise Census of Japan in addition to methods 1 and 2 above is by tracing entries and exits back using the data from individual questionnaires. Surveys since 1991 have assigned a code consisting of a municipality code, survey block number and establishment number, and this code can be used to concatenate establishments with the results of surveys conducted in subsequent years in order to calculate the entry and exit rates.

The calculations are performed by classifying each establishment into one of the following categories based on the concatenated results:

(Example) Entry and exit rates for 1999~2001
Continuing establishments: establishments traceable from the questionnaire data from start (1999) and end (2001) of period and found to exist at both points in time
New establishments (entries): establishments not found to exist at the start of the period (1999) and found to exist only at the end of the period (2001)
Closed establishments: establishments found to exist at the start of the period (1999) but not at the end of the period (2001)

Entry rate = annual average number of entries of establishments / number of establishments at start of period (1999) \times 100 (%) 
Exit rate = annual average number of exits of establishments / number of establishments at start of period (1999) \times 100 (%) 

* Important points regarding 1~4 above
Establishments that migrated across the boundaries of survey blocks (which numbered 248,000 as of March 2001 and each consisted of around 30 establishments) cannot be concatenated using questionnaire data. As it is also not possible to concatenate establishments from which questionnaires could not be collected for reasons such as temporary closure of business at the time of the survey, it should be borne in mind that both the number of entries and exits of establishments may in reality be larger.

5. Treatment in this report

1) As questionnaire data cannot be traced back prior to 1991, long-term entry and exit rates are calculated based on the data published by the MPHPT in order to ensure data continuity (method 1, 2 above).
2) Due to the practical difficulty of calculating the entry and exit rates from the establishment periods published by the MPHPT (due to the large impact of changes of industry), entry and exit rates by industry group and municipality for 1999~2001 are calculated based on questionnaire date (method 4 above).

Appended Note 2-2-2  Characteristics of would-be entrepreneurs

1. Model
Dependent variable: Would-be entrepreneur = 1, other = 0 (males only)
“Would-be entrepreneurs” are here defined as employed persons wanting to change jobs (including regular employees) who responded that they wanted to go into business themselves and were not preparing to enter business.

Explanatory variables: 1) Age dummy (twenties, thirties, forties, fifties), 2) Personal income dummy (¥500,000~4,990,000, ¥5,000,000~9,990,000, ¥10,000,000 or over), 3) Spouse dummy, 4) Education dummy, 5) Industry dummies (manufacturing, wholesaling/retailing, food services, services)

Method of estimation: Probit analysis

2. Data set
3. Results of estimates

<table>
<thead>
<tr>
<th>Base item</th>
<th>Estimated coefficient</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>-3.411</td>
<td>***</td>
</tr>
<tr>
<td>Twenties</td>
<td>0.883</td>
<td>***</td>
</tr>
<tr>
<td>Thirties</td>
<td>0.912</td>
<td>***</td>
</tr>
<tr>
<td>Forties</td>
<td>0.734</td>
<td>***</td>
</tr>
<tr>
<td>Fifties</td>
<td>0.487</td>
<td>***</td>
</tr>
<tr>
<td>Personal income ($500,000~$4,990,000)</td>
<td>0.396</td>
<td>***</td>
</tr>
<tr>
<td>Personal income ($5,000,000~$9,990,000)</td>
<td>0.255</td>
<td>***</td>
</tr>
<tr>
<td>Personal income ($10,000,000 or over)</td>
<td>-0.025</td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>0.174</td>
<td>***</td>
</tr>
<tr>
<td>Education</td>
<td>-0.043</td>
<td>***</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.027</td>
<td>*</td>
</tr>
<tr>
<td>Wholesaling/retailing and food services dummy</td>
<td>0.176</td>
<td>***</td>
</tr>
<tr>
<td>Services dummy</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>298,134</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-21,322.2</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

**Appended Note 2-2-3 About the Fact-finding Survey of Business Succession**

Implementing entity: Japan Small Business Research Institute (JSBRI)
Cooperating entities: Ota City Industrial Promotion Organization, Higashiosaka Chamber of Commerce and Industry
Date of survey: December 2002
Method: Postal survey
Subjects: All SMET registered enterprises in Ota-ku, all member enterprises of Higashiosaka Chamber of Commerce and Industry

<table>
<thead>
<tr>
<th>Area</th>
<th>Subjects</th>
<th>No. sent</th>
<th>No. of valid responses</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ota-ku</td>
<td>SMET registered enterprises</td>
<td>5,966</td>
<td>959</td>
<td>16.07%</td>
</tr>
<tr>
<td>Higashiosaka City</td>
<td>All member enterprises of Higashiosaka Chamber of Commerce and Industry</td>
<td>3,528</td>
<td>588</td>
<td>16.67%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9,494</td>
<td>1,547</td>
<td>16.29%</td>
</tr>
</tbody>
</table>

**Appended Note 2-2-4 Desire to exit and attributes of enterprises and entrepreneurs**

1. Model
   
   Dependent variable: Exit desire dummy (1 = want to exit, 0 = want to continue in business)
   
   Explanatory variables: 1) Natural log of enterprise age, 2) Natural log of number of employees, 3) Limited liability dummy, 4) Ordinary profit dummy, 5) Two terms ordinary loss dummy, 6) More assets than liabilities dummy, 7) More liabilities than assets dummy, 8) Own technology/know-how dummy, 9) Entrepreneur age, 10) Years in office of entrepreneur, 11) Founder dummy, 12) Successor dummy, 13) Ota-ku dummy, 14) Industry dummies
   
   Method of estimation: Probit analysis

2. Data set
   
3. Results of estimates (industry dummies omitted)

<table>
<thead>
<tr>
<th>Base item</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>1.120</td>
<td>1.543</td>
<td></td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>0.373</td>
<td>0.144</td>
<td>***</td>
</tr>
<tr>
<td>Natural log of number of employees</td>
<td>-0.751</td>
<td>0.071</td>
<td>***</td>
</tr>
<tr>
<td>Limited liability dummy</td>
<td>-0.410</td>
<td>0.151</td>
<td>***</td>
</tr>
<tr>
<td>Ordinary profit dummy</td>
<td>-0.102</td>
<td>0.160</td>
<td></td>
</tr>
<tr>
<td>Two terms ordinary loss dummy</td>
<td>0.259</td>
<td>0.156</td>
<td>*</td>
</tr>
<tr>
<td>More assets than liabilities dummy</td>
<td>-0.029</td>
<td>0.147</td>
<td></td>
</tr>
<tr>
<td>More liabilities than assets dummy</td>
<td>0.021</td>
<td>0.144</td>
<td></td>
</tr>
<tr>
<td>Own technology/know-how dummy</td>
<td>-0.555</td>
<td>0.123</td>
<td>***</td>
</tr>
<tr>
<td>Entrepreneur age</td>
<td>-0.027</td>
<td>0.008</td>
<td>***</td>
</tr>
<tr>
<td>Years in office of entrepreneur</td>
<td>-0.011</td>
<td>0.007</td>
<td></td>
</tr>
<tr>
<td>Founder dummy</td>
<td>0.086</td>
<td>0.259</td>
<td></td>
</tr>
<tr>
<td>Successor dummy</td>
<td>0.082</td>
<td>0.247</td>
<td></td>
</tr>
<tr>
<td>Ota-ku dummy</td>
<td>0.327</td>
<td>0.127</td>
<td>***</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-353.790</td>
<td>985</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-2-5  Financing in event of deterioration in business and behavioral economics

The winner of the 2002 Nobel Price for economics, Daniel Kahneman, has put forward a highly psychologically realistic behavioral model called prospect theory as an alternative to traditional uncertainty theory. According to conventional economic theory, humans act and think consistently, and always make rational judgments. However, the premise of behavioral economics is that humans do not always behave rationally under uncertain conditions.

Applying this theory to the entrepreneurs of enterprises whose condition is deteriorating, we find the following. If the slump in an enterprise’s performance continues and an entrepreneur ceases business when liabilities are greater than assets, capital that has already been injected becomes irrecoverable, which subjects the entrepreneur as an individual to the additional burden of repaying liabilities covered by personal guarantees. Let us assume that exiting business results in a loss of ¥1 million. However, it may be possible to continue in business for an additional expenditure of ¥1 million and, assuming a change in conditions enabling the enterprise to again generate a profit, to eliminate the excess liabilities and avoid the ¥1 million loss. Of course, if the enterprise cannot again generate a profit, there will be incurred an additional loss of ¥2 million in addition to the ¥1 million, thus putting the entrepreneur in an even worse situation.

If the possibility of performance recovering and the excess liabilities being eliminated is one in two, then the possibility of choosing one option is exactly the same as the possibility of choosing the other according to traditional economic theory. (Profits after the elimination of the excess of liabilities are not in such a case considered.) In reality, however, most entrepreneurs probably choose to shoulder the additional burden and continue in an attempt to avert disaster. This is because humans have a strong desire to avoid certain losses as far as possible. In Japan in particular, the severe social attitude toward exits and bankruptcies may well make an entrepreneur even more disposed to choose to avoid exit or bankruptcy.

In actual enterprise management, uncertainty is even greater and it is extremely difficult to estimate the probability of eliminating excess liabilities. If we look at the Fact-finding Survey of Business Rechallenge, however, we find there not to be a contradiction between bankrupt enterprises undertaking unreasonable levels of financing and the tendency of humans to act to avoid certain loss.

Entrepreneurs need to make rational judgments concerning the possibility of successfully turning their businesses around according to the additional cost, and it is necessary to create a climate in which it is more socially acceptable to take courageous decisions to avoid worsening the damage.

Appended Note 2-2-6  About the Fact-finding Survey on Overcoming Difficulties

Implementing entity: Small Business Institute Japan (SBI)
Date of survey: December 2002
Method: Postal survey
Subjects: Random sample

<table>
<thead>
<tr>
<th>Area</th>
<th>No. sent</th>
<th>No. of valid responses</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationwide</td>
<td>10,000</td>
<td>1,803</td>
<td>18.0%</td>
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</tbody>
</table>
Appended Note 2-2-7  
**Measures taken at times of business crisis and avoidance of bankruptcy**

1. **Model**
   - **Dependent variables:** Bankruptcy dummy (1 = bankrupt enterprise, 0 = surviving enterprises (enterprises still in and likely to remain in a critical condition only))
   - **Explanatory variables:**
     1) Equity ratio, 2) Ratio of deposits to borrowing, 3) Ordinary profit to sales, 4) Strengthening of sales and marketing operations dummy, 5) Engagement in development and improvement of goods and services dummy, 6) Revision of distribution and sales channels dummy, 7) Increase in unit selling/order price dummy (including requests), 8) Reduction of purchasing/outsourcing expenses (including requests) dummy, 9) Reduction of directors/employees dummy, 10) Reduction of directors/employees pay dummy, 11) Other cost reductions dummy, 12) Sale of idle assets/facilities dummy, 13) Revision of terms of payment/receipt (including requests) dummy, 14) Scaling down and change of business (including business transfer) dummy, 15) Request for investment/loan from financial institution, supplier or customer dummy, 16) Request for investment/loan from relative or acquaintance dummy, 17) Injection of entrepreneur’s personal assets dummy, 18) Injection into enterprise of borrowing in entrepreneur’s own name

   **Method of estimation:** Probit analysis

2. **Data set**

3. **Results of estimates**

<table>
<thead>
<tr>
<th></th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Base item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>-0.750</td>
<td>0.108</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equity ratio</td>
<td>-0.001</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio of deposits to borrowing</td>
<td>-0.001</td>
<td>0.000</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Ordinary profit to sales</td>
<td>0.000</td>
<td>0.014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strengthening of sales and marketing operations dummy</td>
<td>0.086</td>
<td>0.105</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Engagement in development and improvement of goods and services dummy</td>
<td>-0.334</td>
<td>0.131</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Revision of distribution and sales channels dummy</td>
<td>-0.178</td>
<td>0.134</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Increase in unit selling/order price (including requests) dummy</td>
<td>0.020</td>
<td>0.174</td>
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</tr>
<tr>
<td>Reduction of purchasing/outsourcing expenses (including requests) dummy</td>
<td>-0.200</td>
<td>0.111</td>
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<td></td>
</tr>
<tr>
<td>Reduction of directors/employees dummy</td>
<td>0.072</td>
<td>0.158</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of directors/employees pay dummy</td>
<td>-0.256</td>
<td>0.114</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Other cost reductions dummy</td>
<td>-0.136</td>
<td>0.118</td>
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<td></td>
</tr>
<tr>
<td>Sale of idle assets/facilities dummy</td>
<td>-0.026</td>
<td>0.137</td>
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<tr>
<td>Revision of terms of payment/receipt (including requests) dummy</td>
<td>0.392</td>
<td>0.133</td>
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</tr>
<tr>
<td>Scaling down and change of business (including business transfer) dummy</td>
<td>0.327</td>
<td>0.145</td>
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<tr>
<td>Request for investment/loan from financial institution, supplier or customer dummy</td>
<td>0.390</td>
<td>0.113</td>
<td>**</td>
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</tr>
<tr>
<td>Request for investment/loan from relative or acquaintance dummy</td>
<td>0.359</td>
<td>0.144</td>
<td>**</td>
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</tr>
<tr>
<td>Injection of entrepreneur’s personal assets dummy</td>
<td>0.276</td>
<td>0.112</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Injection into enterprise of borrowing in entrepreneur’s own name</td>
<td>-0.032</td>
<td>0.119</td>
<td>*</td>
<td></td>
</tr>
</tbody>
</table>

Log likelihood: -437.910

Sample size: 947

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-2-8  
**Continuation in business after bankruptcy and enterprise attributes**

1. **Model**
   - **Dependent variables:** State of continuation in business (1= business continuing, 0 = business suspended or closed down)
   - **Explanatory variables:**
     1) Entrepreneur age, 2) Corporation dummy, 3) Natural log of enterprise age, 4) Natural log of number of employees at time of bankruptcy, 5) Subcontracting dummy, 6) Increase in sales in term before bankruptcy dummy, 7) Decrease in sales in term before bankruptcy dummy, 8) Ordinary profit in term before bankruptcy dummy, 9) Ordinary loss in term before bankruptcy dummy, 10) More assets than liabilities dummy, 11) More liabilities than assets dummy, 12) Industry dummies

   **Method of estimation:** Probit analysis
2. Data set

3. Results of estimates (industry dummies omitted)

<table>
<thead>
<tr>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Base item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>0.624</td>
<td>0.671</td>
<td></td>
</tr>
<tr>
<td>Entrepreneur age</td>
<td>-0.003</td>
<td>0.005</td>
<td></td>
</tr>
<tr>
<td>Corporation dummy</td>
<td>-0.424</td>
<td>0.077</td>
<td></td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>-0.161</td>
<td>0.079</td>
<td></td>
</tr>
<tr>
<td>Natural log of number of employees at time of bankruptcy</td>
<td>0.140</td>
<td>0.036</td>
<td>***</td>
</tr>
<tr>
<td>Subcontracting dummy</td>
<td>-0.281</td>
<td>0.041</td>
<td>Has subcontracting business = 1</td>
</tr>
<tr>
<td>Increase in sales in term before bankruptcy dummy</td>
<td>0.270</td>
<td>0.143</td>
<td>*</td>
</tr>
<tr>
<td>Decrease in sales in term before bankruptcy dummy</td>
<td>0.141</td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>Ordinary profit in term before bankruptcy dummy</td>
<td>0.071</td>
<td>0.145</td>
<td></td>
</tr>
<tr>
<td>Ordinary loss in term before bankruptcy dummy</td>
<td>-0.155</td>
<td>0.124</td>
<td></td>
</tr>
<tr>
<td>More assets than liabilities dummy</td>
<td>-0.165</td>
<td>0.175</td>
<td></td>
</tr>
<tr>
<td>More liabilities than assets dummy</td>
<td>-0.085</td>
<td>0.128</td>
<td></td>
</tr>
<tr>
<td>Natural log of number of employees of continuing business</td>
<td>0.090</td>
<td>0.052</td>
<td>*</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-580.957</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>1,122</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level    ** = 5% significance level      * = 10% significance level

Appended Note 2-2-9  Analysis of business conditions of enterprises continuing in business after bankruptcy

1. Model
Dependent variables: Business conditions of continuing business (2 = surplus, 1 = breaking even, 0 = loss)
Explanatory variables: 1) Increase in sales in term before bankruptcy dummy 2) Decrease in sales in term before bankruptcy dummy, 3) Ordinary profit in term before bankruptcy dummy, 4) Ordinary loss in term before bankruptcy dummy, 5) More assets than liabilities dummy, 6) More liabilities than assets dummy, 7) Natural log of number of employees of continuing business, 8) Industry dummies
Method of estimation: Ordered probit analysis

2. Data set

3. Results of estimates (industry dummies omitted)

<table>
<thead>
<tr>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Base item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in sales in term before bankruptcy dummy</td>
<td>-0.226</td>
<td>0.221</td>
<td></td>
</tr>
<tr>
<td>Decrease in sales in term before bankruptcy dummy</td>
<td>-0.371</td>
<td>0.161</td>
<td>*</td>
</tr>
<tr>
<td>Ordinary profit in term before bankruptcy dummy</td>
<td>0.384</td>
<td>0.230</td>
<td></td>
</tr>
<tr>
<td>Ordinary loss in term before bankruptcy dummy</td>
<td>-0.097</td>
<td>0.192</td>
<td></td>
</tr>
<tr>
<td>More assets than liabilities dummy</td>
<td>-0.394</td>
<td>0.286</td>
<td></td>
</tr>
<tr>
<td>More liabilities than assets dummy</td>
<td>-0.160</td>
<td>0.194</td>
<td></td>
</tr>
<tr>
<td>Natural log of number of employees of continuing business</td>
<td>-0.090</td>
<td>0.092</td>
<td>*</td>
</tr>
<tr>
<td>More liabilities than assets dummy</td>
<td>-0.085</td>
<td>0.128</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-331.749</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>324</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level    ** = 5% significance level      * = 10% significance level
Appended Note 2-3-1  
Comparison of financing patterns of enterprises in Japan and U.S.

### Debt/capital composition of American manufacturers by size of assets  
(end September 2002)

<table>
<thead>
<tr>
<th></th>
<th>Bank borrowing</th>
<th>Other borrowing</th>
<th>Inter-enterprise credit</th>
<th>Corporate bonds</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>All enterprises</td>
<td>27.5</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>Under $5,000,000</td>
<td>30.5</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$5,000,000~under</td>
<td>21.3</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$10,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$20,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$50,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$20,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$100,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$250,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$1,000,000,000~under</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
<tr>
<td>$1,000,000,000 or more</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
<td>21.3</td>
<td>20.6</td>
</tr>
</tbody>
</table>


### Debt/capital composition of Japanese manufacturers by size of assets  
(fiscal 2001)

<table>
<thead>
<tr>
<th></th>
<th>Bank borrowing</th>
<th>Other borrowing</th>
<th>Inter-enterprise credit</th>
<th>Corporate bonds</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>All enterprises</td>
<td>18.8</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>Under ¥500,000,000</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥500,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥1,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥2,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥5,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥10,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥20,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥50,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥100,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥250,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥1,000,000,000,000~under</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
<tr>
<td>¥1,000,000,000,000 or more</td>
<td>11.0</td>
<td>12.8</td>
<td>12.8</td>
<td>20.6</td>
<td>21.3</td>
</tr>
</tbody>
</table>


### Appended Note 2-3-2  
Characteristics of enterprise that borrow easily

1. **Model**

   **Dependent variables:**
   1) Response of main bank to loan applications in past year (mostly reduced or refused = 1, mostly approved = 0)
   2) Interest rate (short-term borrowing rate at end October 2002): average interest rate for all industries = 2.103%

   **Explanatory variables:**
   - **Variables regarding enterprise in general**
     1) Natural log of enterprise age
     2) Natural log number of employees
   - **Variables regarding bank transactions, etc.**
     3) Number of banks (total number of city banks, long-term credit banks, trust banks, regional banks, second-tier regional banks, credit associations and credit cooperatives with which an enterprise had transactions according to its latest financial results)
     4) Superior bank dummy (share of outstanding borrowing from leading bank where main bank is a regional/second-tier regional bank and from regional/second-tier regional bank where main bank is credit association is over 30% = 1, other = 0)
     5) Main bank dummy (dummy variables respectively established for enterprises whose main bank is a leading bank, regional/second-tier regional bank, and credit association/coop; reference value is credit association/coop, and enterprises whose main bank is another type of financial institution are excluded)
     6) Length of relationship with main bank (years)
     7) Non-borrowing transactions dummy (enterprises obtaining at least seven of 13 types of service other than borrowing from their main bank (current account, term deposits, draft payment collection, settlement of notes payable, bank capital increase underwriting, underwriting of bonds issued by enterprise, enterprise capital increase underwriting, foreign exchange transactions, receipt of seconded or former bank staff, transactions with affiliates of bank, participation in meetings with customers/suppliers organized by bank, use of advisory services, etc., introduction of business) = 1, other enterprises = 0)
     8) Interest rate knowledge dummy = enterprises with accurate knowledge of deviation of own short-term borrowing rate from bank’s short-term prime rate = 1, other enterprises = 0)
9) Retrogressive use dummy (enterprises that use borrowing applied for in past year to make up for shortfall in operating funds, repay past borrowing or cover deficit = 1, other enterprises = 0)

Variables regarding disclosure by enterprises

10) Voluntary provision of data dummy (enterprises voluntarily providing data = 1, other enterprises = 0)
11) Frequency of provision of data dummy (enterprises providing data to main bank at least once a month = 1, other enterprises = 0)

12) Number of measures to improve reliability of financial statements (number of following improvement measures taken: audited by certified public accountant, advised by certified public accountant, attachment of documents by licensed tax accountant, advised by licensed tax accountant, advised by (SME) business consultant, publication of accounting documents, other improvement measures)

13) Frequency of contact with lending staff dummy (enterprises that have contact with main bank lending staff at least once per month = 1, other enterprises = 0)
14) Branch proximity dummy (enterprises whose branch handling their borrowing with their main bank is within 10km = 1, enterprises whose branch is over 10km away = 0)

Variables regarding financial position

15) Equity ratio (shareholders’ equity / total assets)
16) Operating profit to total capital (operating profit / total assets)

Method of estimation: Least squares method, probit model

2. Data set

Data on dependent variables 1) response of main bank and 2) interest rate and on explanatory variables 1) natural log of enterprise age, 2) natural log of number of employees, 3) number of banks, 4) superior bank dummy, 5) main bank dummy, 6) length of relationship with main bank, 7) non-borrowing transactions dummy, 8) interest rate knowledge dummy, 9) retrogressive use dummy, 10) voluntary provision of data dummy, 11) frequency of provision of data dummy, 12) number of measures to improve reliability of financial statements, 13) frequency of contact with lending staff dummy and 14) branch proximity dummy are from SME Agency, Survey of the Financial Environment. Data for 15) equity ratio and 16) operating profit to total capital is from recompiled data on enterprises’ end-of-year financial statistics according to Tokyo Shoko Research Ltd. Database.

3. Hypotheses

Variables regarding enterprise in general

1) Natural log of enterprise age
   Older enterprises have creditworthiness built up over many years of doing business, while banks too regard the reputation of a long-established enterprise as evidence of an enterprise’s stability, and so should lend at lower interest rates.
2) Natural log of number of employees
   As Figs. 2-3-4~4 show, main banks’ responses and interest rates differ according to enterprise size. This is thought to be because banks regard an enterprise as being more stable the larger it is.

Variables regarding bank transactions

3) Number of banks
   The more banks an enterprise has, the greater its negotiating power, which should impact on the response and interest rates of its main bank (Fig. 2-3-24).
   On the other hand, having more banks may be regarded as being the result of the negativity of an enterprise’s main bank.
4) Superior bank dummy
   Competition between different types of financial institutions should put enterprises that do business with banks of a type superior to their main bank in an advantageous position in relation to borrowing (Figs. 2-3-21~22).
5) Main bank dummy
   As Figs. 2-3-15~16 show, the responses and interest rates of main banks differ according to their type. Leading banks lend at lower rates due to their lower procurement rates, but their response to loan applications should be “drier”, while the reverse should apply to local financial institutions.
6) Length of relationship with main bank
   Enterprises with a longer relationship with their main bank should have a stronger “relationship”, while banks should be able to accumulate more information, making borrowing easier (Figs. 2-3-17~18).
7) Non-borrowing transactions dummy
   The more services other than borrowing that an enterprise obtains from its main bank, the closer its relationship and the better placed it should be for borrowing.
8) Interest rate knowledge dummy
As interest rates too are determined through negotiation between bank and enterprise, knowing the level of interest rates (i.e. the price of funds) should lower the borrowing rate.

9) Retrogressive use dummy
Loan applications for retrogressive uses, such as to cover shortfalls in operating funds due to reduction of output, repay past borrowing and cover deficits should make it more difficult to obtain bank approval and so increase interest rates.

Variables regarding disclosure by enterprises

10) Voluntary provision of data dummy
Enterprises that provide data voluntarily should be regarded by banks as having a positive approach to disclosure and enable banks to accumulate more information on them, thus making borrowing easier (Figs. 2-3-30~31).

11) Frequency of provision of data dummy
Enterprises that provide data frequently should be regarded by banks as having a positive approach to disclosure and enable banks to accumulate more information on them, thus making borrowing easier.

12) Number of measures to improve reliability of financial statements
Enterprises endeavoring to improve the reliability of their financial statements should reassure banks that they can be investigated on the basis of their financial statements and that their data is of good quality, thus making borrowing easier.

13) Frequency of contact with lending staff dummy
Enterprises with a high frequency of contact with main banks’ lending staff should be able to communicate “soft” information other than financial data to their banks through their day-to-day contact, mitigating the “asymmetry of information” and making the terms of borrowing more favorable.

14) Branch proximity dummy
For banks, the nearer an enterprise is, the easier it should be to visit and obtain soft information, making lending easier.

Variables regarding financial status

15) Equity ratio
The equity ratio is an important financial indicator for determining the “safety” of an enterprise, and it should affect main banks’ responses and interest rates as indicated in Figs. 2-3-13~14.

16) Operating profit to total capital
The ratio of operating profit to total capital is an indicator of profitability. The more profitable an enterprise is, the greater its ability to repay lending. It should therefore have an impact on loan applications.

4. Results of estimates

<table>
<thead>
<tr>
<th></th>
<th>Response of main bank (refusal = 1)</th>
<th>Interest rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.014</td>
<td>0.204</td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>-0.041</td>
<td>0.056</td>
</tr>
<tr>
<td>Natural log of number of employees</td>
<td>-0.186</td>
<td>0.025</td>
</tr>
<tr>
<td>Number of banks</td>
<td>0.006</td>
<td>0.006</td>
</tr>
<tr>
<td>Superior bank dummy</td>
<td>-0.226</td>
<td>0.135</td>
</tr>
<tr>
<td>Leading bank as main bank dummy</td>
<td>0.276</td>
<td>0.090</td>
</tr>
<tr>
<td>Regional/second-tier regional bank as main bank dummy</td>
<td>-0.071</td>
<td>0.080</td>
</tr>
<tr>
<td>Length of relationship with main bank (years)</td>
<td>-0.004</td>
<td>0.002</td>
</tr>
<tr>
<td>Non-borrowing transactions dummy</td>
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<tr>
<td>Interest rate knowledge dummy</td>
<td>0.520</td>
<td>0.069</td>
</tr>
<tr>
<td>Retrogressive use dummy</td>
<td>-0.395</td>
<td>0.056</td>
</tr>
<tr>
<td>Voluntary provision of data dummy</td>
<td>0.651</td>
<td>0.064</td>
</tr>
<tr>
<td>Frequency of provision of data dummy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of measures to improve reliability of financial statements</td>
<td>-0.005</td>
<td>0.031</td>
</tr>
<tr>
<td>Frequency of contact with lending staff dummy</td>
<td>-0.238</td>
<td>0.074</td>
</tr>
<tr>
<td>Branch proximity dummy</td>
<td>-0.039</td>
<td>0.091</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>-0.694</td>
<td>0.081</td>
</tr>
<tr>
<td>Operating profit to total capital</td>
<td>-1.464</td>
<td>0.366</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,829</td>
<td>4,773</td>
</tr>
<tr>
<td>Adjusted RSQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-1,362,308</td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

The results were generally as hypothesized.
Appended Note 2-3-3  Characteristics of enterprises requested to accept an interest rate rise

1. Model
Dependent variables:
First stage
1) Rate rise request dummy (enterprises requested to accept an interest rate rise by main bank during past year = 1, other enterprises = 0)

Second stage
2) Rate rise dummy (enterprises requested to accept an interest rate rise by main bank during past year whose interest rate was actually increased = 1, enterprises that refused request = 0)

Explanatory variables:
Variable regarding enterprise in general
1) Natural log of number of employees

Variables regarding bank transactions
2) Superior bank dummy (share of outstanding borrowing from leading bank where main bank is a regional/second-tier regional bank and from regional/second-tier regional bank where main bank is credit association is over 30% = 1, other = 0)
3) Main bank dummy (dummy variables respectively provided for enterprises whose main bank is a leading bank, regional/second-tier regional bank, and credit association/coop; reference value is credit association/coop, and enterprises whose main bank is another type of financial institution are excluded)
4) Length of relationship with main bank (years)
5) Non-borrowing transactions dummy (enterprises obtaining at least seven of 13 types of service other than borrowing from their main bank (current account, term deposits, draft payment collection, settlement of notes payable, bank capital increase underwriting, underwriting of bonds issued by enterprise, enterprise capital increase underwriting, foreign exchange transactions, receipt of seconded or former bank staff, transactions with affiliates of bank, participation in meetings with customers/suppliers organized by bank, use of advisory services, etc., introduction of business) = 1, other enterprises = 0)
6) Interest rate knowledge dummy = enterprises with accurate knowledge of deviation of own short-term borrowing rate from bank’s short-term prime rate = 1, other enterprises = 0)

Variables regarding disclosure by enterprises
7) Voluntary provision of data dummy (enterprises voluntarily providing data = 1, other enterprises = 0)
8) Frequency of contact with lending staff dummy (enterprises that have contact with main bank lending staff at least once per month = 1, other enterprises = 0)

Variables regarding financial position
9) Equity ratio (shareholders’ equity / total assets)
10) Operating profit to total assets (operating profit / total assets)

Method of estimation: Sample-selection probit model

2. Data set
Data for dependent variables 1) rate rise request dummy and 2) rate rise dummy are from SME Agency, Survey of the Financial Environment. Data for other variables are from the same sources as for Appended Note 2-3-2.

3. Explanation and hypotheses
This analysis was performed by means of a sample-selection probit model using the variables expected to affect interest rates used in Appended Note 2-3-2. The first-stage consisted of analyzing whether enterprises were requested to accept an interest rate rise, and the second stage consisted of analyzing whether or not enterprises that were so requested actually experienced an interest rate rise.

For the first stage, the following variables were used as it was assumed that banks would use outward characteristics, such as size and financial status, as a benchmark and request that easily approachable enterprises accept an interest rate rise: 1) natural log of number of employees, 2) superior bank dummy, 3) main bank type dummy, 4) length of relationship with main bank, 7) voluntary provision of data dummy, 8) frequency of contact with lending staff dummy, 9) equity ratio, 10) operating profit to total capital.

It was assumed that whether an enterprise that was requested to accept an interest rate rise actually experienced an interest rate rise would be related to negotiations after the request and the intimacy of a bank and enterprise. For the second stage, therefore, the following variables considered to be related to negotiating strength and closeness were used: 1) natural log of number of employees, 4) length of relationship with main bank, 6) interest rate knowledge dummy.
4. Results of estimates

Log likelihood = -3,404,635  χ²P value = 0.002

<table>
<thead>
<tr>
<th>Characteristics of enterprises requested to accept an interest rate rise: first stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>- There exists a size gap regarding whether an enterprise is requested to accept an interest rate rise, with larger enterprises being less likely to be requested to do so.</td>
</tr>
<tr>
<td>- A comparison of types of financial institutions shows that credit associations/coops, regional/second-tier regional banks and leading banks are increasingly more likely in that order to request an interest rate rise.</td>
</tr>
<tr>
<td>- Important to note is that the length of relationship with a main bank and the frequency of contact with lending staff dummy variables have a significant positive effect. Although these variables had a negative impact on the level of borrowing rates, the results are the opposite for requests to increase interest rates. This is surmised to be because enterprises with closer relations and day-to-day contact with a bank are easier for a bank to approach to request an interest rate rise.</td>
</tr>
<tr>
<td>- Enterprises that voluntarily provide data are less likely to be requested to accept an interest rate rise. This shows that it is possible for SMEs to avoid being requested to accept higher interest rates, and is a strategy worth considering.</td>
</tr>
<tr>
<td>- Enterprises in a financially health state (i.e. enterprises that have a high equity ratio and high ratio of operating profit to total capital) are also less likely to be requested to accept an interest rate rise.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Characteristics of enterprises that experience an actual interest rate rise: second stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Larger enterprises were found to be less likely to be requested to accept an interest rate rise at the first stage and, if they were requested to accept an interest rate rise, to be able in many cases to refuse the request in subsequent negotiations.</td>
</tr>
<tr>
<td>- There is a significant negative correlation with length of relationship with a main bank. Enterprises with longer relationships with their main bank have close relations with their main bank, and so are often requested to accept an</td>
</tr>
</tbody>
</table>
interest rate rise. However, the length of their relationships acts to their advantage in subsequent negotiations.

- As in Appended Note 2-3-2, the interest rate knowledge dummy variable was found to be negatively correlated with a rise in interest rates, indicating that knowledge of interest rates is a useful negotiating weapon.

**Appended Note 2-3-4  List of failed financial institutions**

<table>
<thead>
<tr>
<th>Date of assignment</th>
<th>Failed financial institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr. 2001</td>
<td>Ishikawa Shogin Credit Cooperative</td>
</tr>
<tr>
<td>May 2001</td>
<td>Shinko Credit Cooperative</td>
</tr>
<tr>
<td>May 2001</td>
<td>Niigata Chuo Bank</td>
</tr>
<tr>
<td>May 2001</td>
<td>Osaka Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2001</td>
<td>Tokyo Sowa Bank</td>
</tr>
<tr>
<td>Jul. 2001</td>
<td>Douou Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Kochi Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Mizunami Shiko Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Aomori Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Miyagi Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Fukui Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Aichi Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Shimane Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Hiroshima Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Yamaguchi Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Fukoku Credit Cooperative</td>
</tr>
<tr>
<td>Nov. 2001</td>
<td>Chogin Nagasaki Credit Cooperative</td>
</tr>
<tr>
<td>Dec. 2001</td>
<td>Ibaraki Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Jan. 2002</td>
<td>Nagasaki Dai-ichi Credit Cooperative</td>
</tr>
<tr>
<td>Jan. 2002</td>
<td>Fudo Credit Cooperative</td>
</tr>
<tr>
<td>Feb. 2002</td>
<td>Wajima Credit Cooperative</td>
</tr>
<tr>
<td>Feb. 2002</td>
<td>Utsumoniyama Shinkin Bank</td>
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<tr>
<td>Feb. 2002</td>
<td>Mie Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Feb. 2002</td>
<td>Usuki Shinkin Bank</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Otago Shoko Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Niigata Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Harue Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Tokoname Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Nakatsugawa Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Okinawa Shinkin Bank</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Seika Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Kanagawa-ken Seika Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Dai-Nikko Credit Cooperative</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Osaka Dai-ichi Shinkin Bank</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Kansai Nishinomiya Shinkin Bank</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Nakatsu Shinkin Bank</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Sagaseki Shinkin Bank</td>
</tr>
<tr>
<td>Apr. 2002</td>
<td>Tokyo Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Apr. 2002</td>
<td>Daishin Credit Cooperative</td>
</tr>
<tr>
<td>Apr. 2002</td>
<td>Datei Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Asahikawa Shoko Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Kaga Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Shin-ei Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Fukuoka Shogin Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>San-ei Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Kyoto Shogin Credit Cooperative</td>
</tr>
<tr>
<td>May 2002</td>
<td>Matsushima Tanko Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Nagashima Shinkin Bank</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Sogo Shinkin Bank</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Saeki Shinkin Bank</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Tokyo Fuji Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Funabashi Shinkin Bank</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Miyagi-ken Chu Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Tomir Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Isebukuuro Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Kinan Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Kansai Kogin Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Tochigi-ken Chu Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Kuroiso Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Ojawa Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Bisto Credit Cooperative</td>
</tr>
<tr>
<td>Jun. 2002</td>
<td>Chiba Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Abashiri Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Iwate Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Tokyo Shokuhin Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Okayama-ken Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Dai-san Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Tokyo Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Fyochiku Credit Cooperative</td>
</tr>
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<td>Jul. 2002</td>
<td>Shimabara Credit Cooperative</td>
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<td>Jul. 2002</td>
<td>Oita Shogin Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Aktia-ken Chu Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Tokyo Chuo Credit Cooperative</td>
</tr>
<tr>
<td>Jul. 2002</td>
<td>Ishikawa Tobacco Credit Cooperative</td>
</tr>
<tr>
<td>Aug. 2002</td>
<td>Ueda Shoko Credit Cooperative</td>
</tr>
<tr>
<td>Aug. 2002</td>
<td>Atatsuki Credit Cooperative</td>
</tr>
<tr>
<td>Aug. 2002</td>
<td>Atsugi Credit Cooperative</td>
</tr>
<tr>
<td>Aug. 2002</td>
<td>Chogin Kinki Credit Cooperative</td>
</tr>
<tr>
<td>Aug. 2002</td>
<td>Chiba-ken Shoko Credit Cooperative</td>
</tr>
<tr>
<td>Sept. 2002</td>
<td>Eitai Credit Cooperative</td>
</tr>
<tr>
<td>Sept. 2002</td>
<td>Ishioka Shinkin Bank</td>
</tr>
<tr>
<td>Dec. 2002</td>
<td>Chogin Kanto Credit Cooperative</td>
</tr>
<tr>
<td>Dec. 2002</td>
<td>Chogin Tokyo Credit Cooperative</td>
</tr>
<tr>
<td>Dec. 2002</td>
<td>Chogin Chiba Credit Cooperative</td>
</tr>
<tr>
<td>Dec. 2002</td>
<td>Chogin Nagano Credit Cooperative</td>
</tr>
<tr>
<td>Dec. 2002</td>
<td>Chogin Niigata Credit Cooperative</td>
</tr>
</tbody>
</table>

Source: Prepared by the SME Agency from the Resolution and Collection Corporation’s website.

Note: “Failed financial institutions” are failed financial institutions whose assets were assigned to the Resolution and Collection Corporation (including when the Tokyo Kyodo Bank and the Resolution and Collection Bank).
APPENDED NOTES

Appended Note 2-3-5 Recent mergers and business integration between private-sector financial institutions

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr. 1999</td>
<td>Hanshin Bank and Midori Bank merge to form Minato Bank</td>
</tr>
<tr>
<td>Apr. 1999</td>
<td>Dai-Ichi Kangyo Trust and Banking and Fuji Trust and Banking merge to form Dai-Ichi Kangyo Fuji Trust and Banking</td>
</tr>
<tr>
<td>Apr. 2000</td>
<td>Mitsui Trust and Banking and Chuo Trust and Banking merge to form Chuo Mitsui Trust and Banking</td>
</tr>
<tr>
<td>Apr. 2000</td>
<td>Bank of Kinki and Bank of Osaka merge to form Kinki Osaka Bank</td>
</tr>
<tr>
<td>Aug. 2000</td>
<td>Takeover of Sumigin Trust and Banking and Daiwa International Trust and Banking by Sumitomo Trust and Banking</td>
</tr>
<tr>
<td>Sept. 2000</td>
<td>Dai-Ichi Kangyo Bank, Fuji Bank and Industrial Bank of Japan establish Mizuho Holdings (holding company)</td>
</tr>
<tr>
<td>Oct. 2000</td>
<td>Kogin Trust and Banking and Dai-Ichi Kangyo Fuji Trust and Banking merge to form Mizuho Trust and Banking</td>
</tr>
<tr>
<td>Apr. 2001</td>
<td>Bank of Tokyo-Mitsubishi, Mitsubishi Trust and Banking, Nippon Trust Bank and Tokyo Trust Bank establish Mitsubishi Tokyo Financial Group (holding company)</td>
</tr>
<tr>
<td>Apr. 2001</td>
<td>Sakura Bank and Sumitomo Bank merge to form Sumitomo Mitsui Banking</td>
</tr>
<tr>
<td>Apr. 2001</td>
<td>Sanwa Bank, Tokai Bank and Toyo Trust and Banking establish UFJ Holdings (holding company)</td>
</tr>
<tr>
<td>Apr. 2001</td>
<td>North Pacific Bank and Sapporo Bank establish Sapporo Hokuyo Holdings (holding company)</td>
</tr>
<tr>
<td>Jul. 2001</td>
<td>Toyo Trust and Banking and Tokai Trust and Banking merge to form Toyo Trust and Banking</td>
</tr>
<tr>
<td>Sept. 2001</td>
<td>Setouchi Bank and Hiroshima-Sogo Bank establish Momiiri Holdings (holding company)</td>
</tr>
<tr>
<td>Oct. 2001</td>
<td>Mitsubishi Trust Banking, Nippon Trust Bank and Tokyo Trust Bank merge to form Mitsubishi Trust and Banking</td>
</tr>
<tr>
<td>Dec. 2001</td>
<td>Daiwa Bank, Kinki Osaka Bank and Nara Bank establish Daiwa Bank Holdings (holding company)</td>
</tr>
<tr>
<td>Jan. 2002</td>
<td>Sanwa Bank and Tokai Bank merge to form UFJ Bank</td>
</tr>
<tr>
<td>Feb. 2002</td>
<td>Chuo Mitsui Trust and Banking and Sakura Trust and Banking establish Mitsu Trust and Banking (holding company)</td>
</tr>
<tr>
<td>Mar. 2002</td>
<td>Daiwa Bank group and Asahi Bank integrate operations</td>
</tr>
<tr>
<td>Apr. 2002</td>
<td>Dai-Ichi Kangyo Bank, Fuji Bank and the Industrial Bank of Japan reorganize operations to form Mizuho Bank and Mizuho Corporate Bank</td>
</tr>
<tr>
<td>Apr. 2002</td>
<td>Shinwa Bank and Kyushu Bank establish holding company Kyushu-Shinwa Holdings (holding company)</td>
</tr>
</tbody>
</table>

Appended Note 2-3-6 Merger of main banks and impact of collapses

1. Model
   Dependent variables: Same as Appended Note 2-3-2
   Explanatory variables: Same variables as used in Appended Note 2-3-2 and the following additional variables
   Variables regarding experience of merger or failure
   16) merged dummy (enterprises whose main bank merged in or after 1997 = 1, other enterprises = 0)
   17) collapsed dummy (enterprises whose main bank collapsed in or after 1997 = 1, other enterprises = 0)
   Method of estimation: Least squares method, probit model

2. Data set
   Data for explanatory variables 16) merged dummy and 17) collapsed dummy are from SME Agency, Survey of the Financial Environment. Data for all other variables are from the sources indicated in Appended Note 2-3-2.

3. Hypothesis
   The impact on the responses and interest rates of main banks of their merger or collapse was analyzed using the variables described in Appended Note 2-3-2 thought to affect the responses and interest rates of main banks together with the merged and collapsed dummy variables.
### 4. Results of estimates

<table>
<thead>
<tr>
<th></th>
<th>Response of main bank (refusal = 1)</th>
<th>Interest rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.030</td>
<td>0.204</td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>-0.035</td>
<td>0.056</td>
</tr>
<tr>
<td>Natural log of number of employees</td>
<td>-0.189</td>
<td>0.025</td>
</tr>
<tr>
<td>Number of banks</td>
<td>0.006</td>
<td>0.006</td>
</tr>
<tr>
<td>Superior bank dummy</td>
<td>-0.228</td>
<td>0.135</td>
</tr>
<tr>
<td>Leading bank as main bank dummy</td>
<td>0.216</td>
<td>0.097</td>
</tr>
<tr>
<td>Regional/second-tier regional bank as main bank dummy</td>
<td>-0.056</td>
<td>0.081</td>
</tr>
<tr>
<td>Length of relationship with main bank (years)</td>
<td>-0.004</td>
<td>0.002</td>
</tr>
<tr>
<td>Non-borrowing transactions dummy</td>
<td>-0.485</td>
<td>0.095</td>
</tr>
<tr>
<td>Interest rate knowledge dummy</td>
<td>0.520</td>
<td>0.069</td>
</tr>
<tr>
<td>Voluntary provision of data dummy</td>
<td>-0.395</td>
<td>0.056</td>
</tr>
<tr>
<td>Frequency of provision of data dummy</td>
<td>0.852</td>
<td>0.064</td>
</tr>
<tr>
<td>Number of measures to improve reliability of financial statements</td>
<td>-0.005</td>
<td>0.031</td>
</tr>
<tr>
<td>Frequency of contact with lending staff dummy</td>
<td>-0.237</td>
<td>0.074</td>
</tr>
<tr>
<td>Branch proximity dummy</td>
<td>-0.042</td>
<td>0.092</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>-0.701</td>
<td>0.081</td>
</tr>
<tr>
<td>Operating profit to total capital</td>
<td>-1.458</td>
<td>0.367</td>
</tr>
<tr>
<td>Merged dummy</td>
<td>0.134</td>
<td>0.080</td>
</tr>
<tr>
<td>Collapsed dummy</td>
<td>-0.082</td>
<td>0.185</td>
</tr>
<tr>
<td>Sample size</td>
<td>4,829</td>
<td></td>
</tr>
<tr>
<td>Adjusted RSQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-1,360.810</td>
<td>0.000</td>
</tr>
</tbody>
</table>

### Appendix Note 2-3-7  Characteristics of enterprises using non-banks

#### 1. Model

Dependent variable:
1. Non-bank use dummy (business with non-bank = 1, no business with non-bank = 0)

Explanatory variables:

1. Industry dummies (dummy variables provided for construction, manufacturing, information and communications, transport, wholesaling, retailing, real estate and services; reference value is food services and other industries)
2. Natural log of enterprise age
3. Natural log of number of employees
4. Variables regarding bank transactions
5. Number of banks
6. Main bank dummy (dummy variables respectively provided for enterprises whose main bank is a leading bank, regional/second-tier regional bank, and credit association/coop; reference value is credit association/coop, and enterprises whose main bank is another type of financial institution are excluded)
7. Length of relationship with main bank (years)
8. Response of main bank to loan applications (application refused or loan reduced = 1, application approved = 0)
9. Variables regarding financial position
10. Equity ratio (shareholders’ equity / total assets)
9) Operating profit to total capital (operating profit / total assets)
10) Liquidity on hand ((cash and deposits + securities) / sales)
Method of estimation: Probit model

2. Data set
Data for dependent variables 1) industry dummies, 2) natural log of enterprise age, 3) natural log of number of employees, 4) number of banks, 5) main bank dummy, 6) length of relationship with main bank and 7) response of main bank to loan application are from SME Agency, Survey of the Financial Environment. Data regarding 8) equity ratio, 9) operating profit to total capital and 10) liquidity on hand are recompiled from data on enterprises’ latest financial results according to Tokyo Shoko Research Ltd. Database.

3. Hypotheses
Variables regarding enterprise in general
1) Industry dummies
   Industry attributes such as large numbers of enterprises without security and sudden demand for funds should impact on the extent of use of non-banks.
2) Natural log of enterprise age
   Younger enterprises may be unable to acquire borrowing easily from banks and therefore make use of non-banks.
3) Natural log of number of employees
   As smaller enterprises are less able to acquire borrowing smoothly from banks, they may use non-banks. Conversely, larger enterprises may borrow from non-banks in the process of increasing the number of financial institutions with which they do business.

Variables regarding bank transactions
4) Number of banks
   As in the case of 3), enterprises doing business with many banks would be expected to borrow from non-banks.
5) Main bank dummy
   That the responses of main banks differ according to the type of main bank is apparent from Appended Note 2-3-2. This difference should affect use of non-banks.
6) Length of relationship with main bank
   Enterprises with a short relationship with their main bank do not have close relations with their main bank and are less able to borrow easily than enterprises with longer relationships. As a result, it is well within the realms of possibility that such enterprises should make use of non-banks.
7) Response of main bank to loan applications
   Frequent refusal of loan applications by a main bank creates the need to make up the shortfall in funds from another source. Such enterprises would therefore be expected to borrow from non-banks.

Variables regarding financial position
8) Equity ratio
   As shown in Appended Note 2-3-2, enterprises with lower equity ratios are unable to obtain borrowing easily, and there is a possibility that such enterprises may make use of non-banks (Fig. 2-3-55).
9) Operating profit to total capital
   Enterprises with low profitability are unable to obtain borrowing smoothly, and may as a result use non-banks.
10) Liquidity on hand
   Enterprises in a tight financial position experience a deterioration in their liquidity on hand in terms of the proportion of cash and deposits to sales. Such enterprises may use non-banks to take advantage of the perceived speed of borrowing from them.
4. Results of estimates

<table>
<thead>
<tr>
<th>Non-bank dummy (use = 1, non-use = 0)</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>-1.964</td>
<td>0.275</td>
<td>***</td>
</tr>
<tr>
<td>Construction dummy</td>
<td>0.099</td>
<td>0.157</td>
<td></td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.225</td>
<td>0.163</td>
<td></td>
</tr>
<tr>
<td>Information and communications dummy</td>
<td>-0.387</td>
<td>0.422</td>
<td></td>
</tr>
<tr>
<td>Transport dummy</td>
<td>-0.075</td>
<td>0.256</td>
<td></td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>-0.162</td>
<td>0.184</td>
<td></td>
</tr>
<tr>
<td>Retailing dummy</td>
<td>0.143</td>
<td>0.169</td>
<td></td>
</tr>
<tr>
<td>Real estate dummy</td>
<td>1.166</td>
<td>0.178</td>
<td>***</td>
</tr>
<tr>
<td>Service dummy</td>
<td>0.351</td>
<td>0.161</td>
<td>**</td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>-0.079</td>
<td>0.078</td>
<td></td>
</tr>
<tr>
<td>Natural log of number of employees</td>
<td>0.164</td>
<td>0.031</td>
<td>***</td>
</tr>
<tr>
<td>Number of banks</td>
<td>0.012</td>
<td>0.004</td>
<td>***</td>
</tr>
<tr>
<td>Leading bank as main bank dummy</td>
<td>-0.225</td>
<td>0.123</td>
<td>*</td>
</tr>
<tr>
<td>Regional/second-tier regional bank as main bank dummy</td>
<td>-0.194</td>
<td>0.110</td>
<td>*</td>
</tr>
<tr>
<td>Length of relationship with main bank (dummy)</td>
<td>-0.008</td>
<td>0.003</td>
<td>**</td>
</tr>
<tr>
<td>Response of main bank to loan application</td>
<td>0.635</td>
<td>0.094</td>
<td>***</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>-0.411</td>
<td>0.096</td>
<td>***</td>
</tr>
<tr>
<td>Operating profit to total capital</td>
<td>0.549</td>
<td>0.536</td>
<td></td>
</tr>
<tr>
<td>Liquidity on hand</td>
<td>-0.036</td>
<td>0.142</td>
<td></td>
</tr>
</tbody>
</table>

Sample size 5,155

*** = 1% significance level    ** = 5% significance level    * = 10% significance level

- Much use is made of non-banks in the real estate and service sectors. This is because of the sudden demand for funds and large number of enterprises without assets to offer as security due to the nature of these industries.
- As significantly negative results were obtained for the leading bank and regional bank dummy variables, enterprises whose main bank is a credit association/coop use non-banks. It can be seen from Fig. 2-3-34 too that enterprises whose main bank is a credit association/coop use non-banks after being refused a loan by their main bank.
- Both length of relationship with main bank and response of main bank were found to have a significantly negative effect, which means that enterprises that do not have close relations with their main bank and that cannot obtain borrowing easily from their main bank use non-banks.
- Regarding financial variables/characteristics, enterprises with low equity ratios were found to use non-banks. This is for the reasons hypothesized.

Appended Note 2-3-8  Characteristics of enterprises using inter-enterprise credit

1. Model

Dependent variable:
1) Proportion of inter-enterprise credit ((accounts payable + notes payable + receipts in advance + advance receipts for work in progress) / total assets)

Explanatory variables:
Variables regarding enterprise in general
1) Industry dummies (dummy variables provided for construction, manufacturing, information and communications, transport, wholesaling, retailing, real estate and services; reference value is food services and other industries)
2) Natural log of enterprise age
3) Natural log of number of employees

Variables regarding state of commercial transactions
4) Length of relationship with main customers (years)
5) Length of relationship with main suppliers (years)

Variables regarding bank transactions
6) Number of banks
7) Main bank dummy (dummy variables respectively provided for enterprises whose main bank is a leading bank, regional/second-tier regional bank, and credit association/coop; reference value is credit association/coop, and enterprises whose main bank is another type of financial institution are excluded)
8) Length of relationship with main bank (years)
9) Response of main bank to loan application (application refused or loan reduced = 1, application approved = 0)

Variables regarding financial position
10) Equity ratio (shareholders’ equity / total assets)
11) Operating profit to total capital (operating profit / total assets)
12) Rate of growth in sales (sales in year before latest year - sales in latest year) / sales in year before latest year)
13) Total capital turnover (sales / total assets)

Method of estimation: Least squares method

2. Data set
The date for explanatory variables 1) industry dummies, 2) natural log of enterprise age, 3) natural log of number of employees, 4) length of relationship with main customers, 5) length of relationship with main suppliers, 6) number of banks, 7) main bank dummy, 8) length of relationship with main bank and 9) response of main bank to loan application are from SME Agency, Survey of the Financial Environment. Dependent variable 1) proportion of inter-enterprise credit and explanatory variables 10) equity ratio, 11) operating profit to total capital, 12) rate of growth in sales and 13) total capital turnover are recompiled from data for the latest fiscal year according to Tokyo Shoko Research Ltd. Database.

3. Hypotheses
Variables regarding enterprise in general
1) Industry dummies
   Inter-enterprise credit should increase or decrease according to differences in commercial practices between industries, viz. the extent of cash transactions and note transactions.
2) Natural log of enterprise age
   The longer an enterprise has been established, the more trust it should have acquired and the greater use it should be able to make of inter-enterprise credit.
3) Natural log of number of employees
   Larger enterprises should be more creditworthy and have subcontractors, and so make greater use of inter-enterprise credit.

Variables regarding state of commercial transactions
4) Length of relationship with main customers
   A long relationship with customers is evidence of the stability of the sales strength of an enterprise. Enterprises providing credit should therefore rate the stability of such enterprises more highly and provide more credit.
5) Length of relationship with main suppliers
   Enterprises with long relationships with main suppliers have close relations with those suppliers. These main suppliers should therefore value the length and closeness of the relationship, and provide greater credit.

Variables regarding bank transactions
6) Number of banks
   As was observed above, the number of banks with which an enterprise does business affects the response of its main bank. The smoothness of borrowing from main banks should therefore affect inter-enterprise credit.
7) Main bank dummy
   As in the case of 6), the smoothness of borrowing from main banks should affect inter-enterprise credit.
8) Length of relationship with main bank
   As in the case of 6), the smoothness of borrowing from main banks should affect inter-enterprise credit.
9) Response of main bank to loan application
   Enterprises that find it difficult to borrow from main banks should make active use of inter-enterprise credit as an alternative means of finance.

Variables regarding financial position
10) Equity ratio
   The provider of inter-enterprise credit should provide credit based on its assessment of the financial stability of an enterprise, as expressed by its equity ratio.
11) Operating profit to total capital
   As in the case of 10), providers of inter-enterprise credit would be expected to provide credit based on their estimation of the receiver’s profitability.
12) Rate of growth in sales
   Enterprises with a high rate of growth in sales should purchase greater supplies, and the sales of enterprises providing inter-enterprise credit should grow. Active provision of credit should therefore be greater.
13) Total capital turnover
   Enterprises with a high total capital turnover should be more efficient and have fewer assets compared to sales. Enterprises providing inter-enterprise credit should rate the efficiency of such enterprises more highly.
### 4. Results of estimates

Adjusted RSQ = 0.326

<table>
<thead>
<tr>
<th>Proportion of inter-enterprise credit (inter-enterprise credit / total assets)</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant term</td>
<td>0.120</td>
<td>0.023</td>
<td>***</td>
</tr>
<tr>
<td>Construction dummy</td>
<td>0.152</td>
<td>0.012</td>
<td>***</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>0.080</td>
<td>0.011</td>
<td>***</td>
</tr>
<tr>
<td>Information and communications dummy</td>
<td>-0.013</td>
<td>0.023</td>
<td>***</td>
</tr>
<tr>
<td>Transport dummy</td>
<td>-0.017</td>
<td>0.018</td>
<td>*</td>
</tr>
<tr>
<td>Wholesale dummy</td>
<td>0.220</td>
<td>0.012</td>
<td>***</td>
</tr>
<tr>
<td>Retailing dummy</td>
<td>0.054</td>
<td>0.014</td>
<td>***</td>
</tr>
<tr>
<td>Real estate dummy</td>
<td>-0.051</td>
<td>0.023</td>
<td>**</td>
</tr>
<tr>
<td>Service dummy</td>
<td>-0.011</td>
<td>0.013</td>
<td>*</td>
</tr>
<tr>
<td>Natural log of enterprise age</td>
<td>-0.013</td>
<td>0.006</td>
<td>**</td>
</tr>
<tr>
<td>Natural log of number of employees</td>
<td>0.005</td>
<td>0.002</td>
<td>**</td>
</tr>
<tr>
<td>Length of relationship with main customers (years)</td>
<td>0.001</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>Length of relationship with main suppliers (years)</td>
<td>0.000</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>Number of banks</td>
<td>-0.002</td>
<td>0.000</td>
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<tr>
<td>Leading bank as main bank dummy</td>
<td>0.035</td>
<td>0.009</td>
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<tr>
<td>Regional/second-tier regional bank as main bank dummy</td>
<td>0.017</td>
<td>0.008</td>
<td>**</td>
</tr>
<tr>
<td>Length of relationship with main bank (dummy)</td>
<td>-0.000</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>Response of main bank to loan application</td>
<td>-0.008</td>
<td>0.008</td>
<td>*</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>-0.188</td>
<td>0.011</td>
<td>***</td>
</tr>
<tr>
<td>Operating profit to total capital</td>
<td>0.080</td>
<td>0.041</td>
<td>**</td>
</tr>
<tr>
<td>Rate of growth in sales</td>
<td>-0.000</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td>Total capital turnover</td>
<td>0.036</td>
<td>0.003</td>
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</tr>
<tr>
<td>Sample size</td>
<td>4,072</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

- The construction, manufacturing, wholesaling and retailing dummy variables were found to be significantly positively correlated, showing that enterprises in these industries make considerable use of inter-enterprise credit and notes and the terms of payment when purchasing are longer.
- On the other hand, the real estate dummy was significantly negatively correlated, and inter-enterprise credit is not used. This is surmised to be due to the preponderance of settlements in cash for land purchases.
- As hypothesized, larger enterprises were found to make greater use of inter-enterprise credit.
- As hypothesized, the length of relationship with main customers was found to be positively correlated. However, the length of relationship with main suppliers was not found to have a significant effect. This is presumed to be due to the large number of suppliers (unlike customers) and the fact that relations with one company among these have no impact on inter-enterprise credit overall.
- Regarding the financial variables, enterprises with low equity ratios were found to be more likely to use inter-enterprise credit. It should be noted that this is the reverse of bank lending, which tends to be used more by enterprises with higher equity ratios.
### Appended Note 2-3-9  Outline of the receivable-backed loan program and support for the securitization of receivables

**Outline of receivable-backed loan program**

- **SME**
- **Receivable**
- **Source of receivable (customer/recipient)**
- **Financial institution**
- **Credit guarantee corporation**

**Borrowing by SMEs from financial institutions is guaranteed by credit guarantee corporations, with SMEs providing receivables owed by businesses as security.**

1. **Outline of support for securitization of receivables**

**Receivable**

- **Transfer**
- **Bank of Japan**
- **Investor**

1) **An SME transfers (entrusts) receivables to a financial institution to raise funds.**
2) The financial institution issues "securities" backed by the receivables.
3) The Shoko Chukin Bank underwrites some of the "securities".
4) The Bank of Japan accords "securities" security qualified status (This makes it easier for investors to realize "securities").

### Appended Note 2-4-1  Trends in subcontracting rates

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All manufacturing</td>
<td>53.3</td>
<td>58.7</td>
<td>60.7</td>
<td>65.5</td>
<td>55.9</td>
<td>47.9</td>
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<tr>
<td>Foods</td>
<td>16.5</td>
<td>30.2</td>
<td>14.5</td>
<td>17.5</td>
<td>8.2</td>
<td>8.6</td>
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<tr>
<td>Beverages and tobacco</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>5.9</td>
</tr>
<tr>
<td>Textiles</td>
<td>79.8</td>
<td>75.9</td>
<td>84.5</td>
<td>84.9</td>
<td>79.7</td>
<td>76.4</td>
</tr>
<tr>
<td>Apparel and textile products</td>
<td>73.8</td>
<td>71.4</td>
<td>83.9</td>
<td>86.5</td>
<td>79.1</td>
<td>70.8</td>
</tr>
<tr>
<td>Timber and wooden products</td>
<td>35.0</td>
<td>43.8</td>
<td>42.9</td>
<td>48.0</td>
<td>21.7</td>
<td>22.2</td>
</tr>
<tr>
<td>Furniture and fixtures</td>
<td>45.6</td>
<td>49.4</td>
<td>41.2</td>
<td>51.6</td>
<td>38.5</td>
<td>23.7</td>
</tr>
<tr>
<td>Pulp and paper</td>
<td>51.0</td>
<td>43.9</td>
<td>44.8</td>
<td>51.6</td>
<td>41.3</td>
<td>44.2</td>
</tr>
<tr>
<td>Publishing and printing</td>
<td>46.3</td>
<td>51.0</td>
<td>50.8</td>
<td>58.0</td>
<td>42.0</td>
<td>30.8</td>
</tr>
<tr>
<td>Chemicals</td>
<td>40.2</td>
<td>38.7</td>
<td>37.1</td>
<td>38.5</td>
<td>22.5</td>
<td>23.4</td>
</tr>
<tr>
<td>Oil and coal products</td>
<td>30.1</td>
<td>30.7</td>
<td>27.0</td>
<td>38.9</td>
<td>18.4</td>
<td>11.8</td>
</tr>
<tr>
<td>Plastic products</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>68.7</td>
<td>58.5</td>
</tr>
<tr>
<td>Rubber products</td>
<td>62.3</td>
<td>54.3</td>
<td>61.1</td>
<td>71.8</td>
<td>65.6</td>
<td>58.4</td>
</tr>
<tr>
<td>Leather products</td>
<td>60.0</td>
<td>64.5</td>
<td>62.5</td>
<td>68.8</td>
<td>64.7</td>
<td>61.7</td>
</tr>
<tr>
<td>Ceramic, stone and clay products</td>
<td>33.8</td>
<td>34.0</td>
<td>29.4</td>
<td>36.6</td>
<td>35.5</td>
<td>27.0</td>
</tr>
<tr>
<td>Iron and steel</td>
<td>66.0</td>
<td>66.0</td>
<td>70.4</td>
<td>72.0</td>
<td>52.6</td>
<td>47.4</td>
</tr>
<tr>
<td>Non-ferrous metals</td>
<td>67.1</td>
<td>69.7</td>
<td>68.7</td>
<td>73.6</td>
<td>62.3</td>
<td>45.4</td>
</tr>
<tr>
<td>Metal products</td>
<td>66.3</td>
<td>71.7</td>
<td>74.8</td>
<td>78.6</td>
<td>71.0</td>
<td>58.4</td>
</tr>
<tr>
<td>General machinery</td>
<td>70.7</td>
<td>75.8</td>
<td>82.7</td>
<td>84.2</td>
<td>74.8</td>
<td>59.2</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>81.4</td>
<td>78.9</td>
<td>82.3</td>
<td>85.3</td>
<td>80.1</td>
<td>65.2</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>67.1</td>
<td>77.9</td>
<td>86.2</td>
<td>87.7</td>
<td>79.9</td>
<td>69.3</td>
</tr>
<tr>
<td>Precision equipment</td>
<td>72.3</td>
<td>70.7</td>
<td>72.4</td>
<td>80.9</td>
<td>70.4</td>
<td>58.8</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>50.8</td>
<td>58.7</td>
<td>56.5</td>
<td>62.2</td>
<td>43.5</td>
<td>31.4</td>
</tr>
</tbody>
</table>


**Notes:**
1. The shaded sections indicate the points in time when the subcontracting rate was highest.
2. Subcontracting rate = small and medium subcontractors / SMMs x 100
Appended Note 2-4-2  Advantages of stability of volume of work among subcontractors

1. Model
Dependent variable: Natural log of standard deviation of sales in 1994~2001
Explanatory variables: 1) Natural log of enterprise age
2) Natural log of number of regular workers in 1994
3) Subcontractor dummy (subcontractor = 1)
Subcontractor = enterprises that responded that they were engaged in subcontracting at both the start and end of the survey period

2. Data set
Both surveys were concatenated to determine the enterprises for which sales data could be obtained for the eight-year period from 1994 to 2001.

3. Method of estimation (estimation by the least squares method)

<table>
<thead>
<tr>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise age</td>
<td>-0.244</td>
<td>0.044</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.989</td>
<td>0.029</td>
</tr>
<tr>
<td>Subcontractor dummy</td>
<td>-0.124</td>
<td>0.049</td>
</tr>
<tr>
<td>Constant term</td>
<td>2.136</td>
<td>0.218</td>
</tr>
<tr>
<td>Sample size</td>
<td>1,831</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted RSQ=0.390

--- = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-4-3  Are subcontractors risk averse?

1. Model
Dependent variable: Average operating profit, 1994~2001
Explanatory variables: 1) Dispersion of operating profit, 1994~2001
2) Average number of employees \times\text{dispersion of operating profit (1)}, 1994~2001
3) Subcontractor dummy \times\text{dispersion of operating profit (1)}, 1994~2001
Subcontractor = enterprises that responded that they were engaged in subcontracting at both the start and end of the survey period

2. Data set
Both surveys were concatenated to determine the enterprises for which sales data could be obtained for the eight-year period from 1994 to 2001.

3. Method of estimation (estimation by the least squares method)

<table>
<thead>
<tr>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispersion of operating profit</td>
<td>5.04\times10^{-4}</td>
<td>3.53\times10^{-5}</td>
</tr>
<tr>
<td>Average number of employees \times\text{dispersion of operating profit (1)}</td>
<td>8.51\times10^{-5}</td>
<td>5.02\times10^{-6}</td>
</tr>
<tr>
<td>Subcontractor dummy \times\text{dispersion of operating profit (1)}</td>
<td>1.84\times10^{-4}</td>
<td>1.62\times10^{-5}</td>
</tr>
<tr>
<td>Constant term</td>
<td>215.940</td>
<td>24.135</td>
</tr>
<tr>
<td>Sample size</td>
<td>1,837</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted RSQ=0.353

--- = 1% significance level  ** = 5% significance level  * = 10% significance level
Meaning of model
Following Kawasaki and McMillan (1987) and Asanuma and Kikutani (1992), the profit expectation effect was provided for as follows assuming absolute risk aversion to be constant (where operating profit is used for profit).

\[
EU (\pi) = \frac{1 - \exp \left( -\lambda \mu + \frac{1}{2} \lambda^2 s^2 \right)}{\lambda}
\]

\(\pi\): profit
\(\lambda\): Arrow-Pratt absolute risk aversion
\(\mu\): mean profit
\(s^2\): dispersion of profit

The above equation assumes constant absolute risk aversion and a normal distribution. This may be expressed as a linear relation as follows:

\[
\mu = \left( \frac{1}{2} \lambda \right) s^2 + k \quad \text{(1)}
\]

\(k\): profit after deduction of risk premium

It is next assumed that variable \(\lambda\) in Equation (1) changes in accordance with enterprise size and whether or not an enterprise engages in subcontracting. Enterprise size is expressed by the average number of employees in the period concerned, and the following function provided for \(\lambda\):

\[
\lambda = d_0 + d_1 z + d_{\text{SUB}} \quad \text{(2)}
\]

\(z\): natural log of number of employees
\(\text{SUB}\): subcontractor dummy
\(d_0, d_1, d_2\): parameters

This yields the following equation if \(\lambda\) is eliminated using Equations (1) and (2) thus provided.

\[
\mu = \frac{d_0}{2} s^2 + \frac{d_1}{2} z s^2 + \frac{d_2}{2} \text{SUB} s^2 + k \quad \text{(3)}
\]

Equation (3) is the model equation used in the present analysis.

The question of whether or not subcontractors are averse to risk, which this analysis was designed to answer, is answered by determining from Equation (2) whether the sign of \(d_2\) is positive or negative. (If positive, being a subcontractor makes an enterprise more risk averse, and so subcontractors may be described as being risk averse).

**Appended Note 2-4-4  Impact of the actions of parent companies on the rate of growth in sales of subcontractors**

1. **Model**
   - **Dependent variable:** Rate of growth in sales
     - (FY2002 sales - FY1999 sales) / FY1999 sales \(\times 100\)
   - **Explanatory variables:**
     1. Natural log of enterprise age (2003 year of startup)
     2. Natural log of enterprise size (number of regular workers)
     3. Action of parent company
        - Transfer of plant overseas, shift of production overseas, establishment of new plant overseas, reorganization of subcontracting relations, establishment of new plant in Japan, withdrawal from field of business

2. **Data set**
   - Sample consisted only of subcontractors.
3. Results of estimates (estimated by least squares method)

<table>
<thead>
<tr>
<th>Action of parent company</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise age</td>
<td>-0.029</td>
<td>0.020</td>
<td></td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.038</td>
<td>0.009</td>
<td>***</td>
</tr>
<tr>
<td>Transfer of plant overseas</td>
<td>-0.122</td>
<td>0.047</td>
<td>***</td>
</tr>
<tr>
<td>Shift of production overseas</td>
<td>0.202</td>
<td>0.240</td>
<td></td>
</tr>
<tr>
<td>Establishment of new plant overseas</td>
<td>0.508</td>
<td>0.030</td>
<td>*</td>
</tr>
<tr>
<td>Reorganization of subcontracting relations</td>
<td>-0.021</td>
<td>0.023</td>
<td></td>
</tr>
<tr>
<td>Establishment of new plant in Japan</td>
<td>-0.017</td>
<td>0.037</td>
<td></td>
</tr>
<tr>
<td>Withdrawal from field of business</td>
<td>-0.032</td>
<td>0.038</td>
<td></td>
</tr>
<tr>
<td>Constant term</td>
<td>-0.080</td>
<td>0.073</td>
<td></td>
</tr>
</tbody>
</table>

Sample size: 901

Adjusted R² = 0.032

--- = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-4-5  Impact of overseas expansion by parent companies and strategies of subcontractors on sales

1. Model
   - Dependent variable: Rate of growth in sales in each period (11-stage scale index)
   - Explanatory variables:
     1) Industry of enterprise dummy
        - Textiles, materials processing, general machinery, electrical machinery, transport equipment, precision equipment
     2) Production method × development function dummy
        - Mass production × development function, mass production × no development function, diverse small-lot × development function, diverse small-lot × no development function, single unit production
     3) Target of overseas expansion by parent company dummy
        - Europe, United States, China, South Korea/Taiwan/Hong Kong, ASEAN region, other region
     4) Strategy of subcontractor dummy
        - Reduction of facilities, reduction of workforce, reduction of cost of products, acquisition of new customers, development of high value-added products, other measure


2. Data set
### 3. Results of estimates (estimated by ordered probit model)

<table>
<thead>
<tr>
<th>Industry of enterprise</th>
<th>Log likelihood</th>
<th>Estimate</th>
<th>Significance level</th>
<th>Estimate</th>
<th>Significance level</th>
<th>Estimate</th>
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<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>I</td>
<td></td>
<td>II</td>
<td></td>
<td>III</td>
<td></td>
<td>IV</td>
<td></td>
</tr>
<tr>
<td>Textiles</td>
<td>-2,421.432</td>
<td>-0.168</td>
<td>-0.220</td>
<td>-0.554</td>
<td>-0.301</td>
<td>-0.108</td>
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<td>Materials processing</td>
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<td>0.203</td>
<td>*</td>
<td>0.000</td>
<td>0.008</td>
<td>-0.108</td>
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<td>-0.150</td>
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<td>0.007</td>
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<td>Electrical machinery</td>
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<td></td>
<td>-0.023</td>
<td>0.008</td>
<td>-0.171</td>
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<td>Transport equipment</td>
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<td>-0.081</td>
<td>0.026</td>
<td>0.280</td>
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<tr>
<td>Precision equipment</td>
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<td>-0.047</td>
<td>0.059</td>
<td>-0.300</td>
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<tr>
<td>Mass x development</td>
<td></td>
<td>0.291</td>
<td>0.162</td>
<td>0.128</td>
<td>-0.355</td>
<td>*</td>
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<tr>
<td>Mass x no development</td>
<td></td>
<td>0.122</td>
<td>0.084</td>
<td>0.061</td>
<td>-0.337</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Small x development</td>
<td></td>
<td>0.160</td>
<td></td>
<td>0.053</td>
<td>-0.000</td>
<td>-0.200</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Small x no development</td>
<td></td>
<td>0.053</td>
<td></td>
<td>0.030</td>
<td>-0.011</td>
<td>-0.393</td>
<td>***</td>
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</tr>
<tr>
<td>Single unit production</td>
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<td>-0.147</td>
<td>-0.158</td>
<td>-0.424</td>
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</tr>
<tr>
<td>Europe</td>
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<td>0.164</td>
<td></td>
<td>-0.484</td>
<td>0.136</td>
<td>-0.857</td>
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<td></td>
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</tr>
<tr>
<td>United States</td>
<td></td>
<td>-0.006</td>
<td></td>
<td>-0.208</td>
<td>0.093</td>
<td>2.233</td>
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<td></td>
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<tr>
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<td>-0.175</td>
<td>-0.179</td>
<td>-0.454</td>
<td>-0.036</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Korea/Taiwan/Hong Kong</td>
<td>0.041</td>
<td></td>
<td></td>
<td>-0.160</td>
<td>-0.009</td>
<td>-0.054</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASEAN region</td>
<td></td>
<td>-0.284</td>
<td>**</td>
<td>0.126</td>
<td>0.022</td>
<td>-0.809</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other regions</td>
<td></td>
<td>-0.011</td>
<td></td>
<td>0.332</td>
<td>0.331</td>
<td>9.934</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of facilities</td>
<td></td>
<td>-0.419</td>
<td>***</td>
<td>-0.676</td>
<td>***</td>
<td>-0.435</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of workforce</td>
<td></td>
<td>-0.956</td>
<td>***</td>
<td>-0.629</td>
<td>***</td>
<td>-0.360</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduction of costs</td>
<td></td>
<td>-0.150</td>
<td>**</td>
<td>-0.072</td>
<td>0.132</td>
<td>0.257</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition of new customers</td>
<td>0.114</td>
<td></td>
<td></td>
<td>0.029</td>
<td>-0.053</td>
<td>-0.083</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High value-added development</td>
<td>0.262</td>
<td></td>
<td>***</td>
<td>0.269</td>
<td>***</td>
<td>0.270</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>0.208</td>
<td>**</td>
<td>0.055</td>
<td>0.213</td>
<td>0.157</td>
<td>***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sample size: 1,364, 1,496, 1,629, 1,657

### Appended Note 2-4-6 Engagement in business collaboration activities by SMEs

In Fig. 2-4-14 in the main text, it was shown that 25% of SMEs are engaged in business collaboration activities. Here, however, we examine using the following data whether SME involvement in business collaboration activities is increasing.

**Data set**


The two data sets were concatenated, and enterprises whose involvement in business collaboration activities could be ascertained from the individual questionnaires for the *Basic Survey of Commercial and Manufacturing Structure* ("joint business" in this survey) tabulated. (This yielded a sample of 2,750 companies).

In the *Survey on Alliance Activities of SMEs*, respondents were questioned about their involvement in business collaboration activities between June 1998 and the date of the survey. For the *Basic Survey of Commercial and Manufacturing Structure and Activity*, respondents were asked about their involvement in fiscal 1997. It is therefore necessary to remember that there exist differences between the survey periods of the two surveys.

**Results of comparison**

| Proportion of enterprises engaged in business collaboration activity in fiscal 1997 | 10.4% |
| Proportion of enterprises engaged in business collaboration activity from 1998 onward | 20.4% |

Although only estimates, the above results indicate that engagement in business collaboration activities by SMEs is increasing.
Appended Note 2-4-7  Characteristics of SMEs engaging in business collaboration activities

1. Model
   Dependent variable: Engagement/non-engagement in business collaboration activities
   (joint R&D = 1, joint sales and joint receipt of orders = 2, joint purchasing and joint production = 3, joint logistics, joint advertising and joint introduction of IT = 4, not engaged = 5)

   Explanatory variables:
   1) Natural log of enterprise age (in 2002)
   2) Natural log of number of regular workers (in 1997)
   3) Natural log of number of competitors
   4) Operating profit to sales (FY1997)
   5) Constantly engaged in R&D dummy variable (yes = 1)
   6) Engaged in subcontracting dummy variable (yes = 1)
   7) Industry dummies (manufacturing, wholesaling)
   8) Participation in cross-industry exchange associations (yes = 1)

2. Data set
   SME Agency, Survey on Alliance Activities of SMEs (November 2002).
   The above two data sets were concatenated, and SMEs whose main industry could be ascertained (excluding SMEs whose year of startup was in or after 1999) selected for the sample.
   Enterprises whose year of startup was in or after 1999 were excluded as the Survey on Alliance Activities of SMEs is a survey of respondents to the Basic Survey of Commercial and Manufacturing Structure and Activity, and the continuity of variables for enterprises responding that they started up in or after 1999 could not be guaranteed after concatenating with the Basic Survey of Commercial and Manufacturing Structure and Activity.

3. Results of estimates (estimated by multinomial logit model, reference value: “5 = not engaged”)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (Significance level)</td>
<td>Estimate (Significance level)</td>
<td>Estimate (Significance level)</td>
<td>Estimate (Significance level)</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.133 (0.143)</td>
<td>-0.155</td>
<td>0.073</td>
<td></td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.293 ***</td>
<td>0.020</td>
<td>-0.082</td>
<td>0.008</td>
</tr>
<tr>
<td>Number of competitors</td>
<td>0.052</td>
<td>0.210 ***</td>
<td>0.170 **</td>
<td>0.105</td>
</tr>
<tr>
<td>Operating profit to sales</td>
<td>1.842 **</td>
<td>-1.909 ***</td>
<td>-0.737</td>
<td>0.215</td>
</tr>
<tr>
<td>R&amp;D activity</td>
<td>1.671 ***</td>
<td>0.201</td>
<td>0.381 **</td>
<td>0.525 ***</td>
</tr>
<tr>
<td>Subcontracting dummy</td>
<td>0.185</td>
<td>0.200</td>
<td>0.450 **</td>
<td>0.038</td>
</tr>
<tr>
<td>Cross-industry exchange association</td>
<td>0.693 ***</td>
<td>0.664 ***</td>
<td>0.172</td>
<td>0.853 ***</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.616</td>
<td>-0.546</td>
<td>-0.536</td>
<td>-1.374 ***</td>
</tr>
<tr>
<td>Wholesaling</td>
<td>-0.047</td>
<td>-0.425</td>
<td>-0.369</td>
<td>-0.671 ***</td>
</tr>
<tr>
<td>Constant term</td>
<td>-4.524 ***</td>
<td>-2.528 ***</td>
<td>-7.100 ***</td>
<td>-2.711 ***</td>
</tr>
<tr>
<td>Sample size</td>
<td>2,882</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   Log likelihood = -2,377.441

   *** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-4-8  Impact of business collaboration activities on SME performance

1. Model
   Dependent variables:
   1) Increase in sales dummy (enterprises whose sales increased in FY1997~2001 = 1)
   2) Improvement in ratio of operating profit to sales dummy (enterprises whose ratio of operating profit to sales improved in FY1997~2001 = 1)

   Explanatory variables:
   1) Natural log of enterprise age (in 2002)
   2) Natural log of number of regular workers (in FY1997)
   3) Natural log of number of competitors
   4) Engaged in business collaboration dummy (yes = 1)
   A: joint R&D, B: joint sales/joint receipt of orders, C: joint purchasing/joint production,
   D: joint logistics/joint advertising/joint introduction of IT
   5) Industry dummies (manufacturing, wholesaling)
2. Date set


Questionnaire data from the above surveys were concatenated, and enterprises for which the business collaboration activity C and D dummies were 1 for dependent variable 1) and enterprises for the business collaboration activity A and B dummies were 1 for dependent variable 2) were excluded.

3. Results of estimates (estimated by probit model)

<table>
<thead>
<tr>
<th>Sales increase dummy</th>
<th>Improvement in ratio of operating profit to sales dummy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated coefficient</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.385</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.028</td>
</tr>
<tr>
<td>Number of competitors</td>
<td>0.002</td>
</tr>
<tr>
<td>Business collaboration activity A</td>
<td>0.288</td>
</tr>
<tr>
<td>Business collaboration activity B</td>
<td>-0.184</td>
</tr>
<tr>
<td>Business collaboration activity D</td>
<td>-0.189</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>-0.174</td>
</tr>
<tr>
<td>Constant term</td>
<td>0.331</td>
</tr>
<tr>
<td>Sample size</td>
<td>2,916</td>
</tr>
</tbody>
</table>

*** = 1% significance level     ** = 5% significance level      * = 10% significance level

Appended Note 2-4-9  Characteristics of enterprises participating in cross-industry exchange activities

1. Model

<table>
<thead>
<tr>
<th>Dependent variables:</th>
<th>1) Participation in cross-industry exchange activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2) Evolution of cross-industry exchange activity into business collaboration activity</td>
</tr>
<tr>
<td>Explanatory variables:</td>
<td>1) Natural log of enterprise age (in 2002)</td>
</tr>
<tr>
<td></td>
<td>2) Natural log of number of regular workers (in 1997)</td>
</tr>
<tr>
<td></td>
<td>3) Operating profit to sales (in FY1997)</td>
</tr>
<tr>
<td></td>
<td>4) Number of competitors</td>
</tr>
<tr>
<td></td>
<td>5) Constant R&amp;D activity dummy variable (yes = 1)</td>
</tr>
<tr>
<td></td>
<td>6) Subcontracting dummy (yes = 1)</td>
</tr>
<tr>
<td></td>
<td>7) Years since appointment of manager</td>
</tr>
<tr>
<td></td>
<td>8) Age of present manager</td>
</tr>
<tr>
<td></td>
<td>9) Shareholding rate of present manager</td>
</tr>
<tr>
<td></td>
<td>10) Industry dummies (reference value: retailing)</td>
</tr>
</tbody>
</table>

2. Data set

3. Results of estimates (estimated by probit model)

<table>
<thead>
<tr>
<th>Participating in cross-industry exchange activity</th>
<th>Evolution into business collaboration activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>0.130</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>0.043</td>
</tr>
<tr>
<td>Operating profit to sales</td>
<td>0.584</td>
</tr>
<tr>
<td>Number of competitors</td>
<td>0.100</td>
</tr>
<tr>
<td>R&amp;D activity dummy</td>
<td>0.343</td>
</tr>
<tr>
<td>Subcontracting dummy</td>
<td>0.285</td>
</tr>
<tr>
<td>Years since appointment of manager</td>
<td>0.009</td>
</tr>
<tr>
<td>Age of manager</td>
<td>-0.015</td>
</tr>
<tr>
<td>Shareholding ratio of manager</td>
<td>0.002</td>
</tr>
<tr>
<td>Manufacturing dummy</td>
<td>-0.143</td>
</tr>
<tr>
<td>Wholesaling dummy</td>
<td>-0.160</td>
</tr>
<tr>
<td>Constant term</td>
<td>-1.338</td>
</tr>
<tr>
<td>Sample size</td>
<td>2,916</td>
</tr>
</tbody>
</table>

Log likelihood = -1,189.071  Log likelihood = -213.166

*** = 1% significance level   ** = 5% significance level   * = 10% significance level

Appendix Note 2-4-10 Reasons for success of new product development as cross-industry exchange activity

1. Model

Groups engaged in product development activities as cross-industry exchange associations were divided into groups that succeeded technologically and groups that succeeded commercially, and the averages of the variables shown in the table under 3. compared.

* Technological success: completion of development of product
Commercial success: commercialization of products developed and generation of profit

2. Data set


3. Results of estimates

<table>
<thead>
<tr>
<th>Year of establishment</th>
<th>Technological success</th>
<th>Technological success</th>
<th>Significance level</th>
<th>Commercial success</th>
<th>Commercial success</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989.7</td>
<td>1992.0</td>
<td>**</td>
<td>1990.0</td>
<td>1989.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity of business resources</td>
<td>3.57</td>
<td>3.23</td>
<td>3.46</td>
<td>3.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>Number of regular meetings</td>
<td>9.54</td>
<td>9.29</td>
<td>9.3</td>
<td>9.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Regular meeting participation rate</td>
<td>72.7</td>
<td>73.6</td>
<td>74.5</td>
<td>71.5</td>
<td></td>
</tr>
<tr>
<td>Access to technical knowledge</td>
<td>Collaboration with organization outside group</td>
<td>28.2%</td>
<td>16.5%</td>
<td>***</td>
<td>27.8%</td>
<td>28.5%</td>
</tr>
<tr>
<td></td>
<td>Collaboration with university technical college</td>
<td>15.1%</td>
<td>9.7%</td>
<td>**</td>
<td>13.9%</td>
<td>15.9%</td>
</tr>
<tr>
<td></td>
<td>Collaboration with public research institute</td>
<td>15.1%</td>
<td>6.8%</td>
<td>***</td>
<td>15.7%</td>
<td>14.6%</td>
</tr>
<tr>
<td></td>
<td>Collaboration with domestic enterprise</td>
<td>12.7%</td>
<td>8.0%</td>
<td>**</td>
<td>15.7%</td>
<td>10.6%</td>
</tr>
<tr>
<td></td>
<td>Divided equally</td>
<td>27.0%</td>
<td>35.7%</td>
<td>**</td>
<td>25.8%</td>
<td>27.8%</td>
</tr>
<tr>
<td></td>
<td>Determined according to role</td>
<td>14.3%</td>
<td>13.6%</td>
<td>**</td>
<td>15.7%</td>
<td>13.2%</td>
</tr>
<tr>
<td></td>
<td>Borne by core enterprise</td>
<td>6.2%</td>
<td>3.4%</td>
<td>**</td>
<td>8.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td></td>
<td>Subsidy used</td>
<td>37.1%</td>
<td>37.5%</td>
<td>**</td>
<td>3.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Market access (sales method)</td>
<td>Receipt of orders for group products, etc. via website</td>
<td>—</td>
<td>—</td>
<td>**</td>
<td>25.9%</td>
<td>17.2%</td>
</tr>
<tr>
<td></td>
<td>Joint business</td>
<td>—</td>
<td>—</td>
<td>**</td>
<td>62.0%</td>
<td>51.0%</td>
</tr>
<tr>
<td></td>
<td>Joint sales</td>
<td>—</td>
<td>—</td>
<td>**</td>
<td>34.3%</td>
<td>20.5%</td>
</tr>
<tr>
<td></td>
<td>Joint exhibition</td>
<td>—</td>
<td>—</td>
<td>**</td>
<td>38.9%</td>
<td>51.1%</td>
</tr>
<tr>
<td>Sample size</td>
<td>259</td>
<td>176</td>
<td>**</td>
<td>108</td>
<td>151</td>
<td>**</td>
</tr>
</tbody>
</table>

*** = 1% significance level   ** = 5% significance level   * = 10% significance level
Appended Note 2-4-11  Effect of industry-university-government collaboration on enterprise performance (estimated by selection bias model)

1. Model
   (1) Growth function
   Dependent variable: Rate of growth in sales, FY1997~2001
   Explanatory variables: 1) Natural log of enterprise age (in 2002)
                           2) Natural log of number of regular workers (in 1997)
                           3) Entrepreneur’s responsibility for technology and R&D dummy variable (yes = 1)
   (2) Preference function
   Dependent variable: Experience of industry-university-government collaboration dummy variable (yes = 1)
   Explanatory variables: 1) Natural log of enterprise age (in 2002)
                           2) Natural log of number of regular workers (in 1997)
                           3) Engagement in subcontracting dummy variable (yes = 1)
                           4) Gone public dummy variable (yes = 1)
                           5) Making concrete preparations for going public dummy variable (yes = 1)
                           6) Considering going public in future dummy variable (yes = 1)
                           7) Age of entrepreneur
                           8) Gender of entrepreneur (male = 1)
                           9) Entrepreneur responsible for technology and R&D dummy variable (yes = 1)

2. Data set
   The sample was produced by concatenating the above surveys and selecting only SMEs whose main industry was manufacturing.

3. Results of estimates (perfect information maximum likelihood method)

<table>
<thead>
<tr>
<th></th>
<th>Growth function</th>
<th>Preference function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>coefficient</td>
<td>error</td>
</tr>
<tr>
<td>Enterprise age</td>
<td>-0.102</td>
<td>0.036</td>
</tr>
<tr>
<td>Number of regular workers</td>
<td>-0.125</td>
<td>0.030</td>
</tr>
<tr>
<td>Subcontracting dummy</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Gone public dummy</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Preparing for going public dummy</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Considering going public dummy</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Age of entrepreneur</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Gender of entrepreneur</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Responsibility of entrepreneur dummy</td>
<td>-0.168</td>
<td>0.044</td>
</tr>
<tr>
<td>Constant term</td>
<td>1.498</td>
<td>0.276</td>
</tr>
</tbody>
</table>

ρ (significance level) = -0.860 (***)

Log likelihood = -1,682.061

Sample size: 627, 2,805

*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appended Note 2-4-12  Activities to revitalize shopping districts and number of new entrants

1. Model
   Dependent variable: Number of new stores opened in past five years
   Explanatory variables: 1) Number of stores in shopping district (natural log)
                           2) Environment and location of shopping district 1 (adjacent-type shopping district = 1)
                           3) Environment and location of shopping district 2 (wide-area-type shopping district = 1)
                           4) Association participation rate (number of members of association / total number of stores in shopping district)
                           5) Number of large retail stores present five years ago
6) Number of stores with customer drawing power five years ago
7) State of store innovation by existing stores in past five years
   (very little = 0, a little = 1, some = 2, very much = 3)
8) External resource attraction dummy variable
9) Internal resource utilization dummy variable
10) Business environment development dummy variable
11) Simultaneous external resource attraction and internal resource utilization dummy variable
12) Simultaneous external resource attraction and business environment development dummy variable
13) Simultaneous internal resource utilization and business environment development dummy variable

2. Data set
Shoko Research Institute, *Survey on Store Openings and Closings on Shopping Streets* (2002).

3. Results of estimates (estimated by Poisson regression model)

<table>
<thead>
<tr>
<th></th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
<th>Estimated coefficient</th>
<th>Standard error</th>
<th>Significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of stores</td>
<td>0.660</td>
<td>0.044</td>
<td>***</td>
<td>0.673</td>
<td>0.044</td>
<td>***</td>
</tr>
<tr>
<td>Adjacent-type dummy</td>
<td>-0.182</td>
<td>0.059</td>
<td>***</td>
<td>-0.163</td>
<td>0.058</td>
<td>***</td>
</tr>
<tr>
<td>Wide-area-type dummy</td>
<td>0.314</td>
<td>0.068</td>
<td>***</td>
<td>0.303</td>
<td>0.068</td>
<td>***</td>
</tr>
<tr>
<td>Association participation rate</td>
<td>0.118</td>
<td>0.050</td>
<td>***</td>
<td>0.110</td>
<td>0.050</td>
<td>**</td>
</tr>
<tr>
<td>Number of large retail stores</td>
<td>-0.012</td>
<td>0.031</td>
<td>***</td>
<td>-0.013</td>
<td>0.031</td>
<td>***</td>
</tr>
<tr>
<td>Number of stores with customer drawing power</td>
<td>-0.001</td>
<td>0.003</td>
<td></td>
<td>-0.001</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>State of innovation by existing stores</td>
<td>0.208</td>
<td>0.031</td>
<td>***</td>
<td>0.215</td>
<td>0.031</td>
<td>***</td>
</tr>
<tr>
<td>External resource attraction</td>
<td>-0.090</td>
<td>0.059</td>
<td></td>
<td>-0.091</td>
<td>0.059</td>
<td></td>
</tr>
<tr>
<td>Internal resource utilization</td>
<td>0.412</td>
<td>0.055</td>
<td>***</td>
<td>0.412</td>
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<td>***</td>
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*** = 1% significance level  ** = 5% significance level  * = 10% significance level

Appendixed Note 3
Summary of main surveys used

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<th>Title of survey</th>
<th>Subject of survey</th>
<th>Sample size</th>
<th>Register used</th>
<th>Response rate</th>
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<td>Survey of the Financial Environment</td>
<td>All industries except agriculture, forestry, fisheries and government sector (not otherwise classified)</td>
<td>15,000</td>
<td>Tokyo Shoko Research, Ltd. Database</td>
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<tr>
<td>Survey on Alliance Activities of SMEs</td>
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<td>15,000</td>
<td>Register of businesses for the Basic Survey of Commercial and Manufacturing Structure and Activity (1998)</td>
<td>31.3%</td>
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Notes: 1. *Fact-finding Survey on Business Management Strategy*: randomly sampled by industry and number of employees.
3. *Survey on Alliance Activities of SMEs*: random sampling by industry of enterprises defined as SMEs in terms of number of employees.
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(Japanese titles translated by the Japan Small Business Research Institute. Japanese names are presented in Japanese form, with the surname followed by the given name.)
SUPPLEMENTARY
STATistical DATA
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Table 1: Number of business establishments and enterprises by industry and size (private)

(1) Business establishments

<table>
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<tr>
<th>Industry</th>
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<th>Small and medium business establishments</th>
<th>Large business establishments</th>
<th>Total</th>
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Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes: 1. For the figures for 1996, business establishments with 300 or fewer workers (100 or fewer in wholesaling, 50 or fewer in retailing, food services and services) are treated as small and medium business establishments.
2. For the figures for 1999 onward, business establishments with 300 or fewer workers (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) are treated as small and medium business establishments as defined under the revised Small and Medium Enterprise Basic Law.
3. Business establishments with 20 or fewer workers (5 or fewer in wholesaling, retailing, food services and services) are treated as small business establishments.
4. The percentages of the total for small business establishments indicate their proportion of the total number of business establishments.
5. Industries are classified according to the October 1993 revised system of industry classification.
6. The figures for 2001 include business establishments with temporary employment service and subcontracted workers only (total number of workers = 0).
### Enterprises

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Notes:
1. Number of enterprises = number of companies + sole proprietor establishments (independent establishments and head offices).
2. SMEs in 1996 are enterprises with 300 or fewer regular employees (100 or fewer in wholesaling, 50 or fewer in retailing, food services and services) or capital stock of ¥100 million or less (¥30 million or less in wholesaling, ¥10 million or less in retailing, food services and services).
3. SMEs from 1999 are enterprises with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services) as defined under the revised Small and Medium Enterprise Basic Law.
4. Small enterprises are enterprises with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services).
5. The percentages of the total for small enterprises indicate their proportion of the total number of enterprises.
6. Industries are classified according to the October 1993 revised system of industry classification.
(3) Companies only

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<th>Total</th>
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Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).
Notes:
1. Business establishments of sole proprietors not included.
2. SMEs in 1996 are enterprises with 300 or fewer regular employees (100 or fewer in wholesaling, 50 or fewer in retailing, food services and services) or capital stock of ¥100 million or less (¥30 million or less in wholesaling, ¥10 million or less in retailing, food services and services).
3. SMEs from 1999 are enterprises with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services) as defined under the revised Small and Medium Enterprise Basic Law.
4. Small enterprises are enterprises with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services).
5. The percentages of the total for small enterprises indicate their proportion of the total number of enterprises.
6. Industries are classified according to the October 1993 revised system of Industry classification.
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<th>Large enterprises No.</th>
<th>Large enterprises % of total</th>
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<th>Total % of total</th>
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Notes:
1. Number of enterprises = number of companies + establishments of sole proprietors (independent establishments and head offices).
2. SMEs are enterprises with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services).
3. Small enterprises are enterprises with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services).
4. The percentages of the total for small enterprises indicate their proportion of the total number of enterprises.
5. Industries are classified according to the October 1993 revised system of Industry classification.
Table 3  Number of workers by industry and size (private)

(1) Business establishments

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<th>No. of small business establishments</th>
<th>No. % of total</th>
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<th>% of total</th>
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<th>% of total</th>
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<td>96.3</td>
<td>705,378</td>
<td>76.9</td>
<td>34,280</td>
<td>3.7</td>
<td>917,476</td>
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<tr>
<td>Real estate</td>
<td>1996</td>
<td>8,499,800</td>
<td>61.6</td>
<td>2,715,003</td>
<td>19.7</td>
<td>5,301,964</td>
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<td>1999</td>
<td>9,935,146</td>
<td>72.6</td>
<td>2,605,315</td>
<td>19.0</td>
<td>3,752,233</td>
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<tr>
<td></td>
<td>2001</td>
<td>10,669,122</td>
<td>71.5</td>
<td>2,728,807</td>
<td>18.3</td>
<td>4,246,549</td>
<td>28.5</td>
<td>14,915,671</td>
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<tr>
<td>Non-primary industry total</td>
<td>1996</td>
<td>44,602,876</td>
<td>77.8</td>
<td>16,828,361</td>
<td>29.3</td>
<td>12,743,894</td>
<td>22.2</td>
<td>57,346,770</td>
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<tr>
<td></td>
<td>1999</td>
<td>43,287,581</td>
<td>80.8</td>
<td>15,419,366</td>
<td>28.8</td>
<td>10,302,732</td>
<td>19.2</td>
<td>53,903,313</td>
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<tr>
<td></td>
<td>2001</td>
<td>43,704,264</td>
<td>79.9</td>
<td>15,453,922</td>
<td>28.3</td>
<td>10,976,327</td>
<td>20.1</td>
<td>54,680,591</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: MPHPT, Establishment and Enterprise Census of Japan (recompiled).

Notes:
1. For the figures for 1996, business establishments with 300 or fewer workers (100 or fewer in wholesaling, 50 or fewer in retailing, food services and services) are treated as small and medium business establishments.
2. For the figures for 1999 onward, business establishments with 300 or fewer workers (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) are treated as small and medium business establishments as defined under the revised Small and Medium Enterprise Basic Law.
3. Small business establishments are defined as business establishments with 1–20 workers (1–5 workers in wholesaling, retailing, food services and services).
4. The percentages of the total for small business establishments indicate their proportion of the total number of business establishments.
5. Industries are classified according to the October 1993 revised system of industry classification.
(2) Enterprises (number of regular employees of companies and sole proprietors)

<table>
<thead>
<tr>
<th>Industry</th>
<th>SMEs</th>
<th>Large enterprises</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of regular employees</td>
<td>% of total</td>
<td>No. of regular employees</td>
</tr>
<tr>
<td>Mining</td>
<td>29,771</td>
<td>84.5</td>
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<td>Construction</td>
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<td>Manufacturing</td>
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<td>26,960</td>
<td>12.4</td>
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<td>Transport and communications</td>
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<td>299,959</td>
</tr>
<tr>
<td>Wholesaling, retailing and food services</td>
<td>8,036,726</td>
<td>67.8</td>
<td>1,976,620</td>
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<tr>
<td>Wholesaling</td>
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<td>310,547</td>
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<tr>
<td>Retailing</td>
<td>3,784,141</td>
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<td>918,919</td>
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<tr>
<td>Food services</td>
<td>1,887,926</td>
<td>81.7</td>
<td>747,154</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>159,920</td>
<td>13.9</td>
<td>54,293</td>
</tr>
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<td>Services</td>
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<tr>
<td>Non-primary industry total</td>
<td>25,600,984</td>
<td>66.9</td>
<td>7,238,406</td>
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</tbody>
</table>

Notes:
1. Number of workers by enterprises = number of regular employees of companies + number of regular employees of sole proprietor establishments (independent establishments and head offices).
2. SMEs are companies with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or with capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services).
3. Small enterprises are enterprises with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services).
4. The percentages of the total for small enterprises indicate the proportion of regular employees at enterprises of all sizes accounted for by small enterprises.
5. Industries are classified according to the October 1993 revised system of industry classification.

(3) Enterprises (number of regular employees of companies and total number of workers of sole proprietors)

<table>
<thead>
<tr>
<th>Industry</th>
<th>SMEs</th>
<th>Large enterprises</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of regular company employees</td>
<td>% of total</td>
<td>No. of regular company employees</td>
</tr>
<tr>
<td>Mining</td>
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<td>14,285</td>
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<tr>
<td>Construction</td>
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<td>2,159,911</td>
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<tr>
<td>Manufacturing</td>
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<td>2,236</td>
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<tr>
<td>Transport and communications</td>
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<td>67.9</td>
<td>354,136</td>
</tr>
<tr>
<td>Wholesaling, retailing and food services</td>
<td>10,145,170</td>
<td>72.6</td>
<td>3,617,709</td>
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<tr>
<td>Wholesaling</td>
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<td>388,725</td>
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<td>Retailing</td>
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<tr>
<td>Food services</td>
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<td>86.7</td>
<td>1,367,210</td>
</tr>
<tr>
<td>Finance and insurance</td>
<td>182,164</td>
<td>15.6</td>
<td>76,491</td>
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<tr>
<td>Real estate</td>
<td>642,253</td>
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<td>437,757</td>
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<tr>
<td>Services</td>
<td>6,724,696</td>
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<td>1,993,791</td>
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<tr>
<td>Non-primary industry total</td>
<td>29,963,365</td>
<td>70.2</td>
<td>10,793,230</td>
</tr>
</tbody>
</table>

Notes:
1. Figures indicate the number of regular employees of companies combined with the total number of workers of sole proprietors (independent establishments and head offices).
2. SMEs are companies with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or with capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services) and sole proprietors with 300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services).
3. Small enterprises are companies with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services) and sole proprietors with 30 or fewer workers (5 or fewer in wholesaling, retailing, food services and services).
4. The percentages of the total small enterprises indicate the proportion of regular employees of companies and workers of sole proprietors accounted for by small enterprises.
5. Industries are classified according to the October 1993 revised system of industry classification.
### Companies only (number of regular employees of companies)

<table>
<thead>
<tr>
<th>Industry</th>
<th>SMEs</th>
<th></th>
<th>Large enterprises</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of regular employees</td>
<td>% of total</td>
<td>No. of regular employees</td>
<td>% of total</td>
<td>No. of regular employees</td>
</tr>
<tr>
<td>Mining</td>
<td>28,763</td>
<td>84.1</td>
<td>12,684</td>
<td>37.1</td>
<td>5,443</td>
</tr>
<tr>
<td>Construction</td>
<td>2,824,238</td>
<td>85.1</td>
<td>1,481,940</td>
<td>44.7</td>
<td>493,131</td>
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<tr>
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<td>58.6</td>
<td>1,366,637</td>
<td>13.7</td>
<td>4,119,197</td>
</tr>
<tr>
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<td>12.4</td>
<td>2,234</td>
<td>1.0</td>
<td>190,678</td>
</tr>
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<td>Transport and communications</td>
<td>1,978,593</td>
<td>67.0</td>
<td>277,229</td>
<td>9.4</td>
<td>974,096</td>
</tr>
<tr>
<td>Wholesaling, retailing and food services</td>
<td>5,928,159</td>
<td>61.4</td>
<td>734,092</td>
<td>7.6</td>
<td>3,733,874</td>
</tr>
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<td>Wholesaling</td>
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<td>65.9</td>
<td>241,629</td>
<td>7.0</td>
<td>1,169,926</td>
</tr>
<tr>
<td>Retailing</td>
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<td>56.4</td>
<td>395,592</td>
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<td>2,142,076</td>
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<tr>
<td>Food services</td>
<td>894,903</td>
<td>68.0</td>
<td>96,871</td>
<td>7.4</td>
<td>421,872</td>
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<td>Finance and insurance</td>
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<td>42,295</td>
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<td>Services</td>
<td>4,081,001</td>
<td>67.5</td>
<td>319,255</td>
<td>5.3</td>
<td>1,963,470</td>
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<td>Non-primary industry total</td>
<td>21,249,910</td>
<td>62.9</td>
<td>4,426,618</td>
<td>13.1</td>
<td>12,555,860</td>
</tr>
</tbody>
</table>


Notes:
1. Business establishments of sole proprietors not included.
2. SMEs are companies with 300 or fewer regular employees (100 or fewer in wholesaling and services, 50 or fewer in retailing and food services) or with capital stock of ¥300 million or less (¥100 million or less in wholesaling, ¥50 million or less in retailing, food services and services).
3. Small enterprises are companies with 20 or fewer regular employees (5 or fewer in wholesaling, retailing, food services and services).
4. The percentages of the total for small enterprises indicate the proportion of regular employees or enterprises of all size accounted for by small enterprises.
5. Industries are classified according to the October 1993 revised system of industry classification.
### Table 4  Number of establishments and workers and value of shipments in manufacturing

(1) Number of establishments

<table>
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<tr>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4~9</td>
<td>224,197</td>
<td>229,281</td>
<td>206,621</td>
<td>213,308</td>
<td>198,411</td>
<td>190,640</td>
<td>206,808</td>
<td>186,111</td>
<td>186,698</td>
<td>161,078</td>
</tr>
<tr>
<td>10~19</td>
<td>85,158</td>
<td>81,909</td>
<td>77,733</td>
<td>76,789</td>
<td>74,823</td>
<td>72,639</td>
<td>73,743</td>
<td>70,132</td>
<td>67,724</td>
<td>71,665</td>
</tr>
<tr>
<td>20~99</td>
<td>89,350</td>
<td>86,454</td>
<td>82,865</td>
<td>82,099</td>
<td>80,991</td>
<td>79,645</td>
<td>78,181</td>
<td>74,710</td>
<td>72,562</td>
<td>69,272</td>
</tr>
<tr>
<td>100~299</td>
<td>12,473</td>
<td>12,171</td>
<td>11,852</td>
<td>11,823</td>
<td>11,721</td>
<td>11,703</td>
<td>11,422</td>
<td>11,066</td>
<td>11,049</td>
<td>10,795</td>
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<td>300~999</td>
<td>3,226</td>
<td>3,159</td>
<td>3,080</td>
<td>3,062</td>
<td>3,046</td>
<td>3,014</td>
<td>2,972</td>
<td>2,876</td>
<td>2,859</td>
<td>2,848</td>
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<tr>
<td>1,000 or more</td>
<td>708</td>
<td>696</td>
<td>674</td>
<td>645</td>
<td>620</td>
<td>605</td>
<td>587</td>
<td>562</td>
<td>529</td>
<td>521</td>
</tr>
<tr>
<td>4~299</td>
<td>411,178</td>
<td>409,815</td>
<td>379,071</td>
<td>384,019</td>
<td>365,946</td>
<td>354,627</td>
<td>370,154</td>
<td>342,019</td>
<td>338,033</td>
<td>312,810</td>
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<td>300 or more</td>
<td>3,934</td>
<td>3,855</td>
<td>3,754</td>
<td>3,707</td>
<td>3,666</td>
<td>3,619</td>
<td>3,559</td>
<td>3,438</td>
<td>3,388</td>
<td>3,369</td>
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<tr>
<td>Total</td>
<td>415,112</td>
<td>413,670</td>
<td>382,825</td>
<td>387,726</td>
<td>369,612</td>
<td>358,246</td>
<td>373,713</td>
<td>345,457</td>
<td>341,421</td>
<td>316,179</td>
</tr>
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</table>

Source: METI, Census of Manufactures.
Notes: 1. Based on statistics for business establishments.
3. Table (1) shows the number of establishments by number of workers at establishments (plants).

(2) Number of workers

<table>
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<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>4~9</td>
<td>1,356</td>
<td>1,366</td>
<td>1,247</td>
<td>1,272</td>
<td>1,199</td>
<td>1,155</td>
<td>1,231</td>
<td>1,119</td>
<td>1,111</td>
<td>957</td>
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<td>10~19</td>
<td>1,176</td>
<td>1,131</td>
<td>1,074</td>
<td>1,061</td>
<td>1,036</td>
<td>1,007</td>
<td>1,021</td>
<td>971</td>
<td>938</td>
<td>976</td>
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<td>20~99</td>
<td>3,461</td>
<td>3,351</td>
<td>3,218</td>
<td>3,192</td>
<td>3,152</td>
<td>3,107</td>
<td>3,044</td>
<td>2,921</td>
<td>2,846</td>
<td>2,720</td>
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<tr>
<td>100~299</td>
<td>2,008</td>
<td>1,958</td>
<td>1,903</td>
<td>1,897</td>
<td>1,879</td>
<td>1,86</td>
<td>1,989</td>
<td>1,86</td>
<td>189</td>
<td>193</td>
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<tr>
<td>300~999</td>
<td>1,631</td>
<td>1,592</td>
<td>1,549</td>
<td>1,539</td>
<td>1,528</td>
<td>1,511</td>
<td>1,484</td>
<td>1,427</td>
<td>1,417</td>
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<td>7,422</td>
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<td>7,150</td>
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<td>7,143</td>
<td>7,088</td>
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<td>3,077</td>
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<td>2,898</td>
<td>2,837</td>
<td>2,787</td>
<td>2,708</td>
<td>2,591</td>
<td>2,513</td>
<td>2,466</td>
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<tr>
<td>Total</td>
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<td>10,321</td>
<td>10,103</td>
<td>9,937</td>
<td>9,838</td>
<td>9,378</td>
<td>9,184</td>
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</table>

(3) Value of shipments

<table>
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<th></th>
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<th></th>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>4~9</td>
<td>15,675</td>
<td>14,806</td>
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<td>13,400</td>
<td>13,722</td>
<td>12,194</td>
<td>12,198</td>
<td>10,250</td>
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<tr>
<td>10~19</td>
<td>18,759</td>
<td>17,379</td>
<td>16,219</td>
<td>16,318</td>
<td>16,314</td>
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<td>16,280</td>
<td>15,001</td>
<td>14,742</td>
<td>14,729</td>
</tr>
<tr>
<td>20~99</td>
<td>73,880</td>
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<td>66,039</td>
<td>67,531</td>
<td>68,957</td>
<td>70,216</td>
<td>67,445</td>
<td>63,630</td>
<td>63,915</td>
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<td>59,541</td>
<td>60,761</td>
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<td>61,945</td>
<td>59,724</td>
<td>62,770</td>
<td>60,465</td>
</tr>
<tr>
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<td>72,488</td>
<td>68,963</td>
<td>68,075</td>
<td>70,635</td>
<td>73,377</td>
<td>76,835</td>
<td>72,466</td>
<td>68,720</td>
<td>73,269</td>
<td>70,109</td>
</tr>
<tr>
<td>1,000 or more</td>
<td>86,052</td>
<td>81,400</td>
<td>77,451</td>
<td>80,169</td>
<td>82,212</td>
<td>75,463</td>
<td>72,180</td>
<td>73,585</td>
<td>69,606</td>
<td>61,717</td>
</tr>
<tr>
<td>4~299</td>
<td>170,980</td>
<td>160,836</td>
<td>153,501</td>
<td>157,139</td>
<td>159,523</td>
<td>164,025</td>
<td>157,940</td>
<td>155,500</td>
<td>155,624</td>
<td>146,615</td>
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<tr>
<td>300 or more</td>
<td>158,540</td>
<td>150,363</td>
<td>145,526</td>
<td>148,890</td>
<td>153,546</td>
<td>159,047</td>
<td>147,929</td>
<td>140,900</td>
<td>146,854</td>
<td>139,715</td>
</tr>
<tr>
<td>Total</td>
<td>329,521</td>
<td>311,199</td>
<td>299,027</td>
<td>306,030</td>
<td>313,068</td>
<td>325,072</td>
<td>305,869</td>
<td>291,450</td>
<td>300,478</td>
<td>286,330</td>
</tr>
</tbody>
</table>

Upper row: ¥ billion, lower row: % of total
Table 5  Capital investment and value added in manufacturing

(1) Capital investment

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30~99</td>
<td>1992</td>
<td>2,929</td>
<td>2,251</td>
<td>1,864</td>
<td>1,734</td>
<td>1,962</td>
<td>2,137</td>
<td>1,975</td>
<td>1,659</td>
<td>1,522</td>
<td>1,709</td>
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<tr>
<td></td>
<td>1993</td>
<td>17.5</td>
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<td>15.0</td>
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<td>14.4</td>
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<tr>
<td>100~299</td>
<td>1992</td>
<td>3,754</td>
<td>2,890</td>
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<td>2,658</td>
<td>2,829</td>
<td>2,982</td>
<td>2,929</td>
<td>2,621</td>
<td>2,604</td>
<td>2,802</td>
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<td>1993</td>
<td>22.4</td>
<td>22.3</td>
<td>22.9</td>
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<td>22.4</td>
<td>22.0</td>
<td>23.6</td>
<td>23.0</td>
<td>23.7</td>
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<td>1993</td>
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<td>29.0</td>
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<td>31.4</td>
<td>29.5</td>
<td>31.2</td>
<td>30.2</td>
</tr>
<tr>
<td>1,000 or more</td>
<td>1992</td>
<td>5,329</td>
<td>4,050</td>
<td>3,545</td>
<td>3,643</td>
<td>3,936</td>
<td>4,210</td>
<td>4,244</td>
<td>3,14</td>
<td>3,529</td>
<td>3,670</td>
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<td>1993</td>
<td>31.8</td>
<td>31.3</td>
<td>32.1</td>
<td>32.4</td>
<td>31.2</td>
<td>31.5</td>
<td>31.8</td>
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(2) Value added

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<th></th>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4~9</td>
<td>1992</td>
<td>8,183</td>
<td>7,756</td>
<td>7,124</td>
<td>7,322</td>
<td>7,163</td>
<td>7,071</td>
<td>7,280</td>
<td>6,487</td>
<td>6,531</td>
<td>5,378</td>
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<td></td>
<td>1993</td>
<td>6.8</td>
<td>6.7</td>
<td>6.3</td>
<td>6.6</td>
<td>6.0</td>
<td>5.9</td>
<td>6.4</td>
<td>6.0</td>
<td>5.9</td>
<td>5.2</td>
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<tr>
<td>10~19</td>
<td>1992</td>
<td>8,426</td>
<td>7,899</td>
<td>7,318</td>
<td>7,453</td>
<td>7,458</td>
<td>7,482</td>
<td>7,452</td>
<td>6,869</td>
<td>6,760</td>
<td>7,112</td>
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<td>1993</td>
<td>7.0</td>
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<td>6.4</td>
<td>6.3</td>
<td>6.2</td>
<td>6.6</td>
<td>6.4</td>
<td>6.1</td>
<td>6.9</td>
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<tr>
<td></td>
<td>1993</td>
<td>24.0</td>
<td>23.8</td>
<td>23.5</td>
<td>23.4</td>
<td>23.5</td>
<td>23.5</td>
<td>23.9</td>
<td>23.9</td>
<td>23.6</td>
<td>24.0</td>
</tr>
<tr>
<td>100~299</td>
<td>1992</td>
<td>22,974</td>
<td>22,192</td>
<td>21,915</td>
<td>22,935</td>
<td>23,227</td>
<td>23,977</td>
<td>22,482</td>
<td>22,502</td>
<td>23,168</td>
<td>22,224</td>
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<tr>
<td></td>
<td>1993</td>
<td>19.0</td>
<td>19.3</td>
<td>19.6</td>
<td>19.6</td>
<td>20.0</td>
<td>19.9</td>
<td>20.0</td>
<td>21.0</td>
<td>21.5</td>
<td></td>
</tr>
<tr>
<td>300~999</td>
<td>1992</td>
<td>25,076</td>
<td>24,118</td>
<td>24,456</td>
<td>25,564</td>
<td>26,055</td>
<td>26,263</td>
<td>24,907</td>
<td>23,638</td>
<td>24,707</td>
<td>22,764</td>
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<tr>
<td></td>
<td>1993</td>
<td>20.7</td>
<td>21.0</td>
<td>21.8</td>
<td>21.8</td>
<td>21.8</td>
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<td>21.9</td>
<td>22.4</td>
<td>22.1</td>
</tr>
<tr>
<td>1,000 or more</td>
<td>1992</td>
<td>27,378</td>
<td>25,750</td>
<td>25,122</td>
<td>26,527</td>
<td>27,555</td>
<td>26,865</td>
<td>24,090</td>
<td>22,590</td>
<td>23,063</td>
<td>20,911</td>
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<tr>
<td></td>
<td>1993</td>
<td>22.6</td>
<td>22.4</td>
<td>22.4</td>
<td>22.6</td>
<td>22.9</td>
<td>22.4</td>
<td>21.3</td>
<td>20.9</td>
<td>20.9</td>
<td>20.3</td>
</tr>
</tbody>
</table>

Source: METI, Census of Manufactures.
Notes: 1. Based on statistics for business establishments.
3. Capital investment equals the value of acquisitions of tangible fixed assets plus the annual change in construction in progress.
4. Where business establishments of the head office are separate from plants, investment in the same is not included.
5. In Table (2), figures for establishments with 4~9 workers up to 2000 and establishments with 29 or fewer workers in 2001 indicate gross value added.
### Table 6  Number of establishments, workers and sales of wholesale trade

(1) Number of establishments and workers

<table>
<thead>
<tr>
<th>Item</th>
<th>No. of establishments (1,000)</th>
<th>No. of employees (1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~2</td>
<td>95.3</td>
<td>101.8</td>
</tr>
<tr>
<td></td>
<td>(21.8)</td>
<td>(21.4)</td>
</tr>
<tr>
<td>3~4</td>
<td>110.1</td>
<td>123.3</td>
</tr>
<tr>
<td></td>
<td>(25.2)</td>
<td>(25.9)</td>
</tr>
<tr>
<td>5~9</td>
<td>121.6</td>
<td>132.1</td>
</tr>
<tr>
<td></td>
<td>(21.8)</td>
<td>(21.4)</td>
</tr>
<tr>
<td>10~19</td>
<td>64.7</td>
<td>70.5</td>
</tr>
<tr>
<td></td>
<td>(14.8)</td>
<td>(14.8)</td>
</tr>
<tr>
<td>20~49</td>
<td>34.0</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>(7.8)</td>
<td>(7.6)</td>
</tr>
<tr>
<td>50~99</td>
<td>7.8</td>
<td>8.4</td>
</tr>
<tr>
<td></td>
<td>(1.8)</td>
<td>(1.8)</td>
</tr>
<tr>
<td>1~99</td>
<td>433.5</td>
<td>472.5</td>
</tr>
<tr>
<td></td>
<td>(99.3)</td>
<td>(99.3)</td>
</tr>
<tr>
<td>100 or more</td>
<td>7.8</td>
<td>8.4</td>
</tr>
<tr>
<td>1988</td>
<td>436.4</td>
<td>476.0</td>
</tr>
</tbody>
</table>

(2) Total sales during the year and total sales during the year per worker

<table>
<thead>
<tr>
<th>Item</th>
<th>Total sales during the year (¥ billion)</th>
<th>Total sales during the year per worker (¥10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~2</td>
<td>5,830</td>
<td>8,162</td>
</tr>
<tr>
<td></td>
<td>(1.3)</td>
<td>(1.4)</td>
</tr>
<tr>
<td>3~4</td>
<td>18,251</td>
<td>23,788</td>
</tr>
<tr>
<td></td>
<td>(4.1)</td>
<td>(4.2)</td>
</tr>
<tr>
<td>5~9</td>
<td>49,592</td>
<td>64,403</td>
</tr>
<tr>
<td></td>
<td>(11.1)</td>
<td>(11.2)</td>
</tr>
<tr>
<td>10~19</td>
<td>62,784</td>
<td>82,024</td>
</tr>
<tr>
<td></td>
<td>(14.1)</td>
<td>(14.3)</td>
</tr>
<tr>
<td>20~49</td>
<td>86,233</td>
<td>108,734</td>
</tr>
<tr>
<td></td>
<td>(19.3)</td>
<td>(19.0)</td>
</tr>
<tr>
<td>50~99</td>
<td>54,584</td>
<td>68,696</td>
</tr>
<tr>
<td></td>
<td>(12.2)</td>
<td>(12.0)</td>
</tr>
<tr>
<td>1~99</td>
<td>277,274</td>
<td>355,807</td>
</tr>
<tr>
<td></td>
<td>(62.1)</td>
<td>(62.1)</td>
</tr>
<tr>
<td>100 or more</td>
<td>169,210</td>
<td>217,358</td>
</tr>
<tr>
<td></td>
<td>(37.9)</td>
<td>(37.9)</td>
</tr>
<tr>
<td>Total</td>
<td>446,484</td>
<td>573,165</td>
</tr>
</tbody>
</table>

Source: METI, Census of Commerce.

Notes: 1. The figures for 1994 onward are tabulated in accordance with the October 1993 revised system of industry classification, and differ slightly in content from the figures up to and including 1991.
2. The 1999 survey was conducted at the same time as the MPHPT’s Establishment and Enterprise Census of Japan (simplified questionnaire used for both surveys), which enabled existing establishments surveyed to be determined. The figures are not therefore consistent with the figures for previous years.
3. Workers for annual sales per worker exclude agency and intermediary business.
### Table 7 Number of establishments, workers and sales of retail trade

#### (1) Number of establishments and workers

<table>
<thead>
<tr>
<th>Item</th>
<th>No. of establishments (1,000)</th>
<th>No. of workers (1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~2</td>
<td>874.4</td>
<td>847.2</td>
</tr>
<tr>
<td></td>
<td>(54.0)</td>
<td>(53.2)</td>
</tr>
<tr>
<td>3~4</td>
<td>422.1</td>
<td>416.9</td>
</tr>
<tr>
<td></td>
<td>(26.1)</td>
<td>(26.2)</td>
</tr>
<tr>
<td>5~9</td>
<td>214.0</td>
<td>214.0</td>
</tr>
<tr>
<td></td>
<td>(13.2)</td>
<td>(13.4)</td>
</tr>
<tr>
<td>10~19</td>
<td>70.4</td>
<td>71.9</td>
</tr>
<tr>
<td></td>
<td>(4.3)</td>
<td>(4.5)</td>
</tr>
<tr>
<td>20~49</td>
<td>31.4</td>
<td>33.1</td>
</tr>
<tr>
<td></td>
<td>(1.9)</td>
<td>(2.1)</td>
</tr>
<tr>
<td>1~49</td>
<td>1,612.3</td>
<td>1,583.1</td>
</tr>
<tr>
<td></td>
<td>(99.5)</td>
<td>(99.5)</td>
</tr>
<tr>
<td>50 or more</td>
<td>7.4</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>(0.5)</td>
<td>(0.5)</td>
</tr>
<tr>
<td>Total</td>
<td>1,619.8</td>
<td>1,591.2</td>
</tr>
</tbody>
</table>

#### (2) Total sales during the year and total sales during the year per worker

<table>
<thead>
<tr>
<th>Item</th>
<th>Total sales during the year (¥ billion)</th>
<th>Total sales during the year per worker (¥10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1~2</td>
<td>12,832</td>
<td>15,224</td>
</tr>
<tr>
<td></td>
<td>(11.2)</td>
<td>(10.8)</td>
</tr>
<tr>
<td>3~4</td>
<td>19,246</td>
<td>23,006</td>
</tr>
<tr>
<td></td>
<td>(16.8)</td>
<td>(16.4)</td>
</tr>
<tr>
<td>5~9</td>
<td>24,095</td>
<td>28,878</td>
</tr>
<tr>
<td></td>
<td>(21.0)</td>
<td>(20.5)</td>
</tr>
<tr>
<td>10~19</td>
<td>16,948</td>
<td>21,409</td>
</tr>
<tr>
<td></td>
<td>(14.8)</td>
<td>(15.2)</td>
</tr>
<tr>
<td>20~49</td>
<td>16,998</td>
<td>21,151</td>
</tr>
<tr>
<td></td>
<td>(14.8)</td>
<td>(15.0)</td>
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<tr>
<td>1~49</td>
<td>90,121</td>
<td>109,668</td>
</tr>
<tr>
<td></td>
<td>(78.5)</td>
<td>(78.0)</td>
</tr>
<tr>
<td>50 or more</td>
<td>24,719</td>
<td>30,971</td>
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<td>(24.7)</td>
<td>(23.2)</td>
</tr>
<tr>
<td>Total</td>
<td>114,840</td>
<td>140,639</td>
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</table>

Source: METI, Census of Commerce.

Notes:
1. The figures for 1994 onward are tabulated in accordance with the October 1993 revised system of industry classification, and differ slightly in content from the figures up to and including 1991.
2. The 1999 survey was conducted at the same time as the MPHPT's Establishment and Enterprise Census of Japan (simplified questionnaire used for both surveys), which enabled existing establishments surveyed to be determined. The figures are not therefore consistent with the figures for previous years.
### Table 8 Main financial indicators, profit status and main financial ratios of business corporations (median values)

(1) All industries

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 1999</th>
<th>2000</th>
<th>2001</th>
<th>FY 1999</th>
<th>2000</th>
<th>2001</th>
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<tbody>
<tr>
<td>Sales</td>
<td>33,500</td>
<td>33,800</td>
<td>36,400</td>
<td>2,440,000</td>
<td>2,499,600</td>
<td>2,343,700</td>
</tr>
<tr>
<td>Total assets</td>
<td>38,300</td>
<td>40,200</td>
<td>43,550</td>
<td>2,088,100</td>
<td>2,137,000</td>
<td>2,022,200</td>
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<tr>
<td>Value added</td>
<td>8,060</td>
<td>8,500</td>
<td>8,600</td>
<td>483,300</td>
<td>485,900</td>
<td>456,800</td>
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<tr>
<td>(Personnel costs)</td>
<td>6,600</td>
<td>6,700</td>
<td>6,900</td>
<td>345,300</td>
<td>338,000</td>
<td>330,300</td>
</tr>
<tr>
<td>(Interest expenses)</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>9,100</td>
<td>7,900</td>
<td>6,700</td>
</tr>
<tr>
<td>No. of workers (including officers)</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>571</td>
<td>551</td>
<td>540</td>
</tr>
<tr>
<td>Quick ratio</td>
<td>83.7</td>
<td>83.8</td>
<td>84.1</td>
<td>75.1</td>
<td>75.9</td>
<td>76.1</td>
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<tr>
<td>Equity ratio</td>
<td>20.7</td>
<td>21.6</td>
<td>22.5</td>
<td>30.1</td>
<td>30.2</td>
<td>31.1</td>
</tr>
<tr>
<td>ROA</td>
<td>1.1</td>
<td>1.5</td>
<td>1.2</td>
<td>2.7</td>
<td>3.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Ratio of ordinary profit to sales</td>
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<td>1.1</td>
<td>1.0</td>
<td>2.0</td>
<td>2.4</td>
<td>1.9</td>
</tr>
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<td>Total capital turnover</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Interest rate on borrowing</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Value-added ratio</td>
<td>27.9</td>
<td>28.1</td>
<td>27.3</td>
<td>21.2</td>
<td>21.0</td>
<td>20.5</td>
</tr>
<tr>
<td>Labor productivity</td>
<td>651</td>
<td>672</td>
<td>659</td>
<td>831</td>
<td>868</td>
<td>832</td>
</tr>
<tr>
<td>Capital-labor ratio</td>
<td>610</td>
<td>602</td>
<td>611</td>
<td>989</td>
<td>974</td>
<td>988</td>
</tr>
<tr>
<td>Ratio of fixed assets to long-term capital</td>
<td>72.9</td>
<td>72.2</td>
<td>72.4</td>
<td>86.7</td>
<td>87.6</td>
<td>88.2</td>
</tr>
</tbody>
</table>

### (2) Manufacturing

<table>
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<th>Item</th>
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<th>2001</th>
<th>FY 1999</th>
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<tbody>
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<td>Sales</td>
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<td>106,400</td>
<td>3,098,500</td>
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<td>Total assets</td>
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<td>10,000</td>
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<td>No. of workers (including officers)</td>
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<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
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<td>1.0</td>
<td>0.9</td>
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<tr>
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<td>27.3</td>
<td>23.1</td>
<td>23.0</td>
<td>22.3</td>
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<tr>
<td>Labor productivity</td>
<td>642</td>
<td>671</td>
<td>650</td>
<td>877</td>
<td>903</td>
<td>885</td>
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<td>Capital-labor ratio</td>
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<td>648</td>
<td>700</td>
<td>1,153</td>
<td>1,171</td>
<td>1,184</td>
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<td>Ratio of fixed assets to long-term capital</td>
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### (3) Wholesaling/retailing

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<tr>
<td>Labor productivity</td>
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<td>13.9</td>
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<tr>
<td>Capital-labor ratio</td>
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<td>600</td>
<td>588</td>
<td>731</td>
<td>752</td>
<td>747</td>
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<td>Ratio of fixed assets to long-term capital</td>
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### 4) Services

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<td>Sales</td>
<td>26,650</td>
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<td>27,350</td>
<td>728,550</td>
<td>737,600</td>
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<td>Total assets</td>
<td>36,700</td>
<td>39,700</td>
<td>40,750</td>
<td>848,950</td>
<td>867,700</td>
<td>857,600</td>
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<td>(Personnel costs)</td>
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<td>187,600</td>
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<td>315</td>
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<td>90.9</td>
<td>100.0</td>
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<td>90.9</td>
<td>95.1</td>
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<td>0.7</td>
<td>0.9</td>
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<td>Total capital turnover</td>
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<td>0.8</td>
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<tr>
<td>Value-added ratio</td>
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<td>590</td>
<td>590</td>
<td>790</td>
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<td>816</td>
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<td>Capital-labor ratio</td>
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<td>604</td>
<td>484</td>
<td>682</td>
<td>603</td>
<td>556</td>
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<td>82.9</td>
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### 5) Construction

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</thead>
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<td>27,350</td>
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<td>19,000</td>
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<td>4,870,800</td>
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<td>6,200</td>
<td>821,900</td>
<td>751,400</td>
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<td>(Personnel costs)</td>
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<td>5,466</td>
<td>617,950</td>
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<td>590,400</td>
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<td>(Interest expenses)</td>
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<td>100</td>
<td>100</td>
<td>14,050</td>
<td>13,300</td>
<td>11,200</td>
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<td>No. of workers (incl. officers)</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>335</td>
<td>315</td>
<td>331</td>
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<tr>
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<td>92.2</td>
<td>73.7</td>
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<td>1.5</td>
<td>1.1</td>
<td>1.1</td>
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<td>0.8</td>
<td>1.2</td>
<td>1.2</td>
<td>1.1</td>
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<tr>
<td>Value-added ratio</td>
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<td>22.6</td>
<td>22.3</td>
<td>15.5</td>
<td>14.8</td>
<td>14.9</td>
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<tr>
<td>Labor productivity</td>
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<td>675</td>
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<td>1,007</td>
<td>979</td>
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<td>Capital-labor ratio</td>
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<td>387</td>
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<td>801</td>
<td>831</td>
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<td>73.1</td>
<td>74.9</td>
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</table>

Notes: 1. SMEs: enterprises with capital stock of ¥300 million or less, or 300 or fewer employees (capital stock of ¥100 million or less, or 100 or fewer employees in wholesaling and services, capital stock of ¥50 million or less, or 50 or fewer employees in retailing).
Large enterprises: enterprises other than SMEs.
2. Value added = net operating profit + personnel costs (officers’ pay, employees’ pay, employee benefits) + interest expenses and discount charges + rent of movable property and real estate + taxes and public impositions
Quick ratio = quick assets / current liabilities
Equity ratio = equity / total capital
ROA = operating profit / total capital (average of beginning and end of period) x 100
Ratio of ordinary profit to sales = ordinary profit / sales x 100
Total capital turnover = sales / total capital (average of beginning and end of period)
Interest rate on borrowing = Interest expenses and discount charges / short-term and long-term borrowing + bonds + notes receivable discounted (average of beginning and end of period) x 100
Value-added ratio = value added / sales x 100
Labor productivity = value added / number of employees
Capital-labor ratio = tangible fixed assets (excluding construction in progress, average of beginning and end of period) / number of employees
Ratio of fixed assets to long-term capital = fixed assets / fixed liabilities x 100
3. Figures for sales, total assets, value added (personnel costs, interest expenses, discount charges), labor productivity and capital-labor ratio are in units of ¥10,000.
Unit for number of workers (including officers): individual workers
Figures for other financial ratios indicate percentages.
4. Figures are population medians.
## Table 9  Outstanding lending to SMEs by type of financial institution

(Units: ¥ trillion)

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<td>1998</td>
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<td>74.4</td>
<td>75.3</td>
<td>77.4</td>
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<td>73.7</td>
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<td>1999</td>
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<td>33.5</td>
<td>33.5</td>
<td>32.5</td>
<td>31.6</td>
<td>31.9</td>
<td>33.2</td>
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### Financial institution

- **City banks**
- **Regional banks**
- **Member banks of the Second Association of Regional Banks**
- **Other**
- **Domestically-licensed bank accounting accounts total**
- **Domestically-licensed bank trust accounts, etc.**
- **Credit associations**
- **Credit cooperatives**
- **Private-sector financial institutions total**
- **Private-sector financial institutions total (excluding trust accounts, etc.)**
- **Shoko Chukin Bank**
- **National Life Finance Corporation**
- **Japan Finance Corporation for Small Business**
- **Credit cooperatives**
- **Domestically-licensed bank trust accounts, etc.**
- **City banks**
- **Regional banks**
- **Member banks of the Second Association of Regional Banks**
- **Other**
- **Domestically-licensed bank accounting accounts total**
- **Domestically-licensed bank trust accounts, etc.**
- **Credit associations**
- **Credit cooperatives**
- **Private-sector financial institutions total**
- **Private-sector financial institutions total (excluding trust accounts, etc.)**
- **Shoko Chukin Bank**
- **National Life Finance Corporation**
- **Japan Finance Corporation for Small Business**
- **Credit cooperatives**
- **Domestically-licensed bank trust accounts, etc.**

### Notes
1. Outstanding lending to SMEs through domestically-licensed banking accounts and trust accounts, etc. indicates lending to enterprises with capital stock of ¥300 million (¥100 million or less) in capital stock of less than ¥1,000 million, or less than 100 employees (10 employees or less). Figures in square parentheses indicate definitions up to March 2000.
2. “Other banks” are trust banks and long-term credit banks.
4. Outstanding lending to SMEs by credit associations is total outstanding lending excluding lending to individuals, local governments, overseas yen loans and domestic loans transferred overseas.
5. Outstanding lending to SMEs by SME credit cooperatives is total outstanding lending including lending to individuals and local governments, etc.
6. Outstanding lending by the Japan Finance Corporation for Small Business does not include equipment loan lending and outstanding lending to small and medium business investment consultation companies.
7. The National Life Finance Corporation was formed by the merger of the People’s Finance Corporation and the Environmental Hygiene Finance Corporation in October 1999. Figures for lending up to September 1999 thus represent the combined total for the former People’s Finance Corporation and the former Environmental Hygiene Finance Corporation. The figures from December 1999 are the total for ordinary loans and environmental health loans.
Table 10 State of corporate bankruptcies

(1) No. of corporate bankruptcies and debts

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<tr>
<td>Overall</td>
<td>14,564</td>
<td>14,061</td>
<td>15,108</td>
<td>14,834</td>
<td>16,464</td>
<td>18,988</td>
<td>15,352</td>
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<td>18,497</td>
<td>18,819</td>
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<td>of under ¥100 million</td>
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<tr>
<td><strong>Debts</strong></td>
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<td>56,294</td>
<td>92,411</td>
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<td>140,447</td>
<td>137,484</td>
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<td>238,850</td>
<td>165,196</td>
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<td>40,917</td>
<td>46,561</td>
<td>49,693</td>
<td>57,494</td>
<td>68,329</td>
<td>80,540</td>
<td>55,691</td>
<td>73,151</td>
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(2) No. of bankruptcies and debts by industry

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(3) Breakdown of number of bankruptcies by cause

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Note: Only enterprises with debts of at least ¥10 million are included.
Table 11  Average monthly cash earning per regular worker

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Note: Cash earnings represent the amount before deduction of income tax, social insurance premiums, union dues and payments, etc.

Table 12 Outline of SME-related budget allocations for fiscal 2003

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Source: METI
Notes: 1. In addition to the above, the fiscal 2002 initial budget and the fiscal 2003 initial budget provided for investment in JASMEC (insurance operations) (¥51.6 billion under the fiscal 2002 initial budget, ¥39.0 billion under the fiscal 2003 initial budget: MOF), and support for the Organization for Worker’s Retirement Allowance Mutual Aid (¥4.4 billion under the fiscal 2002 initial budget and ¥4.3 billion under the fiscal 2003 initial budget: MHLW).
2. The figure for the fiscal 2002 supplementary budget includes the amount for MOF.
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The analyses contained in this white paper were drafted by the Research Office of the SME agency. The Editor in Chief was Takehiko Yasuda, and the individual chapters were drafted by the following persons:

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Thanks are due to Iichiro Uesugi (Fellow of the Research Institute of Economy, Trade and Industry), Associate Professor Hiroyuki Okamuro of Hitotsubashi University, Associate Professor Kenji Kutsuna of Kobe University, Genitsu Kono (attorney at law), Professor Noriaki Goto of Nihon University, Haruki Koyama (attorney at law), Professor Toshihiko Fujie of Chiba University of Commerce, Professor Takahiro Fujimoto of the University of Tokyo, Yukio Horiuchi (attorney at law), Professor Tsutomu Muramoto of Seijo University, Nobuaki Yamada (Managing Director of the Ota City Industrial Promotion Organization), Professor Tsutomu Watanabe of Hitotsubashi University, and the many others who kindly gave their assistance.

We should also like to thank the SME entrepreneurs and everyone else who took part in interviews and surveys, and provided valuable advice and comments that contributed to this White Paper.