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Japan's venture capital market from an institutional perspective

Werner Pascha and Stephan Mocek

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Carsten Herrmann-Pillath, Werner Pascha, Markus Taube

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Gerhard Mercator Universität Duisburg

Fakultät für Wirtschaftswissenschaft

Forschungsinstitut für wirtschaftliche Entwicklungen im Pazifikraum e.V.

FIP e.V., D-47048 Duisburg, Germany

Tel.: +49-203/379-4114
Fax: +49-203/379-4157

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Abstract

Can Japan mobilise enough venture capital to finance its promising venture firms and to support its advance into high-tech? The authors use institutional economics, and the principal-agent as well as the transaction cost approach in particular to answer this question. Firstly, a number of stylised facts is presented to substantiate Japan's problem. Afterwards, the theory-based view-point is introduced to show why Japan still has difficulties to effectively process venture capital. The authors survey changes taking place and look at topical policy issues. They conclude that Japan is moving towards more functional venture capital financing, but that the financial system will remain *hybrid* in the sense of relying both on relational contracts typical of credit-based systems and on the more explicit contracts of arms'-length markets.

Keywords

Venture capital, Japan, institutional economics

Contents

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Werner Pascha and Stephan Mocek*

Institute for East Asian Studies and Faculty of Business and Economics
Gerhard Mercator University Duisburg

1. Overview

Can Japan mobilise enough venture capital to finance its promising venture firms and to support its advance into high-tech? This is one of the most important strategic issues facing the Japanese economy. Where are the bottlenecks; what can be done to overcome remaining problems? In order to answer these questions, we employ a theory-based approach to go beyond a simple description of the current state of affairs. We propose to use institutional economics[1], and the principal-agent as well as the transaction cost approach in particular, because they allow us to discuss the basic problem of financial intermediation, namely how to organise the – to some extent, conflicting – interests of those who save and those who invest.

In the following section, we will first present some stylised facts to substantiate the contention that Japan does have a problem. Afterwards, we will introduce the theory-based viewpoint and show why Japan still has difficulties to effectively process venture capital[2]. We survey changes taking place and look for open policy questions. Again, institutional economics will serve as a background theory to make such statements.

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1 While there are numerous studies on venture capital in Japan (e.g. Hamada 2002; Hosokawa and Sakurai 2000; Imai and Kawagoe 2000; Kutsuna 2000; Storz 2000), few employ a consistent institutional approach.

2 Among experts, Japan already has a notorious reputation for being extremely weak with respect to start-ups and venture capital. For an international comparison of views, see results of the Global Entrepreneurship Monitor in Sternberg et al. 2001.

We will argue that Japan is moving towards more functional venture capital financing[3], but that there are important institutional inconsistencies left. In particular, the consequences of the Japanese-type network society, understood as a set of sticky informal institutions, cannot easily be overcome by government pro-activism or by the heroic establishment of arms'-length capital markets. Rather, Japan's financial system will remain *hybrid* in the sense of relying both on relational contracts typical of credit-based systems and on the more explicit contracts of arms'-length markets.

2. The growing importance of venture capital and start-ups in Japan – some stylised facts

From the viewpoint of growth theory, almost the only path left for advanced economies to enjoy long-term growth is to realise gains through the input of frontier technologies and through a rising total factor productivity. After all, the possibilities of an extensive growth path – more labour and more capital input through an increased mobilisation of the population and of savings, respectively – will be exhausted after some critical stage of development (Pascha forthcoming a). When the Fuji Research Institute recently estimated Japan's potential growth rate for the current decade, it was obvious that more than half would have to be expected from IT-related capital input, software input, and total factor productivity. Due to Japan's rapidly ageing population, these factors even have to (over-) compensate a negative growth contribution of labour input (Fig. 1).

From this perspective, financing technology-related endeavours is a critical precondition for realising intensive growth (Hemmert 1998: 262). As the introduction of new technology in a frontier economy is always particularly risky, an important task of the financial system is to adequately supply venture capital – both in terms of magnitudes and in efficiency terms.

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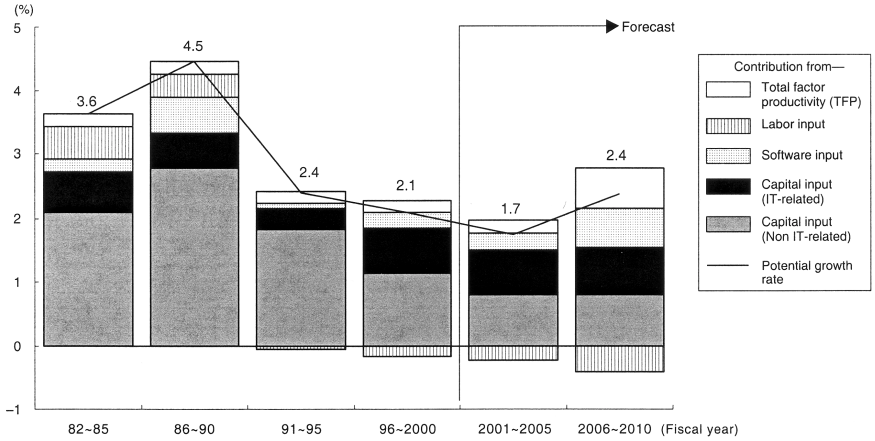
3 As for relevant terms, *venture businesses* are understood as knowledge-intensive and innovative, rather small companies; they need not necessarily be young. *Venture capital* or risk capital earmarked for such businesses can also encompass secured loans, in a Japanese context. *Venture capital (VC) firms* or *funds* are specialised entities to supply funds to venture businesses.

Fig. 1. Factors of potential growth



Source: Masuda 2001: 6

These issues are related to the role of start-ups in an economy. Traditionally, Japan has rather relied on its major companies to introduce and divert new technologies. This is due to the legacy of a "dual system", in which the modern, larger-scale industries introduced technologies from abroad and modified them, whereas small and medium scale industries offered cheap and flexible, low-tech support in hierarchically organised industrial systems. This approach may have been extremely successful during the catching-up phase, but it has reached its limits in Japan's current situation. Firstly, big companies easily turn into inflexible mammoths unable to swiftly develop and introduce new technologies. Until a few years ago, Japan's major firms did not even have a chance to set up a holding structure and reorganise their operations in tailor-made subsidiaries-cum-profit centres. Secondly, in a globalising, radically changing corporate environment new market entrants become (even) more important to try out new factor combinations and new products (Imai and Kawagoe 2000: 117).

Empirically, while Japan has one of the largest ratios of R&D input among advanced economies for instance, in terms of frequently used output measures its performance is considerably lower (Table 1)[4]. Indeed, younger and smaller companies have tended to grow faster in Japan (Imai and Kawagoe 2000: 117) and one might hope to tap this po-

4 R&D and its effectiveness are notoriously difficult to measure. Therefore, we present different indices for R&D input and output, which in their totality support the statement made above.

tential even more. For example, the companies listed on the three Japanese stock markets for emerging firms plan to increase recruiting in 2003 by more than 40 percent, even in the currently tough business situation (Nikkei 2 November 2002). According to the same Nikkei survey, "ventures with proprietary technology and services are growing even in areas in which major companies are suffering" (Nikkei 6 November 2002): this year (fiscal year until 31 March 2003), small electronics firms expect an average 131% growth in profits, software developers 63%, and even housing, construction and real estate ventures 125%.

Table 1. The relative performance of Japan's R&D system based on input and output data

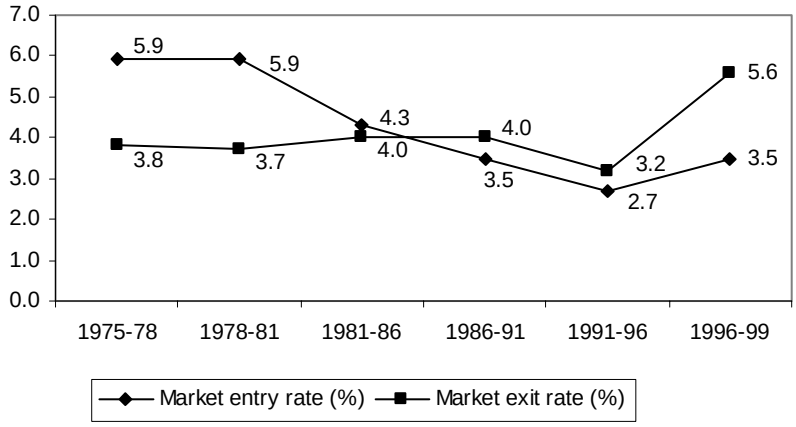
Criterion	Year	Japan	USA	Germany
R&D expenses of industry as % of sales	1998	2.4	2.3	2.0
R&D expenses: share of private sector (in %)	1998	73.4	66.7	61.7
Actual R&D execution: share of private sector (in %)	1998	71.9	74.6	67.8
Technology balance of payments (% of GDP)	1998	+0.1	+0.3	-0.1
Export/import-ratio of technology-intensive goods	1998	1.77	0.75	1.29
Patent applications abroad	1996	193,451	1,175,107	261,444
Scientific publications (yearly average)	1995-97	43,655	173,233	35,294

Source: Pascha forthcoming b, based on various sources

Unfortunately, the number of start-ups as related to the total number of enterprises has shown a remarkable decline since the 1980s (Fig. 2). While there have been fewer simple "extensions of the work bench", i.e. setting up another low-tech establishment by a former employee, there has not been a compensating increase in the number of dynamic, venture start-ups. This development seriously undermines the benign mechanism of "creative destruction" (Schumpeter), which pushes the economy forward through

high entry and exit rates[5]. Also according to other measures, the level of start-up activity in Japan is unsatisfactory. The Global Entrepreneurship Monitor (Reynolds et al. 2001) measures the percentage of the whole population trying to set up or running its own business, which must not be older than 42 months. The level of "entrepreneurial activity", defined that way, is 5.1% in Japan, which is extremely low compared to the average value of approximately 10% for 27 major countries; actually, Japan ranks second-lowest.

Fig. 2. Entry and exit



Note:
1. Average market entry rate = average number of new establishments in the surveyed period / total number of companies at the beginning of the period * 100 (calculation of market exit rate analogous)
2. Calculation includes individual companies, no companies of the primary sector

Source: KKK 2001a: 4

As for the reasons for this low level of new venture businesses, such firms find it particularly hard to gain access to capital. According to a survey, 80.6% of venture businesses consider this as their major problem since foundation. For "conventional" small and medium enterprises, the percentage is lower, but even for them the figure is 63.8% (CKC 1999: 284). In this context, it is important to note the high (average) cost for set-

5 From this viewpoint, the rise in exit rates during the latter 1990s (Fig. 2) is not necessarily bad from a longer-term perspective. While such exits lead to unemployment and social concerns in the short run, they weed out week, unsustainable, outdated businesses. In this context, it should also be noted that Japan has approximately an average survival rate for entries in international comparison.

ting up a start-up in Japan: in 2001, 15.8 million Yen (142,042 Euro) was necessary on average (KKK 2001b: 6).

We are thus led to investigate the problems of venture business financing in Japan as a key issue for the future of the Japanese economy. To some extent, these problems are straight forward and *ad hoc*. The first point is the current recession, which has increased the risk awareness of savers and intermediaries as well as decreased the demand and profit expectations of business. Secondly and as is well known, the current recession in Japan is peculiar, because it is combined with – and possibly due to – a crisis in banking (bad loans, necessity of special depreciation, shrinking capital base in the wake of Basle II, etc.). Consequently, outstanding credit as an aggregate has been declining for years. Thirdly, opening new channels for venture business financing through stock markets along the "new markets" concept employed elsewhere, was badly timed. Such markets started business in 1999/2000, just around the peak of the Nasdaq boom, and they had to manage against the world-wide background of a retreating market for growth stocks ever since. However, problems with venture financing in Japan precede the topical issues by years, if not decades (e.g. Turpin 1986; Gotoh no year). This makes it necessary to look more systematically, because the problems cannot be expected to vanish once the recession is over.

3. The adequate financial system for promoting venture businesses – an institutional issue

In a neo-classical environment with perfect markets, it is irrelevant under which financial system companies raise funds (Albach et al. 1986: 6). Given market imperfection, though, the households as savers of last resort will have difficulties to ensure that the companies use their money in their interest. Information asymmetries, information and transaction costs will lead to typical principal-agent problems. Even if banks act as intermediaries, this will not necessarily reduce such concerns, because new principal-agent issues (household-bank, bank-business) are created in an imperfect environment.

More specifically (e.g. Schmidt 1985: 426ff.), a business planning to invest will have to raise some funds elsewhere. It will be interested to keep the funds on a secure long-term basis, without interference from the creditor; to repay the funds or to offer a share in the profits is not in its interest. Private households will expect such profits, but they

have little knowledge about the business, its environment and its performance. Even after a contract to supply funds has been agreed upon, there are concerns about the compatibility of incentives. Due to information asymmetries, management is able to twist the investment in its favour. A bank as an intermediary will usually be better informed than a household, but it is not certain, for instance, whether it will always act in the interest of the household.

For venture businesses in particular, the concerns are even more pronounced, because such endeavours are characterised by major insecurity, high risk, and strong information asymmetries (Tykvova 2000). Investment typically is highly specific, incorporated in the entrepreneur and difficult to liquidate; this raises moral hazard for the entrepreneur. As investment into high-tech involves high risk, it is difficult to ascertain whether a failure is due to the entrepreneur or to plain bad luck; this also helps an opportunistic entrepreneur to shirk and raises information and control costs for the principal. Moreover, the entrepreneur has a lot of discretion to use and misuse the entrusted funds. Possibly, even before entering a contract the venture entrepreneur could easily misinform the financier (hidden characteristics), and this may lead to adverse selection, because those who discuss the risks frankly may be the least likely to get funds. Banks may set interest rates so high that only irresponsible entrepreneurs will apply and receive funds (again, adverse selection). There are also problems with respect to the financier, though. He may misuse the dependence of the venture entrepreneur and unilaterally raise his profit share (hidden intention).

In the worst case, if transaction and agency costs become formidable, savings and investment cannot be intermediated at all. In an imperfect world, the second-best solution is to have secondary institutions (and organisations) to lower transaction and agency costs. This should bring about a “capacity to economise on bounded rationality while simultaneously safeguarding the transactions in question against the hazards of opportunism” (Williamson 1988: 570, see also Wenger and Terberger 1988: 510).

Basically, two sets of institutions (as rules of a game) and organisations (as players within such a game) are employed in this context: the credit-based financial system operating with banks as intermediaries and the capital market-based system, directly linking savings and investment through stocks, bonds, etc. The perceived characteristics, strengths and weaknesses of both systems are summarised in Table 2.

Table 2. A synopsis of the credit-based and the capital market-based financial system

Criterion	Credit-based financial system	Capital market-based financial system
Basic character	Indirect	Direct
Type of interaction	Dense hybrid relations – banks as intermediaries	Arms'-length markets for stocks, bonds, etc.
Contracts	Relational (plus classical)	Classical: explicit/complete
Character of relations	(Inter-) personal	Anonymous
Type of information	Tacit	Open, explicit
Risk attitude	Risk averse	Intermediation of risk structures
Investment horizon	Long-term	Short-term
Business receiving favourable treatment	Conventional	High-tech, emerging industries
Suitable stage of economy	Catching-up	Advanced, frontier
Type of socio-economy	Network-based (frequent use of generalised exchange)	Individualistic (frequent use of balanced exchange)
Control mechanisms	Reputation, sunk costs, hostage	Rule-of-law, independent (supervisory) agencies

It is generally argued that a capital market-based system is more adequate for venture businesses. The principal reason is that banks will have a risk-averse lending attitude which does not fit the necessities of high risk ventures. On (direct) capital markets, different risk attitudes can be pooled, and even high risk ventures have a fair chance to receive financing. Historically, the necessity to raise risk capital lay behind the introduction of the joint-stock company in the first place. Underdeveloped economies can make good use of the long-term perspective of intimate bank-business relations in catching-up projects, in which the necessary direction is basically clear. For advanced economies, though, the most promising direction of new ventures is not obvious at all, and the short-term fine-tuning of capital allocation offered by capital markets is the system of choice. Interestingly, it is undisputed that Japan currently has a credit-based financial system, which may have been very sensible for the catching-up process of the earlier post-war period, but is inefficient for its current status as an advanced economy in need of more venture capital.

These considerations can be summarised in two hypotheses with respect to the situation of Japan's financial system, one being somewhat backward-looking and explaining, and the other forward-looking in a normative and/or positive sense:

Hypothesis 1 (H1): The main reason for the lack of venture capital financing in Japan is the dominance of the credit-based financial system.

Hypothesis 2 (H2): Japan, as an advanced economy, has to change – or will eventually – transform its financial system to become more capital market-based.

H2 is obviously based on the popular view of convergence, i.e. normatively put, Japan's traditional economic system should adopt elements of an "Anglo-American type" economy if it wants to defend its place among the leading nations. (As for the positivistic version of H2, one would have to argue that decision makers in Japan will understand the superiority of "Anglo-American" institutions, a sufficiently strong interest coalition can come into existence, and Japan will finally take collective action and choose such an institutional set-up.)

One might want to take issue with the convergence hypothesis (H2), though. Financial systems are embedded in a wider institutional system, including sticky informal (social) institutions[6]. Under such circumstances, a capital market in Japan – with its peculiar set of informal institutions – may have a different functionality as compared to another environment, e.g. the US. Specifically, Japan's socio-economy is characterised by a far-reaching network of relational, implicit contracts. The so-called generalised exchange used in such interpersonal relations is based on long-term bonds, in which the costs and benefits of single exchange activities are difficult to calculate. Relational contracts have certain advantages; for instance, they allow the transfer of tacit information and can be the basis of highly specific, complex investments. However, their usual disadvantage is that agency costs are conspicuously high due to moral hazard. In Japan's case, however, such costs are rather low due to a couple of factors (Pascha 1996): (a) The society is rather homogenous which assists the flow of tacit information; this also reduces the danger of shirking, because such behaviour has a high probability of being detected. (b) Defection ("exit") from relational contracts is rather difficult because of

6 Along similar lines, one could speak of a transaction atmosphere (for instance, Picot 1991: 148).

the tightly woven social fabric. (c) The ubiquity of relational contracts (on historical, cultural grounds) creates positive network externalities: investment in personal reputation can be used in a variety of social and economic contexts.

This inclination has two consequences: (1) Relational contracts are used under more circumstances than in other societies, in which agency problems associated with such contracts are higher. (2) Even where explicit contracts in arms'-length market frameworks are clearly superior from an allocative perspective, a hybrid type of organisation (e.g. a strategic partnership) may be chosen, because the gains from the market solution cannot be fully realised. Whereas the former argument is quite obvious, the latter needs some further explanation. There are two major mechanisms involved. The first is that arms'-length markets need clear and strictly enforced rules to function properly. With respect to the capital market, one needs transparent accounting rules allowing only a limited degree of plasticity, publicity rules, insolvency procedures, etc. For their enforcement, one needs competent, trustworthy agencies governed by the will to strictly observe the law. In societies with ubiquitous generalised relations, both are difficult to achieve (Pascha 2002): There is no tradition of adhering to the rule-of-law, and independent enforcement agencies will have a tendency to be undermined by their directors being encroached by a wide variety of social obligations and considerations.

As for a second argument, even if a functioning market is introduced, for an individual actor there is always a choice to be made – given that he finds a suitable partner: He can make use of this market, or he can stick to the "old" system of entering a generalised exchange relation. Simply put, under the assumption that the market is contestable, the market solution will involve little fixed cost, but considerable variable cost (publication needs, search costs, legal advice, etc.). Relying on the old mechanism instead involves rather little variable cost, because few additional safeguards are needed, when one operates within the boundaries of established networks. Of course, normally this comes at a rather high price, to be paid as a fixed cost: namely, the individual has to establish a reputation for trustworthiness in order to find someone who would be willing to enter a risky generalised exchange relationship with him. This reputation had to be established anyway in Japanese society; it has sunk cost character and can be used at no variable cost in any new relationship. This means that even if a (capital) market is established, many actors will tend to choose the old ways and means of the credit-based sys-

tem. The critical mass necessary for smooth capital markets may not come about and the market cannot realise its full allocative potential.

This leads us to an alternative to H2:

Hypothesis 3 (H3): Japan's financial system will become more hybrid, i.e. employing institutional and organisational elements of both a credit-based and a capital market-based system.

In the remainder, we will try to substantiate H1 and empirically discuss the merits of H2 vs. H3.

4. Making ends meet: the financial sources of venture businesses in Japan

Private banks

Private banks are a major financing institution even for venture businesses. Those businesses find it particularly burdensome that they need material securities to receive such funds. In a survey, some 78% replied this was their major problem (CKC 1997: 363). Although many banks have founded specialised venture departments and programs, these are mainly occupied with traditional, secured loans, not with providing holdings. As is well known, this situation is currently made even more severe due to the so-called "credit crunch" (*kashi shiburi*). Banks carry significant amounts of bad loans, which endanger their capital basis. The limits set by the Basle Accord and by the looming Basle II forces them to supply new credit only under highly secure and secured circumstances. We conclude that the heritage of Japan's credit-based financial system leads to the expected difficulties for venture businesses (H1)[7].

Self-help

Even in a credit-based system, there are alternatives to bank loans. One simple option is self-help. According to a survey, 79% of young entrepreneurs use part of their personal property to finance the start-up (KKK 2001a: 125). Almost one third of the start-up

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[7] Sometimes, it is argued that there is actually no convincing evidence for a lack of access to capital markets (e.g. Hayashi and Prescott 2002). However, such arguments are quite laboriously constructed and lack robustness against an overwhelming factual and anecdotal evidence of such a credit crunch.

capital is financed that way. The financial burden is even bigger, because many businessmen have to use their property, real estate in particular, to secure bank loans. For instance, this holds for 40% of venture business board members (KGSK 2000: 32). In case of a bankruptcy, businessmen thus frequently loose (almost) all of their fortune, which makes business start-ups particularly risky. Compared to Anglo-American societies, the "psychological cost" of going bankrupt is also very high ("loosing one's face") compared to many other Western economies. From a principal-agent viewpoint, it is a clean solution to have only the entrepreneur – as the principal – bearing full responsibility. However, it is difficult to find enough individuals willing to take over the significant risk involved. This reduces the chances to move into risky venture businesses and is a competitive disadvantage vis-à-vis other frontier economies.

Business angels

Still another possibility are "business angels", i.e. *private* investors in early stage companies. While in some countries such informal risk capital investors are quite important, in Japan, only 1.4% of the adult population is engaged that way (6% for the US; Reynolds et al. 2001: 24f., 42). However, there frequently is no conscious understanding in Japan of being a venture capital "angel", and according to a some survey, actually some 44% of entrepreneurs have received funds from friends and family when they started business; only some 3.3% have accessed formerly unknown private investors, though (CKC 2000). The share of such start-up capital from individuals could be up to one quarter (see also Storz and Frick 2000: 364). Still, usually it is argued that the full potential for angel investment has not been mobilised yet. Due to the tradition of the credit-based system, there is no legacy for such direct involvement in venture business. It is typical that so far personal relations form the major basis for angel activity ("love money"), which does not promise to support efficiency. Consequently, few private investors follow a hands-on approach and support young enterprises also personally, by offering their expertise, for instance – traditional Japanese angel investors often simply do not have such expertise (Tashiro 1999: 265ff.). Observers hope that through a change in taxation angel investment will become even more attractive. By introducing an angel tax system (*enjeru zeisei*) in 1997, an investment into unlisted venture businesses not older than ten years enjoys some tax advantages (e.g. Hosokawa and Sakurai 2000). For instance, according to the new system only some 25% of the gains following sales after

an IPO (initial public offering) is to be taxed (earlier, it was 100%). It remains to be seen whether such isolated measures can change – in line with H2 – the attitude and aptitude towards angel investment.

Corporate venture capital

A final approach well in line with the traditional Japanese system is investment by *corporate* venture capitalists. Due to the network character of the Japanese socio-economy, some 10% of start-ups have received capital from other firms, and about half of all small and medium enterprises state that they have already supported new firms at least once (CKC 2000; Storz and Frick 2000: 348). A significant proportion of this activity is not relevant for modern venture business, though, because there is a lot of traditional sponsored spin-off (*noren wake* or "dividing the shop curtain"), in which a former employee is encouraged to set up his own business in a similar way as the "mother" company.

Still, corporate investment has also discovered venture businesses. At least three types can be distinguished. Firstly, during the internet and IT hype of the late 1990s, some companies started to invest into start-ups of those very industries. Softbank and Hikari Tsushin have almost become household words for such manoeuvring. Softbank, for instance, had become an important financial force due to its successful early investment into such major "new economy"-heavyweights as Yahoo and Yahoo Japan. During its prime years, Softbank's founder announced to build an internet "*zaibatsu*", following the pre-war Japanese example of powerful holding companies controlling huge inter-industry groups of companies. At some stage, Softbank decided to buy one of the insolvent long-term credit banks as part of this strategy. In retrospect, it is little surprising that those dreams came to nothing (Nikkei 14 November 2002; Bastian 2002). It turned out that it is very difficult to realise synergies by combining various new economy ventures which, in each case, have to survive the severe competition in their own industry. It is interesting, though, that one instinctively turned to a business model ("*zaibatsu*") of the overcome economic system, deeply involved with network relationships, and not with an open, transparent, rule-based set-up. This supports H3 rather than H2.

A second type of corporate venture investment is “in-house” ventures, where major corporations support (former) employees with innovative ideas (SMEA 2001: 148ff.). In a way, this is an extension of the idea of *noren wake*, applied to leading-edge business models. This type of investment is strongly associated with tacit, informal relations. The venture entrepreneur raises his reputation by such a signal from an established player, which is well in line with the traditional Japanese business model (supporting H3), and not with a transformation towards a rule-based organisational set-up (H2).

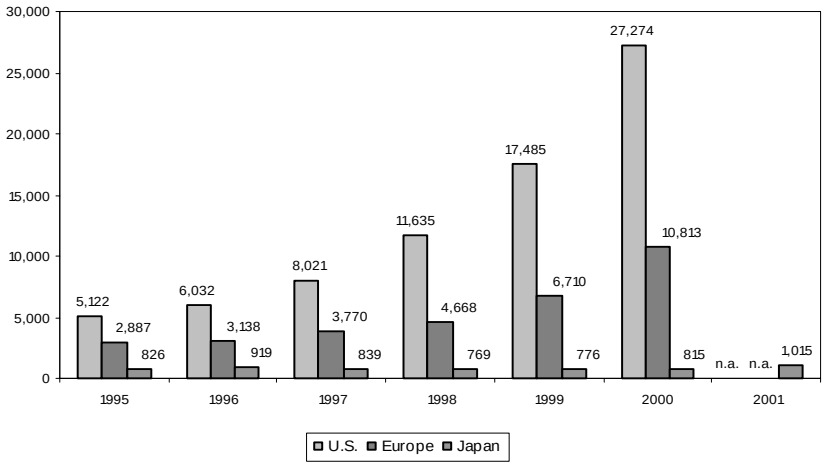
Thirdly, larger corporations have also discovered the possibility of investing into venture businesses not related to former employees. Often, they do so by investing into venture capital funds. For instance, they contributed almost 20% of the capital of such funds originating between mid 1999 and mid 2000 (VEC 2001: 27). Toyota, for instance (Nikkei 28 October 2002), has set up a 50 billion yen (10^9; 502.5 million Euro) venture funds of its own. Hamamatsu Photonics is one of the supported companies. It develops and produces advanced tubes, and Toyota is the top shareholder at about 7%. The connection dates back to 1987 and was among the first of Toyota’s non-automobile activities; its venture investments should contribute to its basic business, though. This example shows the strengths and potential dangers of such relationships. Supported companies enjoy a tacit, trustful relationship with their knowledgeable sponsor. For them, there is the danger of being exploited by a powerful investor, a typical principal-agent concern in such circumstances. For this model to function, it is important that both actors are bounded by strong links discouraging ex-post opportunism. Given such networks as a sunk cost, it is a hopeful venture financing option in the Japanese context (supporting H3). Of course, during the current recession only strong companies with considerable surplus funds like Toyota – which is sometimes referred to as “Toyota Bank” cheek-in-tongue – have such an option, but it may become even more important during an eventual economic upturn.

Venture capital firms and funds

We now turn to venture financing mechanisms usually associated with a capital market-based system and discuss venture capital firms including funds as well as the role of the stock market and its new segments in particular.

In the wake of a so-called third venture boom in the mid 1990s[8], there was a healthy increase of venture investment by specialised firms. After some consolidation, it has started to grow again, reaching more than one trillion yen (10^{12}; 9.3 billion Euro) for the first time for the October 2000 to September 2001 period (VEC 2002: 9). Some 115 companies are active in this field. In comparative terms, these figures are dwarfed when compared to US and European venture capital financing, though (Fig. 3). As for venture capital funds, some 65 were launched from 1998 onwards, with a healthy 32 commencing in the boom year 2000. In 2001, only 14 funds were newly funded, though.

Fig. 3. Comparison of investment amounts by VCs among Japan, Europe and the U.S. (in Billion Yen)



Source: VEC 2002: 19

What are the reasons for this peculiar development? Most venture capital firms were founded by either securities firms or banks. The most famous, Jafco, is related to Nomura Securities, for instance. The banks have, generally speaking, kept their conservative behaviour even in their VC subsidiaries (Hamada 2002: 8). Support measures for venture firms remain rather limited. According to a new survey of the Venture Enterprise Centre, some 44% dispatch part-time executives, but few send full-time executives or staff. Moreover, they are often only related to fund procurement and other financial issues, not to legal or technical support (VEC 2002: 18).

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8 For a longer term view, see Hamada 2000, for instance.

VC firms thus have still not become active business partners of venture businesses, unlike in Anglo-American capital market-based systems. Some change can be noticed, though, which is frequently related to regulative measures:

- (Only) since 1997, pension funds are allowed to undertake venture investment. By mid 2000, they accounted for 6% of all VC funds investments.
- Since 1998, venture investment can be undertaken through limited partnership (*yûgen sekinin tôshi jigyô kumiai*), which reduces risk and is clearly more attractive for investors. About half of the funds are founded under the new system, and the share of those funds concentrating on early stage VC has significantly increased (VEC 2002: 4f.). Of course, this measure tips the power balance in favour of the venture entrepreneur, because it increases his leeway.
- Moreover, VC firms have accepted larger chunks of venture firms, which is riskier, but also raises the interest of the investor in his investment. This is actually another consequence of the limited partnership system, combined with a change of the Anti-Monopoly Law in 1994, which increased the possibility for larger shares in a VC portfolio (Storz 2000: 14).
- Also due to deregulation, more foreign firms have entered the Japanese market. By mid 2000, already some 26% of VC funds investment came from abroad. New business methods enter the Japanese market that way, including a more hands-on approach, offering more technical and procedural advice to promising venture businesses (Nakada 2001).

It is difficult to attribute these developments to either H2 or H3. If H2 (switch-over towards a capital market-system) holds, we would expect a more convincing move into this direction. However, actual developments may be biased because of the post-new economy bubble and by the Japanese recession. Simply put, for H2 we would expect radical change within a low level of activity, while for H3, little change and, again, a low level. While a clear conclusion is not possible, we tend towards H3. For some years, for example, the percentage of funds earmarked for younger companies in-

creased, but as for recent figures, the share for companies less than five years old declined once again from 62 to 55%[9].

New stock market segments

The archetypal method for capital market-based systems to supply venture capital is through specialised stock market segments, because the listing and publication requirements of the regular markets are frequently to difficult for risky, young enterprises to fulfil. In Japan, there are three major markets to take note of:

- The Japan Securities Dealers Association (JSDA) founded an over-the-counter (OTC) market in 1963. As there was rather little trust in an association dominated by former MoF (Ministry of Finance) bureaucrats and by securities dealers, responsibility switched in 2001 to the Jasdaq Market Inc. (Shibata 2000). While supposedly meant for young companies, it actually served as a first step towards listing on the full-scale stock market (Kutsuna 2000). The average length from foundation to an IPO on the OTC market became more than 20 years. When companies became able to directly apply for Tokyo Stock Exchange market, the OTC almost immediately lost a number of blue-chip companies.
- In order to attract more truly venture and young companies, the Tokyo Stock Exchange founded a "Market of the High Growth and Emerging Stocks" (Mothers) in 1999, amidst the new economy-boom. The listing requirements are comparatively easy, but are accompanied by rather strict publication rules, although they are accompanied by few formal sanctions. Even very immature firms can be accepted, if they find a willing security house as an underwriter. At some stage, there were reports about underworld connections (Nikkei Weekly 17 April 2000), which of course harmed its reputation. To regain it, Mothers has introduced stricter standards recently.
- As a competitor of Tokyo, the Osaka Stock Exchange opened Nasdaq Japan in 2000, together with the American Nasdaq and heavily supported by Softbank, the already mentioned new economy-holding. By distinguishing a growth and a standard section, Nasdaq Japan wanted to cater to different client needs. It has followed a rather con-

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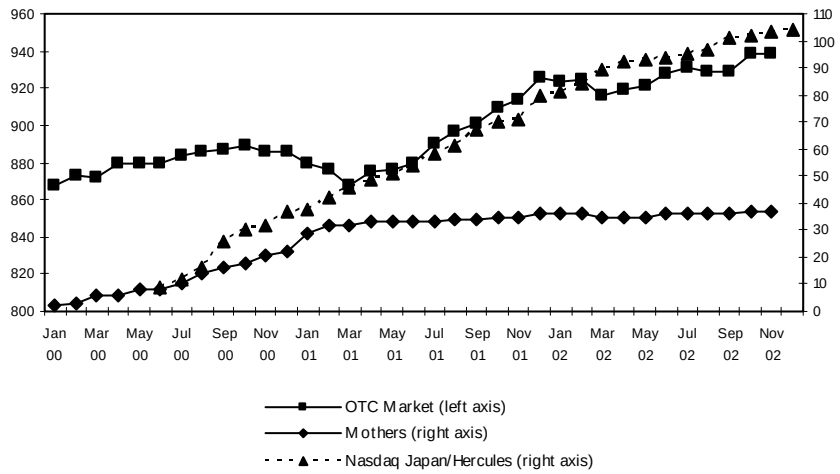
9 Figures are for periods dating from October to September 1999/2000 and 2000/2001, respectively. Of course, some structural reasons are also involved. There was a decline for computer-related firms, which frequently have a short growth period (VEC 2002: 9).

servative approach, but was still affected by rumours that Softbank followed its own agenda. While its performance in terms of listed companies was not too bad – particularly if compared to the other newcomer, Mothers (see Fig. 4), Nasdaq USA finally gave up its involvement in late 2002. The Osaka Stock Exchange has since reorganised its new market segment under the brand name of "Hercules", in an almost desperate attempt to take a free ride on the demigod's reputation of strength.

Fig. 4. The three new markets



Source: Hercules 2002; Jasdaq 2002; TSE 2002

Very few companies currently dare to go public. For Mothers, the number is expected to be 11 for 2002 (7 in 2001) (Nikkei 31 October 2002). Why have the stock market segments for venture businesses disappointed so much? Again, it is difficult to distinguish aspects of the new market bust and of the Japanese recession from more structural factors. Obviously, the current financial and economic "blues" played a considerable role. Below the surface, though, one finds significant changes going on. For instance, medium, often young securities houses as underwriters as well as foreign players beef up the dynamism of the somewhat conservative major securities companies. Also, there is rather active M&A activity among start-ups, following a 1999 Commercial Code revision authorising corporate purchases through equity swaps (Nikkei 21 November 2002). This could be viewed as evidence in favour of H2.

However, there are also problems which can hardly be attributed simply to the slump. One major concern of stock markets is to earn the reputation of safeguarding a suitable balance between principal and agent rights and obligations. The established rules proved not sufficient to quieten rumours of insider trading, other misdeeds and even criminal involvement. To compensate for this deficiency, the market organisers tried and still try to find a well reputed anchor – Nasdaq, the JSDA, the Tokyo Stock Exchange as major players, for instance, but due to all kinds of network effects and split interests of these organisations, no agency could gain reasonable trust. As for another point, the competition among the three new market segments has not proved beneficial, either. They competed for IPOs and for established firms changing markets or applying for a second listing. This meant that strict standards were not first priority, and in the longer run, they could not but jeopardise their reputation.

Summing up, the networking conditions of an established financial system seriously undermined a convincing move towards a capital market-based system of venture financing, which is contrary to H2. The markets are still searching for anchors lending reputation; put differently, they want to employ relational mechanisms in line with H3.

5. Supervising Japan's capital markets

It would be too simplistic, though, to ascribe the deficiencies of Japan's "new markets" only to the problems of its *private* organisers. As elaborated in 3., for a (capital) market to function properly one needs clear, general and strict rules which have to be supervised by a trustworthy agency. It should now be checked whether the basic source for the observed deficiencies lies here.

Since 1992, the Securities and Exchange Surveillance Commission (SESC) is in charge of such duties. It inspects and surveys the securities companies; it also inspects the self-regulatory operations of the various stock exchanges and of the Japan Securities Dealers Association (SESC 2002). Its establishment answered the concern to ensure the fairness of capital markets after a number of scandals in the late 1980s and early 1990s. However, this system suffers from considerable deficiencies, which have lead to a number of requests to increase the SESC's oversight power (e.g. Nikkei 20 September 2002 and 2 December 2002):

- The SESC has few powers. It can make criminal charges against a limited scope of offences, which is usually difficult anyway, but below this level it can only recommend disciplinary action to the Financial Services Agency (FSA), to which it belongs.
- The FSA is run by a commission, composed of three respected individuals: The current chairman was a high-ranking public prosecutor before, and is assisted by a senior journalist of one of the nation's leading dailies and by a former partner of a Japanese auditing company. Given the SESC's subordinated position, though, the "outsider"-status of its heads can easily encroach on its actual influence.
- The commission is also poorly provided with personnel. Whereas the number has increased by 50% during the past year, it is still only 182 – or 364, if inspectors of local finance bureaus are included. This compares to 3,300 staff members at the comparable US commission (SEC) (Indo and Matsuura 2002). The training is considered somewhat deficient as well, and given the de-facto status as a "sub-agency", employment in the SESC is considered to be of rather low prestige, particularly for those transferred from the MoF or the FSA.
- Despite the dynamism of the capital markets, the SESC has no power to change the rules, but can only propose this to the cabinet.
- As a final point, there may be conflicts of interest between the FSA, which is in charge of the "well-being" of the security companies, and the SESC, which has to overlook them.

The government Council on Regulatory Reform has just decided to recommend an enhancement of the SESC's powers (as of early December 2002). However, despite many calls to set up the SESC as a truly independent agency, the Council will not recommend this due to the stiff opposition of the FSA (Nikkei 2 December 2002). The current dispute visualises the problems of a network-based (financial) system when being transformed into a rule-oriented one: It is extremely difficult to set up trustworthy agencies to supervise such rules. There are well-founded theoretical reasons to propose independent agencies for such a job (e.g. Pascha 2002), but limited moves into such a direction offer little help and may even be counterproductive. Ironically, the SESC is subordinated to a more-or-less independent agency, the FSA. However, such a type of

organisation follows its own logic, and in this case it actually obstructs an effective securities supervision, because it is interested to support the securities industry and its own status. Independent personalities not associated with any old bureaucracy may be suitable directors for "truly" independent agencies, but in a semi-independent environment, they may have little influence as outsiders and may be even more dependent on powerful mentors than individuals who are insiders and have a well-structured personal network at their disposal.

6. The impact of government VC promotion policies

Regulatory measures like setting up the SESC are one important aspect of government policies affecting venture capital financing. Another aspect is the promotion of venture capital through fiscal measures. In Japan, there is a confusing multitude of concepts and measures, particularly since the so-called third venture capital boom, a special law to promote creative small and medium enterprises (SME) (*Sôzôhô* of 1995) and the revision of the Basic Law for SME, which pinned its hopes on the dynamism of start-ups (Hamada 2000: 329f.). The basic idea of most programs is to support the early phase of venture companies, when they have severe difficulties to procure capital on the private market. Interestingly, most of the public funds are still provided through loans, the traditional means of financing in post-war Japan. According to a survey, a quarter of all long-term liabilities of venture businesses is based on public loans (KGSK 2000: 17). Such loans, of course, can only be given without (adequately) securing them, because this is just what venture businesses lack. Screening is an important element of all programs, therefore.

So far, the performance of these programs is generally considered to have been rather disappointing (e.g. KKK 2001a: 128f.). On a superficial level, long and clumsy procedures, lack of co-ordination of different programs and actors, inadequate knowledge of involved bureaucrats and similar problems have been identified. However, there is a deeper level of important factors. Subsidies, also in the form of cheap loans, are a difficult instrument, because they create considerable ex ante and ex post principal-agent problems. It is very difficult to overcome the information asymmetries, and once the assistance is paid, there are few incentives to spend the funds frugally. Given the long tradition of credit-based financing, it is illustrative that rather simple mechanisms like loan

or loan guarantees are preferred. Innovative financial instruments like convertible securities or ex post subsidies of successful start-ups are hardly used, although they could solve some tricky incentive problems (Gebhardt and Schmidt 2002: 245, 251). This kind of evidence also supports H3, at least in the sense that it will take very long until the philosophy of capital markets will be internalised in the regulative beliefs of those who develop and execute public policy[10].

7. Conclusions

For the growth and development of a frontier economy like Japan, funding venture projects is one of the most important tasks for supplying adequate production factors. Noting the lack of venture investment in Japan, it was argued that institutional economics, and the principal-agent and transaction cost economics in particular, are helpful to understand the underlying issues. Distinguishing between credit-based and capital market-based financial systems, it could be shown that many of Japan's problems to supply venture financing are related to its legacy of credit-based financing (hypothesis 1).

More interestingly, will there – and should there be – a transformation to a capital market-based financial system, as is frequently argued with respect to Japan's future (hypothesis 2)? Instead, will there rather be a hybrid system, either because of preference or because a full transformation will not be feasible (hypothesis 3)? Answering this question is complicated by the fact that recent developments are strongly influenced by the new economy bust and by the deep recession in Japan. Still, we found a considerable amount of evidence supporting the hybrid system-hypothesis (H3). The basic reason, it was argued, is that financial systems function within an environment characterised by sticky informal institutions. In our case, the ubiquity of relational contracts or inter-personal networks makes it very difficult to introduce a trustworthy arms'-length capital market based on transparent, general rules and on their strict enforcement by impartial public or quasi-public agencies.

Policy makers and investors cannot disregard this. Sunk cost as a basis for economising on relational contracts or the role of reputation in overcoming incentive problems

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[10] The importance of such mental framing for public policy is stressed by the so-called cognitive-evolutionary approach to policy-making; see Slembeck 1997.

will remain to be important aspects of organising venture capital financing in Japan. As the Enron scandal has shown in the US, there is simply no “perfect” financial system. Japan will have to allow for its institutional legacy when reforming its financial system further, but this is not only a burden, but also a comparative distinction which can help to solve some difficult incentive problems. Rather than looking for an ideal solution, Japan’s actors will have to be innovative and flexible to make their hybrid system respond to today’s and tomorrow’s challenges.

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Gerhard Mercator Universität Duisburg
Fakultät für Wirtschaftswissenschaft

Forschungsinstitut für wirtschaftliche Entwicklungen im Pazifikraum e.V.
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