

Financing the “New Economy” Firms in Today’s Japan

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1. Introduction

Importance of the “new economy” in today’s Japan

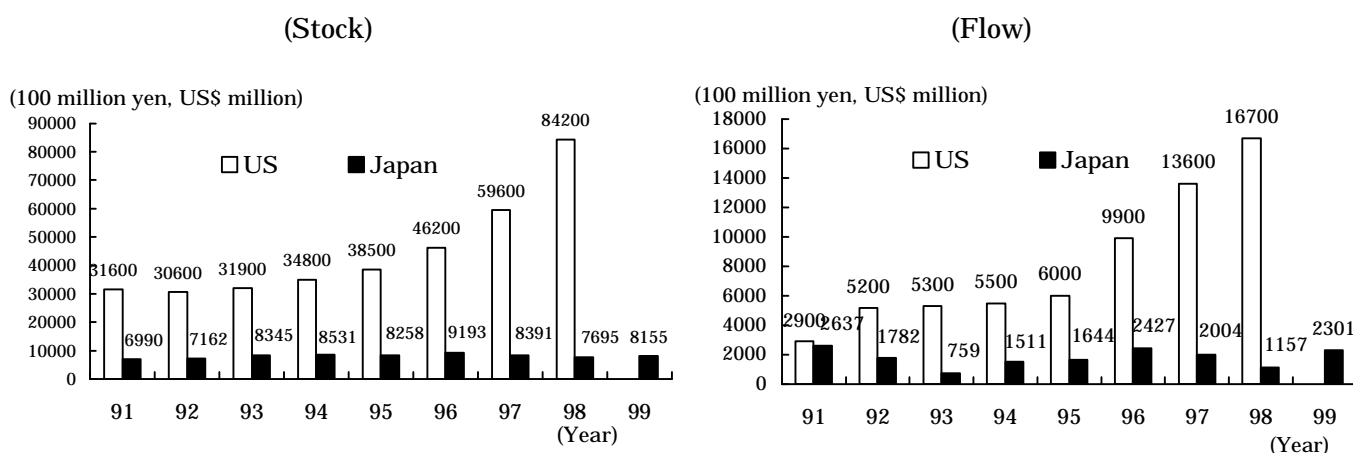
In recent years, the importance of IT-related companies - sometimes referred to as the “new economy” firms - in the Japanese economy has become increasingly clear. Roughly 30% of total fixed investments during the first quarter of 2001 is estimated to be IT-related, and market capitalization of so-called “IT-related industries” (electronic engineering, telecommunications, software and other services) adds up to around 30% of total market value, compared with around 20% ten years ago. Such a fundamental change presents new challenges in the area of corporate finance in Japan.

Two paradoxes

There are two paradoxes concerning the new economy in Japan: First, while Japan has seen its third boom of venture business activity since around 1994, it is frequently claimed that the supply of risk money is still insufficient and inadequately allocated. Second, while Japan is widely known to have prominent IT firms, it is often said that there are few successful IT venture firms. These paradoxes point to some issues that need to be examined concerning the financing of the new economy firms in Japan.

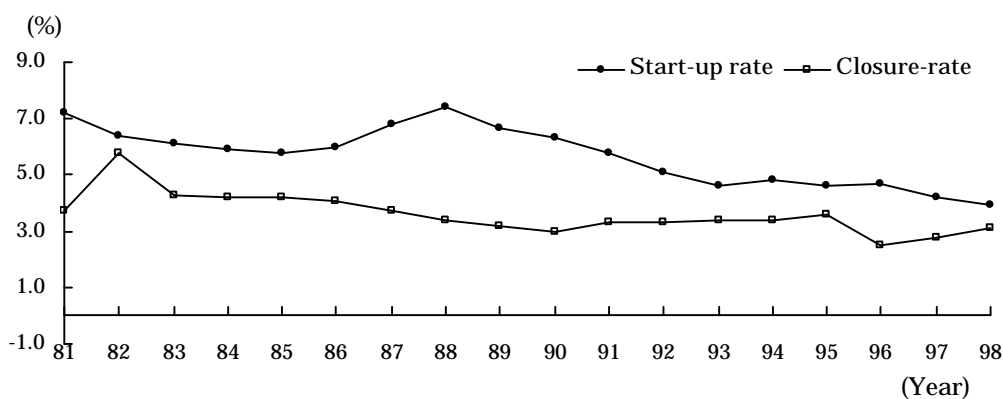
The first paradox suggests that while the volume of funds supplied might be enough in general (or at least in some segments), neither the quality nor timing and coverage of financing have been sufficient to meet the needs of new economy firms. This raises questions as to whether the conventional patterns of financial intermediation in Japan, i.e., the dominance of banks through the so-called “main bank system,” can adequately finance the new economy firms. The recent weakness of the banking system in Japan may have amplified such problems.

Figure 1. Japanese and US Venture Funds



Source: Venture Enterprise Center surveys, Venture Economics.
 Note: 80 - 90% of venture capital investment in the US is through partnerships.

Figure 2. Business Start-up and Closure Rates in Japan



Source: White Paper on Small and Medium-sized Enterprises in Japan 2000, former Ministry of International Trade and Industry (MITI).

The second paradox suggests that although the growth of venture firms is very important, it may not necessarily be the only way to meet the challenges of the IT revolution. The fruits of the new economy may also be enjoyed with different corporate strategies, and hence, different financing strategies.

The importance of meeting the financing needs of venture firms specializing in technology is quite clear. However, considering Japan's financial structure, the

utilization of (a) bank loans and (b) intra-group financing (or corporate in-house ventures) appears to be just as important. This paper covers these questions.

Definition of the "new economy" firms

There is no clear definition of "new economy" firms, and it is not productive to debate a precise definition. In fact, any firm with a business model that is geared towards IT technology could be classified as a "new economy" firm. For the purpose of this paper, the main characteristics of new economy firms are considered to be as follows.

- a) Risk profiles are generally high-risk.
- b) It is usually difficult to identify and quantify risk and returns (i.e., high degree of uncertainty).
- c) They are especially dependent on human resources and know-how as well as technology and business opportunities.
- d) Business models and core competence change swiftly and frequently.
→M&A would be an important tool in the financing of the new economy so as to save time in switching business models.

These characteristics are not necessarily unique to new economy firms, but are all related to the important issues in the financing of the new economy. Some of the findings about the financing of the new economy may be applied to other aspects of corporate finance such as the financing of corporate restructuring and M&A activities.

In this paper, we will focus on venture firms and existing corporations with strong emphasis on IT, namely those in electronic engineering, telecommunications, and other computer-related industries, because these firms seem to display the most relevant characteristics of new economy firms.

Outline of this paper

In this paper, we first discuss the current situation of venture firms in Japan. In the process of the boom and bust of the "IT bubble", the important issues have been clarified. We point out current problems in financing venture firms according to their *growth stage* as well as *provider of funds*. The background to the first paradox mentioned above will be explained.

Then we discuss the challenges in financing the new economy given the current situation and characteristics of Japan's economy. There are three important subjects: (a) corporate in-house ventures (internal financing within a corporate group), (b) M&A and MBOs of venture firms/businesses, and (c) the role of commercial banks. We would like to present some alternative ways, other than venture capital, to meet the financing needs of new economy firms. The second paradox might be explained in this context, though some problems remain. We also briefly discuss the roles of other participants such as venture capitals, institutional investors, and public assistance programs.

Lastly, we sum up the key issues in financing new economy firms in Japan and also suggest future challenges.

2. Financing New Economy Firms: the Current Situation of Venture Firms in Japan

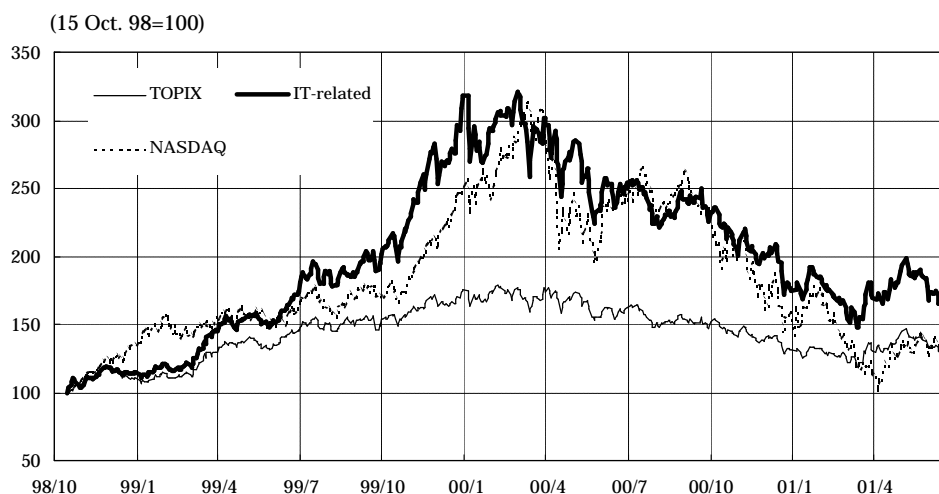
(1) Current situation of venture firms and their financing in Japan

The IT boom and venture firms in Japan

From mid-1999 to early 2000 (the period that is sometimes called the "IT bubble"), the stock prices of IT firms listed on the Tokyo Stock Exchange (TSE) increased significantly (up 108%). Simultaneously, the IPOs of venture firms, especially IT-related companies, also increased considerably. The establishment of markets for trading the shares of new economy firms, such as MOTHERS (sponsored by TSE) and NASDAQ Japan, encouraged these IPOs.

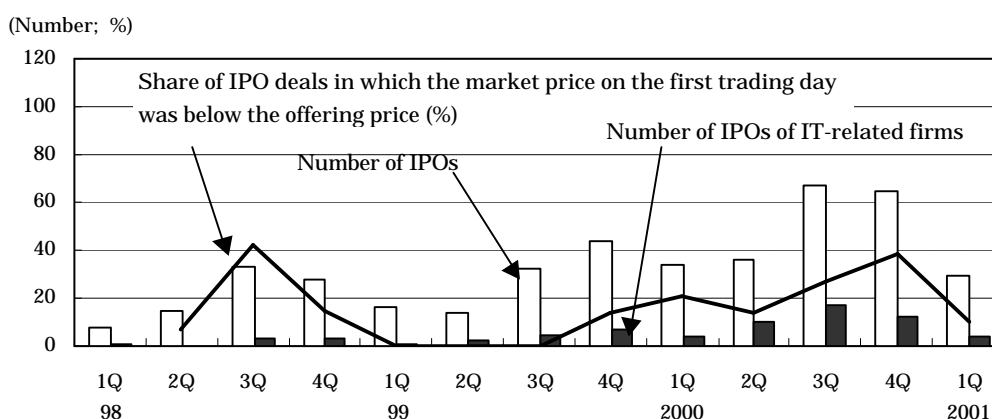
However, the IT boom had more or less ended by early 2000 and the stock prices of IT-related firms dropped significantly (53%). The IPOs of IT venture firms were also affected. Though the number of IPOs of IT-related firms remained high until late 2000, partly due to reluctance to delay already scheduled IPOs, there were increasing instances in which the market price on the first trading day fell short of the offering price. Thereafter, the number of transactions started to decline (figures 3 and 4). The boom and bust of the "IT bubble" was mostly in line with the global trend, as evidenced by the close correlation between IT sector stock prices in Japan and the NASDAQ index.

Figure 3. Stock Prices in Japan (TOPIX, IT-related) and NASDAQ



Note: “IT-related” comprises the electric appliance, service, and telecommunication sectors.

Figure 4. IPOs in Japan



Source: “Funding Eye”, IN Information Center

Based on a series of interviews with the management of IT-related venture firms, venture capitals and financial institutions, features of the venture boom in Japan during 1999 to 2000 can be summarized as follows:

- Stock prices of IT-related firms were mostly overvalued and current valuations appear to be more justifiable in many cases.
- Arguably, the financing conditions of start-up firms, especially those of IT-related venture firms, were excessively accommodative during the IT boom. Many interviewees admitted that, during that period, even start-up firms lacking a solid business plan and management capability could attract sizable investments simply because the firms were IT-related.

- Certain positive changes aiming to facilitate investments to start-up firms were seen, such as the establishment of new stock exchanges for trading the stocks of start-up firms.

These views suggest that financing channels for venture firms in Japan leaves something to be desired. There are many factors hindering growth of venture firms in Japan, not all of which are issues related to financing. However, the scarce availability of risk money is one of the most serious problems for most firms before they go public. Besides, other factors concerning social and institutional issues could be regarded as one chain of the vicious circle which makes it difficult for new economy firms to raise funds. Thus, we will mainly focus on *how* and *why* the problems occur in the financing of venture firms in Japan.

(2) Issues on the financing of new economy firms in Japan

Issues in financing venture firms according to their growth stage

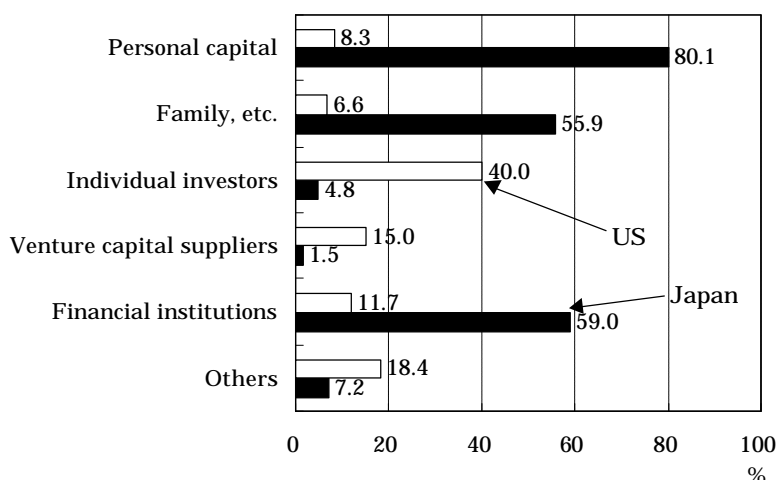
Venture firms in Japan face financing challenges at each growth stage.

i) Early stage

In their early stages, it is quite difficult for venture firms to attract equity investments from external sources, e.g., venture capitals and high net-worth individuals. A survey conducted by the Small and Medium Enterprise Agency shows major financing sources of venture firms in their early stages to be founders' personal assets, borrowing from private financial institutions, and borrowing or equity investments from relatives and friends (Figure 5).

In many cases, when making loans, financial institutions require personal guarantee of founders and, more often than not, also their relatives and friends. In such cases, normally each guarantor is required to jointly guarantee the whole amount of loans. Therefore, not only founders themselves but also their relatives and friends could face financial ruin when start-up firms go bankrupt. This makes it difficult for the management of a failed venture to start afresh. The scarcity of personal and institutional investments for start-up firms in their early stage on a limited liability basis and the resulting virtually unlimited liability faced by the founders may discourage entrepreneurship.

Figure 5. Sources of Funds When Starting Businesses



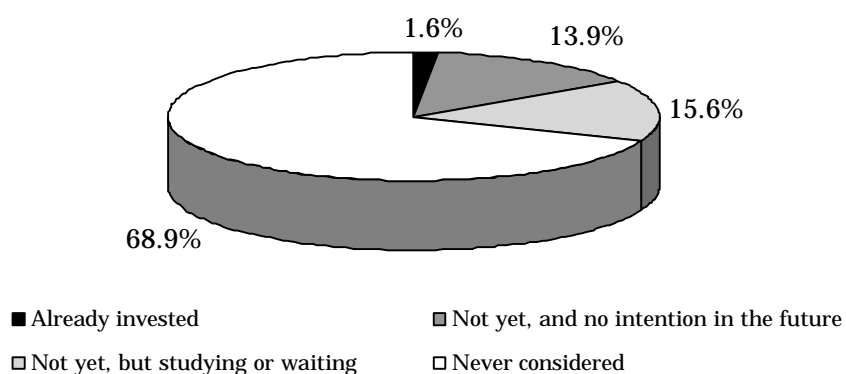
Source: “Cultivating IPO-style Venture Companies”, former Ministry of International Trade and Industry (MITI).

Note: Questionnaire survey from companies. The total for Japan exceeds 100% due to multiple answers.

ii) Growth stage

In their growth stage, venture firms generally face increased need for external funds. Expansion of and changes in their operations are indispensable to survive, but normally the accumulation of internal funds is not enough to finance new investments. This is especially the case for IT-related venture firms because of the rapid pace of change in their industry environment. However, financing channels that connect the vast amount of household financial assets and venture firms, such as pension funds and mutual funds, have not worked well so far in Japan (Figure 6, see also 3.(3)).

Figure 6. Venture Investments by Pension Funds



Source: Small and Medium Enterprise Agency

Note: Based on a questionnaire survey sent to Japanese pension funds with assets of more than 500 billion yen (122 funds responded).

On the one hand, some problems lie on the side of venture capitals. As we have already seen, the outstanding amount of investments provided by venture capitals in Japan is much smaller than in the US. There are also qualitative considerations. Venture capitals tend to concentrate their efforts on supplying funds and lack hands-on support such as providing management expertise, finding alliance partners, advising on disclosure, etc. The inadequacy of hands-on support is evidenced by the fact that the average investment in a venture firm tends to be small, i.e., venture capital portfolios are diversified with little commitment to management.

On the other hand, other problems are seen on the side of commercial banks. Though commercial banks are expected to play a significant role in nurturing venture firms, partly due to the inadequate supply of funds from venture capitals, commercial banks have not been able to meet such expectations. Many venture firms complain about banks' conservative attitude toward loans to venture firms and their overemphasis on tangible collateral. However, what role commercial banks should play could be controversial. We will revisit this issue in 3. (3).

iii) Later stage

In the later stage of a venture firm's development, investors often need to "exit" from their investments by cashing in through IPO or M&A .

As for the IPO environment, newly established stock markets such as NASDAQ Japan and MOTHERS on TSE allow venture firms to be listed under more flexible rules. The establishment of these markets is expected to shorten the maturity of investments in venture firms and attract more risk money. However, many interviewees pointed out that these markets are now probably experiencing growing pains, such as improvements in IPO pricing, preventing the entry of rogue firms, etc.

On the other hand, M&A transactions involving IT-related ventures, another important channel for investors to cash in on their investments, are not as active in Japan. According to RECOF, an M&A arrangement company, M&A transactions in Japan during 2000 are estimated at about 1,600, while Thomson Financial Data estimates those in the US at more than 15,000. Survey results suggest that M&A transactions have the potential to grow dramatically (see 3.(3)), but so far activities by various potential counterparties, i.e., investment banks as arrangers, commercial banks as providers of bridge loans, and institutional investors as risk money suppliers, remain relatively mute.

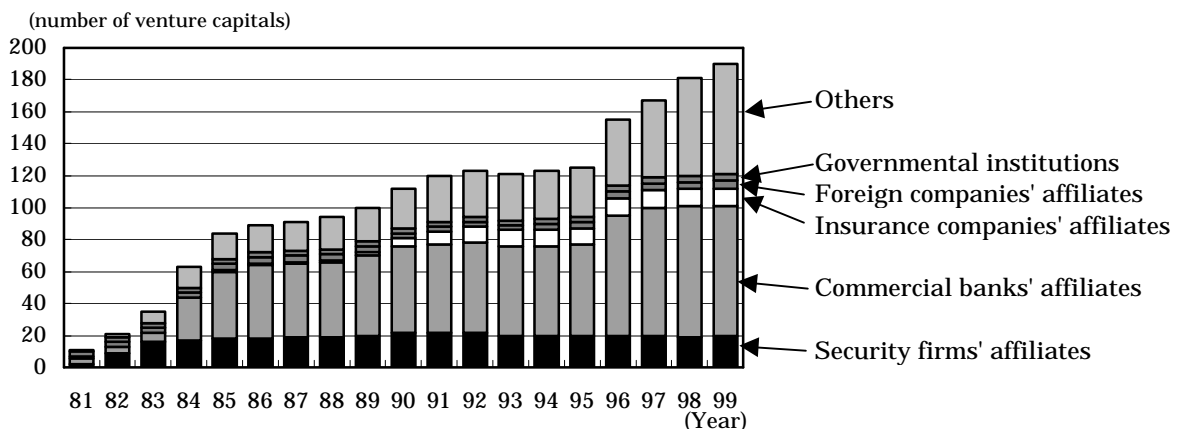
Why financing conditions are difficult for venture firms in Japan

One possible reason explaining the current problem in financing venture firms in Japan is the inadequate capability of financial intermediaries to evaluate venture firms, especially IT-related ones.

i) Venture capital

The majority of venture capitals in Japan are the subsidiaries or affiliated companies of commercial banks and securities houses. In many cases, the employees are engaged in venture finance as part of their career rotation and thus have limited opportunity to acquire experience as venture capitalists. As a result, venture capitals often depend on the judgment of others when they decide their own investments. Such “dependent” investment strategy may have accelerated the boom and bust of the IT bubble and hence discouraged investment over the longer term.

Figure 7. Number of Venture Capitals in Japan

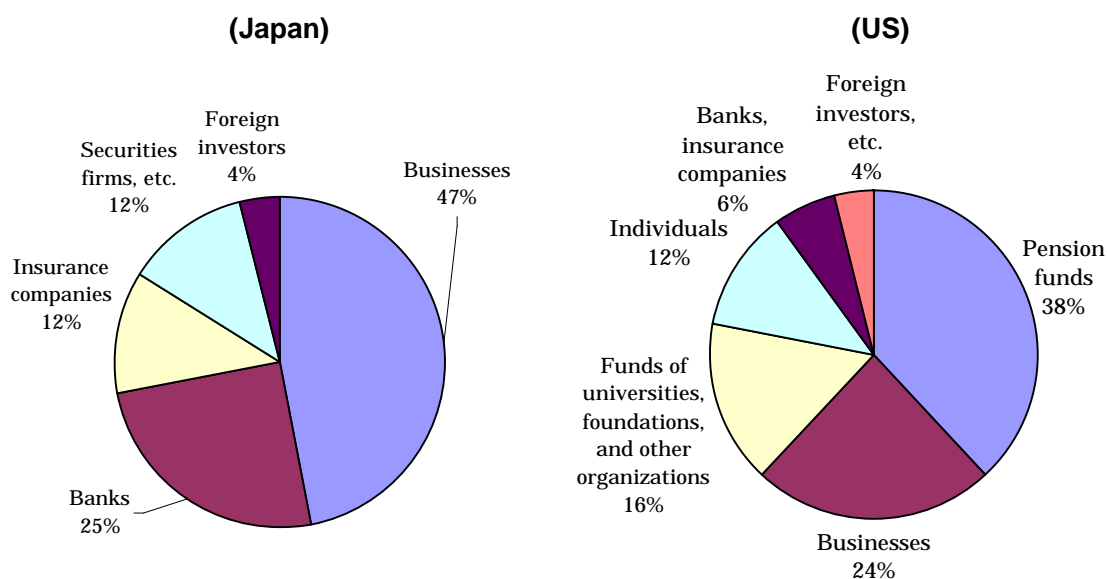


Source: JAFCO materials.

ii) Institutional investors

Based on recent experience in the US, institutional investors such as pension funds and insurance companies have the potential to become major investors in private equity funds including venture capital. In this case, institutional investors can be expected to select well-managed venture capital, contributing to increased competitive pressure among venture capitalists. However, investments by institutional investors in venture capital are not yet active in Japan, mainly due to the fact that institutional investors are still in the process of accumulating a reliable investment track record of such funds in order to satisfy trustee responsibility (Figure 8).

Figure 8. Funds Investing in Venture Capitals



Source: “1998 Venture Capital Fund Performance Benchmark, MITI, US Venture Economics materials.

iii) Commercial banks

Under the current situation, it is difficult to expect commercial banks to function as major lenders to venture firms, especially IT-related ones. Commercial banks, as debt holders, inherently check downside risks of a business more carefully than upside potential. Specifically, they tend to prefer debtors with stable and predictable cash flow as well as sound financial position, neither of which are necessarily characteristic of venture firms. In addition, many commercial banks claim that monitoring the financial well-being of new economy firms entails high cost, and small volume of funds typically lent to such firms may not justify such costly operations. Nonetheless, we believe that commercial banks can play significant roles in the new economy era. We will revisit this point later in 3. (3).

iv) Venture firms

It is rather unfair to attribute all the problems concerning venture firm finance to financial intermediaries. In Japan, disclosure, especially that of private firms, is not as sophisticated as in the US. Such poor disclosure is primarily caused by the legal structure that does not require smaller private firms be audited by a CPA (although large private firms must be audited by a CPA, the content of auditing is less intense than for public firms).

As shown above, there are various problems in financing venture firms not only in terms of volume but also timeliness and quality. During previous venture booms, while the total amount of funds provided increased, they were not used efficiently and effectively (i.e., the first paradox arose).

3. Challenges in Financing New Economy Firms in Japan

In Section 2, we discussed current issues in financing new economy firms. First, the availability of funds in terms of volume and timing at each business stage appears to be an issue. Second, relevant players today are still in the adjustment process of responding to the changing financial needs of new economy firms. We may rephrase such findings as challenges in the financing of the new economy (admittedly not an exhaustive list): (a) capacity for risk taking, (b) capability to evaluate risk, (c) human resources and managerial know-how, (d) incentive and governance mechanism, and (e) flexibility to respond to rapid changes. In this section, we discuss these issues along with structural reform issues including the transformation of established firms and revitalization of troubled venture seeds.

(1) Transformation of established firms in the new economy era

Corporate in-house ventures (Internal financing)

Recently, many established firms have expanded or transformed their businesses to respond to the changing business environment characterized, among other things, by new opportunities presented by the utilization of IT and stiffer global competition. One notable trend among established Japanese firms in the response to such structural change has been the increasing use of corporate in-house ventures, typically involving the creation of a venture project within a corporate group with an additional incentive mechanism such as stock options to encourage entrepreneurship. Such schemes are gathering considerable attention since corporate in-house ventures are often seen as an effective means to overcome some of the previously mentioned problems facing the financing of new economy firms.

Frequently mentioned advantages and disadvantages of corporate in-house ventures are as follows:

Advantages:

- Availability of human resources, technology, managerial know-how, brands, and funds within established firms.
- High degree of compatibility with Japan's social system such as low mobility of labor, and general preference for large firms on the part of highly educated workers.

Disadvantages:

- Incentives for creativity and risk taking may not be sufficient in some cases.
- Less flexibility and swiftness due to explicit and implicit rigidity in a corporate group.

As indicated in Section 2, these advantages are very important issues, especially in Japan. High economic growth in Japan in the second half of the twentieth century was cultivated by the entrepreneurial spirit of many firms and their employees. As these firms grew larger and matured, however, some of them became conservative, losing management flexibility. The nature of the new economy will inevitably require firms to be flexible and agile. So far, many Japanese corporations, including major IT-related firms, have maintained their entrepreneurship, and some have been successful. But, the recent downturn in economic activity and pressure of structural reform may depress entrepreneurial spirit and undermine the competitiveness of firms. In order to revitalize the economy, it is essential to promote new economy businesses not only through independent venture firms but also through established ones. In Japan, the latter may well be vital for future economic success.

Financing of corporate in-house ventures

Since the late 1980s, many major Japanese firms have introduced corporate in-house venture programs. Such activities were encouraged by changes in the economic environment including maturing leading industries and the deteriorating competitiveness of export industries due to the rapid appreciation of the yen. There are two types of corporate in-house ventures, (a) a new business unit within the corporation, and (b) a separate firm within the corporate group. Although there have not been many highly successful cases so far, several leading firms, especially IT-related ones, have

introduced corporate in-house venture programs. The following are selected examples, taken from press releases and research by *Keidanren* [Japan Federation of Economic Organizations](Keidanren 2000):

SONY

It has an invitation program participated in by employees (those working in the same section for more than three years). It usually establishes separate companies to explore new businesses (e.g., Sony Computer Entertainment, Sony Communication Network).

Hitachi

In 1995, it started a new business promotion unit within the firm. In 2000, it established Hitachi CVC (Corporate Venture Capital) Fund with 10 billion yen. The Fund invests in promising venture firms including those based on the firm's own research and development.

Toshiba

In 1995, it introduced a program to support venture businesses established by retired employees. If a retiree begins a venture business using his/her retirement payment, the company also invests some money provided the venture meets certain internal criteria.

Fujitsu

In 1994, it started a corporate in-house venture program. Anyone who presents a venture business plan and retires from the company will be provided up to 50% of the venture firm's capital. The company also provides loans to venture firms at relatively low interest rates (usually the bank loan rate to the company plus 0.1%).

NTT Data

Two types of corporate in-house venture programs are in place. First, an employee who presents a business plan becomes a project leader within a firm, and receives up to 1 million yen if the project succeeds. Second, a business planner can retire and become president of a venture firm; the parent invests some funds (at least one third, at most half) in the business provided it meets certain criteria.

Toyota

A new business development unit was launched in 1989. It also established corporate in-house venture fund of 50 billion yen. In some cases, Toyota uses joint ventures with other companies (e.g. Admatechs Inc. [new material products] established by Toyota and Shin-etsu Chemical).

Tokyo Electric Power

It has introduced a corporate in-house venture program through which it provides up to 10 million yen for research expenses during the feasibility study period. It also provides equity capital, loans, and guarantees for debt if certain criteria are met. Those starting a venture business have to provide at least 30% of the initial capital.

As seen in the examples above, the financing of corporate in-house ventures is usually supported by parent companies. Even though parent companies do not necessarily provide the full amount of capital, the corporate network and customer base are available to access additional funds provided by other firms and venture capitals. As long as corporate in-house ventures satisfy certain criteria, obtaining necessary funds does not appear to be a serious problem in most cases. Even in periods of economic difficulty (such as the bursting of the IT bubble), the availability of funds seems to be relatively stable.

Corporate in-house ventures enjoy some advantages in financing and are spreading steadily among established firms, but so far there are not many highly successful cases. The success of corporate in-house ventures mainly depends on three things:

- 1) There being a sufficient amount of funds provided
- 2) Parent firms properly fulfill their incubation function
- 3) Top management provides strong leadership and employees exhibit an entrepreneurial spirit

First, corporate in-house venture funds set aside by large corporations may not necessarily be enough to take full advantage of IT. Hence, while such funds are important, especially for start-up financing, additional sources of funds are also needed to enable promising businesses to grow.

Second, parent firms have to have appropriate screening programs in place to be able to pick up promising seeds of new businesses. To select good projects and ideas, a parent company has to acquire skill to evaluate new technologies and business models, and should not stick to conventional ways of thinking. In addition, parents need to provide appropriate support and incentives to corporate in-house ventures. Not only funds, but also human resources, managerial know-how, and research information are scarce at venture firms. Support for these aspects is a key issue for success of corporate in-house

venture businesses. Simultaneously, it is necessary to draft an appropriate incentive system such as performance-based pay and stock options.

Finally, in order to stimulate the entrepreneurial venture spirits of employees, strong leadership from top management is indispensable. Top management should always provide sufficient motivation to all entrepreneurs in the corporation, and respect the independence of corporate in-house ventures, while maintaining proper discipline (preventing moral hazard).

A high degree of motivation in established firms is one reason why Japan has maintained competitiveness in the IT area, while there are few prominent IT venture firms (i.e., the second paradox holds). Although there are many things that could be done to better utilize corporate in-house ventures, instilling motivation seems to be one of the most promising ways to overcome social and institutional obstacles, especially in the early stages of new economy businesses in Japan. Admittedly, the corporate in-house venture model is only a partial solution for promoting venture businesses, and other measures mentioned elsewhere in the paper are also called for as well.

(2) Revitalization of business seeds damaged by the collapse of the IT bubble

M&A for venture firms

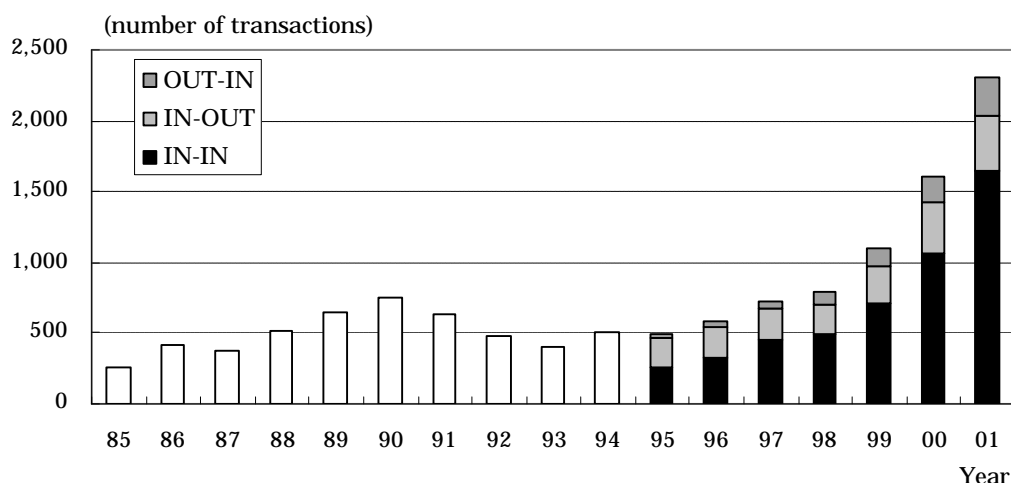
As mentioned in Section 2, many venture firms have recently faced financial difficulties due to the apparent demise of the IT boom. Some of these might be ventures without good business prospects that need to be weeded out, but others are actually promising though they cannot get enough funds and managerial support. It is usually difficult to be able to select only promising venture firms because of their risk-return profile, and it is often the case that both promising and junk venture firms are given up by investors during periods of economic downturn. As a result, there is a risk that the so-called "IT bubble" could become a true bubble with no significant positive outcome for the future.

In order to revive promising venture firms, the most important measures are M&A and business alliance by/with venture capitals and established companies. Japan's M&A market has expanded significantly (Figure 9), reflecting (a) the need for corporate

restructuring because of the lower growth rate of conventional businesses, and (b) need to catch up with rapid technological innovation.

Recently, most of the increase in M&As in Japan has been of the IN-IN type (domestic firms acquiring domestic ones). This means many Japanese companies have been trying to enhance their core competence, while selling unprofitable (or out of strategic scope) business units. There is no explicit data on M&As in respect to venture firms, but it is said that M&As and strategic alliances between venture firms and established companies (in conjunction with venture capitals) have increased somewhat recently. As previously pointed out, M&A is an important way to realize the gains of venture firms as well as IPOs. In addition, although the venture capital market as a whole is presently not prospering, steady corporate restructuring efforts will help potential business seeds to be utilized in the future.

Figure 9. M&A Market in Japan



Source: "MARR", RECOF, March 2001.

Notes: 1. The definition of each transaction category is as follows:

In-In: M&A transactions between domestic firms

In-Out: M&A of foreign firms by Japanese firms

Out-In: M&A of Japanese firms by foreign firms

2. The breakdown of figures before 1994 is not available.

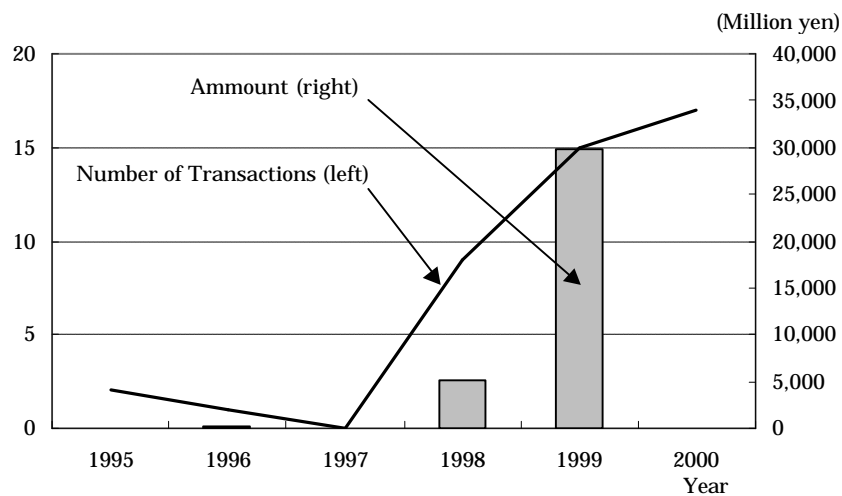
MBOs of corporate in-house ventures

MBOs (management buy-outs) are an important tool for to corporate in-house ventures. The number of MBOs in Japan has increased significantly in recent years, even though the number itself is not yet large (Figure 10). As mentioned above, corporate in-house

ventures would be an effective way to start up new businesses, but locking such in-house ventures within the corporate group is not always the best business strategy. If a corporate in-house venture is profitable but not within the business scope of the parent, an MBO can be one way for the parent to realize the rewards of venture activities, while the management of the in-house venture can gain independence and complete control over the business, as well as increased opportunities for finding new business partners.

There have recently been a series of changes in the legal structure to enhance the M&A (including MBO) market in Japan. In 1997, the Commercial Code was amended so as to simplify corporate merger procedures. In addition, stock exchange was allowed for M&As in 1999, and corporate splits introduced in 2000. Laws regarding the reorganization of distressed firms were enacted in 1999 and 2000. Consolidated taxation has also been proposed (but not decided yet). Japanese firms have taken advantage of such changes in the legal environment and M&As based on these new procedures are increasing.

Figure 10. MBO Market in Japan



Source: Mitsubishi Research Institute.
 Note: Amount in 2000 is not available.

(3) Meeting changing financial needs

Roles of commercial banks

Since commercial banks have been playing a significant role as financial intermediaries in many countries including Japan, it is important to discuss how they have reacted to the changing financial needs of new economy firms.

One plausible hypothesis is that the share of commercial banks in corporate financing is declining as more new economy firms prevail. There appear to be a few supporting arguments for such change. First, considering the structure of debt (mostly bank deposits with guarantee of principal), banks are inclined to hold relatively less risky loans as assets. However, the risk profile of new economy firms tends to be high-risk. Second, there are the issues of timeliness and flexibility. Generally speaking, business models and the core competence of new economy firms are constantly and frequently changing. In order to thrive in such a changing environment, companies need to make decisions on large investments, alliances, and M&A transactions within a relatively short time frame. From a financing point of view, this means such firms need to be able to obtain a large amount of funds with the utmost timeliness and flexibility. The conventional business practices of commercial banks under relationship banking may not fit well with such needs.

Figure 11. Financing Comparison: IT-related and Others

		<i>New firms (94)</i>		<i>Old firms (2,808)</i>	
		Funds raised	9.8	Funds raised	1.9
		Equity	0.8	Equity	0.8
		Bonds and CPs	0.8	Bonds and CPs	0.9
		Loans	8.2	Loans	0.1
<i>IT-related firms (415)</i>		<i>New and IT related (28)</i>		<i>Old and IT related (387)</i>	
Funds raised	3.9	Funds raised	8.7	Funds raised	3.7
Equity	3.1	Equity	4.1	Equity	3.0
Bonds and CPs	1.9	Bonds and CPs	-0.1	Bonds and CPs	2.0
Loans	-1.1	Loans	4.7	Loans	-1.4
<i>Non-IT related firms (2,487)</i>		<i>New and non-IT related (66)</i>		<i>Old and non-IT related (2,421)</i>	
Funds raised	1.9	Funds raised	10.1	Funds raised	1.5
Equity	0.4	Equity	0.2	Equity	0.4
Bonds and CPs	0.7	Bonds and CPs	1.0	Bonds and CPs	0.7
Loans	0.8	Loans	8.9	Loans	0.4

- Notes: 1. Figures are percent change from 1996 to 2000.
2. Figures of equity, bonds and CPs, and loans are contributions to funds raised.
3. "IT-related" includes telecom service providers; computer equipment, semiconductor, telecom equipment, other electric appliance, and computer software manufacturers; and internet-related firms.
4. Figures in parentheses indicate number of firms in each category.

We conducted a short quantitative analysis of Japanese firms to evaluate this hypothesis. More specifically, we compare the financing activities of (a) IT-related firms and non-IT firms, and (b) "new" firms (firms established within five years as of the end

of the recent accounting year for which financial data are available) and “old” firms (firms other than “new” firms). Based on financial data for about 3,000 firms, main results are as follows (Figure 11):

- 1) IT-related firms generally showed higher growth in terms of fund amounts raised.
- 2) Compared with other non-financial firms, IT-related firms rely more on equity financing than on debt financing. In particular, in the case of existing IT-related firms, funds raised by loans actually declined during the period. With respect to debt financing, IT-related firms rely more on capital markets (bonds and CP) than on loans.
- 3) New firms, especially non-IT related ones, rely heavily on loans compared with old firms.

These results appear to support the “declining significance of commercial banking” hypothesis. IT-related firms, especially existing corporations, rely less on loans compared with equity financing, and bonds and CPs. Though newly established firms still seem to depend on commercial banks, the results of interviews suggest that it is at least partly due to the insufficient supply of funds by private equity investors, as mentioned in Section 2. However, it should be noted that the decrease in market share may be concentrated among “conventional” commercial banking activities, where banks have long-term relationship with borrowers and earn relatively small profits on large loan amounts outstanding. Meanwhile, in order to tackle the changing environment, major banks have already begun to increase activities in several market segments.

Project financing and non-recourse loans

From the standpoint of dealing with the risks associated with loans to new economy firms, project financing and non-recourse loans are commonly viewed as a useful means of extending credit. Because of the rapid and constant transformation of their business models, generic loans tied to the risks of the companies themselves could be more difficult to manage than loans tied to the risks pertaining to specific projects.

Syndicated loans and loan trading

The use of syndicated loans enables banks to meet the loan demand of new economy firms with appropriate timeliness and flexibility, especially so in the case of large amounts. Loan trading, combined with the development of primary syndicated loan markets, will help diversify risks attaching to loans.

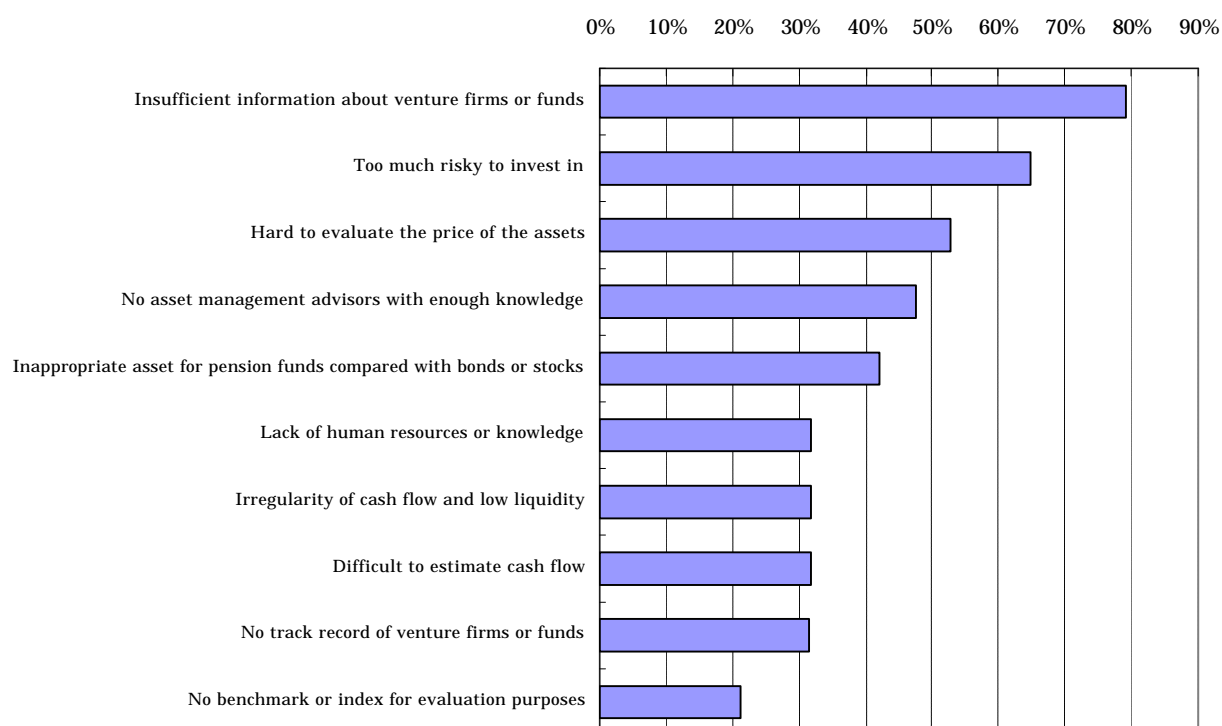
M&A financing

As mentioned above, M&A is an important factor for financing new economy firms from various aspects. Not only leading firms need to arrange “jumbo” transactions to thrive in a changing environment, but venture firms also need M&A for development or exiting purposes. Recent experiences in the US and European markets suggest that commercial banks can play various important roles in M&A transactions: bridge financing, arranging syndicated loans with certain commitment backed by their capital, and even arranging entire transactions utilizing their large customer base.

Venture capitals and institutional investors

Although banks could play important roles in the financing of new economy firms, it still seems to be the case that many more investors are needed to underwrite the risks of new economy firms. The maturing of venture capitals (and venture capital funds), so that venture capitals and corporate in-house ventures can complement each other as business incubators, is obviously an important challenge today.

Figure 12. Reasons Pension Funds Are Negative Toward Venture Investments



Source: “White Paper on Small and Medium Enterprises in Japan” , Small and Medium Enterprise Agency.

Also, institutional investors such as pension funds, investment trusts (mutual funds), and life insurance companies, usually have the capacity to diversify investments along with longer time horizons, and are generally considered to be one of the preferred vehicles for investing in new economy firms. In the US, pension funds are the most important investors in venture capitals. On the other hand, in Japan, only 1-2 percent of all pension funds have actually invested in venture firms and/or funds (see Figure 6 above). According to a survey on pension funds, they require (a) sufficient disclosure of venture firms and venture capital funds, (b) methods and benchmarks for evaluating the fair value of venture firms and funds, (c) talented fund managers to manage the risk of venture businesses, as prerequisites for investment (Small and Medium Enterprise Agency, 2000).

As mentioned before, institutional investors require need some track record of performance. Therefore, corporate in-house ventures and investment with venture capitals and by rich individuals (angels) in the early stage of venture businesses are also important from the point of establishing a track records so that institutional investors can step in during the subsequent stages (Figure 12).

Public assistance programs

Because of the complexity and high volatility of risks, the volume of funds provided for new economy firms today tends to be less than needed. In particular, in a period of economic difficulty, the availability of funds often shrinks excessively or suddenly. Taking these characteristics into account, “market failure” in financing new economy firms may happen from time to time. Such market failure can be partly addressed by some public assistance programs including the provision of funds, loans, guarantees, and advice. In fact, in the course of the bursting of the IT bubble in 2000 the “special credit guarantee system” played an important role. The system, introduced in October 1998 as one pillar of the government package to cope with the credit crunch panic in 1998, was not necessarily targeted to help IT-related venture firms. However, results of interviews with IT-related venture firms suggest that the system helped prospering IT-related venture firms to survive when investments in them dried up.

Considering the highly uncertain nature of the businesses, selecting the right venture firms might often be difficult. A fundamental solution to such a problem is to improve transparency so as to realize the appropriate valuation of venture firms. For example,

enhanced disclosure and auditing are important in this context. Public assistance programs can would be complementary but effective measures, especially in distress (excessive uncertainty) situations such as the sudden collapse of a venture firm boom (which has in fact been observed a couple of times during the last couple of decades), are needed. However, current problems in Japan are often attributed to the complexity of procedures, insufficient monitoring capability, etc.

4. Conclusions

To sum up, the current situation in financing of new economy firms in Japan involves some problems not only in terms of amount but also timing and quality. Therefore, previous venture booms did not necessarily meet the financial needs of venture firms (i.e., there have been few successful venture firms so far), although the total amount of funds provided has increased to some extent. With regard to providers of funds, venture capitals have been less active to commit to the management of venture firms. Institutional investors, essential as a stable source of funds, have been conservative vis-à-vis investing in venture firms because of their high-risk profile. Commercial banks have been the main players in corporate financing in Japan, but as debt holders, they usually prefer stable and regular cash flow. As discussed above, however, it does not necessarily mean that commercial banks will lose significance altogether. Rather, commercial banks are expected to play important roles by providing new financing tools.

As discussed in this paper, there could be several ways to establish an incubation and venture model that meshes with the economic and social structure of each country. The key issues in Japan, and maybe in some other countries as well, are (a) use of internal funds such as corporate in-house ventures, (b) M&A and business alliances between established firms and venture firms including corporate in-house ventures, (c) utilizing bank loans as effective tools for the smooth financing of new economy firms, and (d) promotion of investments by pension funds as well as rich individuals. In other words, complete application and reproduction of the US style model may neither be the best nor the easiest way to cope with the challenges posed by the changing financial needs of new economy firms, although it doubtlessly provides many useful suggestions, especially in terms of incentive mechanisms. An appropriate incentive mechanism (i.e., effective corporate governance and a competitive environment) should be built into the model for it to be successful.

In the US market, the flow of funds to venture capitals and also the volume of M&A appear to have decreased lately, and a similar phenomenon has been observed in Japan as well. This probably is an appropriate time to step back and examine if the existing model of financing new economy firms is robust not only during economic booms but also during an economic downturns.

Also, since external financing channels for new economy firms in Japan currently appear to be insufficient, internal financing would be an important factor for Japan's economy to overcome current difficulties and explore new frontiers of economic growth. Simultaneously, the roles of commercial banks (as arrangers and underwriters of various structured loans) and institutional investors (as final investors to shoulder risks attaching to venture businesses) are important.

Because of the complexity and high volatility of venture businesses, failure in responding to the new economy could bring large risk to the economy, and the impact would be difficult to evaluate in advance. Therefore, it is important to establish economic and social models not only to promote new economy businesses but also to manage such risks.

Finally, although we have discussed financing of the new economy by focusing on IT-related businesses as typical cases, there is a variety of other businesses. Because of insufficient skills in examining new economy businesses in Japan, the components of investment in venture businesses are often concentrated and biased, especially on the IT area. Variety and diversification of businesses may also be important so as to overcome the possible vulnerability of the new economy.

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