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Purchase of SME-related ABS by the Bank of Japan: Monetary Policy and SME financing in Japan

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Purchase of SME-related ABS by the Bank of Japan*

Monetary Policy and SME financing in Japan

Hideaki Hirata^a and Tokiko Shimizu^b

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Introduction

The malfunction of the monetary transmission mechanism in Japan has been cited as one of the main reasons why the quantitative easing of monetary policy undertaken by the Bank of Japan (BOJ) has been insufficient in achieving the objective of an early escape from deflation and the economic slump. The BOJ has quantitatively eased monetary policy, promising to provide as much money as the market needs, and as a result, short term interest rates have fallen to very low levels.¹ However, the growth rate of bank lending particularly to small and medium-sized enterprises (SMEs), has been drawing a secular downtrend for years (Chart 1), thus leading to considerable debate over the effectiveness of the monetary policy.

The factors underlying the malfunction of the monetary transmission channel lurk both in the financial and non-financial sectors. Of all the underlying factors, there is broad consensus that the “health” of the Japanese financial sector should be considered as the problem of most concern.² The financial sector has played a central role in providing external finance to the non-financial sectors through financial intermediation, accumulating credit risks within the financial sector itself. Associated with the non-performing loan problem, the excess accumulation of credit risks in the banking sector lowers the financial intermediation ability. Thus, it impairs the smooth propagation of monetary policy through the credit channel. On the

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¹ The target balance of current accounts held at the BOJ is around 27 to 30 trillion yen.

² See Dell’Ariccia (2003).

side of non-financial enterprises, SMEs as a driving force in the Japanese economy, in particular, have been struggling with their fundraising. Limited availability of reliable information on SMEs, in other words, the asymmetric information problem of SMEs is pivotal as is often mentioned. Furthermore, it is important to bear in mind that the shortage of collateral is an obstacle to credit availability for SMEs. SMEs with lower credit status seek alternative sources of funding that strengthen the effects of monetary easing.

The BOJ recently announced its intention to purchase asset backed securities (ABS) whose underlying assets are closely related to SME economic activities.³ One important motivation for this policy arises from the idea that utilizing modern financial tools, i.e., securitization, can be a possible way to solve the overconcentration or excess accumulation of credit risks in the banking sector, albeit it would be a rare move for central banks to buy private debt. The outright purchase is expected to restore the monetary transmission mechanism by helping diversify credit risks in the financial sector among other economic agents including the BOJ.

The other motivation of the new policy is to increase fundraising options for SMEs. For example, the BOJ will purchase ABS backed by accounts receivable. The use of accounts receivable as collateral is not a popular fundraising method for SMEs in Japan. SMEs can take advantage of the BOJ's policy to utilize quality assets which have not been effectively used as collateral in the past. SME external financial sources can be multi-tracked, thereby reducing their heavy reliance upon traditional financial intermediation. Thus, through the implementation of "traditional" monetary policy tools to purchase "untraditional" financial assets, the policy is expected to strengthen the monetary transmission mechanism.

The spirit of this policy is to effectively improve SME access to financing through accelerating the development of ABS markets, without causing distortions in the ABS markets. The scheme is carefully designed to avoid any moral hazards and to contribute to the removal of obstacles to SME financing through enhancing financial disintermediation.

From a macroprudential perspective, the outright purchase scheme is designed to reinvigorate Japanese economic activities by encouraging functional interactions among the financial markets, the banking sector, and the real economy. The frontier of systemic risk research, the so-called "triangle view," emphasizes that the feedback effects of stress are multiplied when the banking sector is under difficult conditions (See Hosoya and Shimizu (2002)). Although the movement toward securitization at present is a trickle, it could well become a torrent by the development of the market through the purchases of ABS. Murray (2001) states that the

³ Hereafter, we use ABS as both asset backed securities and asset backed commercial papers, unless

proliferation of securitization would strengthen the financial system in times of stress, since banks are forced to demand the repayment of loans from the ABS holders. This interaction would channel more funds into the corporate sector, contributing to the real economy. Such a positive repercussion effect is the goal of the new policy.⁴

Japan's prolonged economic malaise (often referred to as Japan's "lost decade") is considered to have incurred a serious impact on the world economy as well as on the Japanese economy. Although the near term prospect of an economic upturn remains bleak, "another lost decade" should be avoided at all costs. In order to maximize the effects of monetary easing, the BOJ must continue to provide rigorous prescription for the revitalization of the Japanese economy through the enhancement of financial disintermediation channels.

The remainder of this paper is organized as follows: Section two explains the importance of SMEs in Japan and their current fundraising difficulties; Section three explains securitization and its expected role from various aspects; Section four describes the spirit and framework of outright ABS purchase by the BOJ; Section five offers conclusions.

2 SMEs in the Japanese economy

In this section, we give an overview of the role of SMEs and their accessibility to funds.

2.1 Current condition of SMEs

SMEs are the primary driving force of the Japanese economy and their dynamism has been the source of postwar Japanese economic growth. Despite the fact that the majority of SMEs have struggled in competitive markets, the dynamics of entrepreneurship and innovation fostered in SMEs have historically allowed them to overcome their plights. Macroeconomic figures indicate that SMEs are even now very important. For example, 99.7% of enterprises were SMEs in 2001.⁵ SMEs employ more than 80% of the total workforce. Moreover, SMEs

otherwise mentioned.

⁴ Moreover, recent studies show that ongoing financial globalization makes the stability of the Japanese financial system much more vital to the world economy than ever. The more integrated and interconnected financial systems around the globe become, the more synchronization among financial markets will take place. See Rouwenhorst, Goetzmann, and Li (1999), and Forbes and Menzie (2003) for the recent synchronization of world financial markets; Hausler (2002) and Johnson (1998) explain the impact of securitization in the global economy; Kose and Yi (2002) and Hirata (2003) discuss the macroeconomic influence of financial globalization on business cycles.

⁵ An enterprise whose capital is less than 1 billion yen (about US \$8.3 million) is defined as a SME here. Note that the share is 98.5% if the threshold is 0.1 billion yen (about US \$0.8 million). The figures are taken from National Tax Agency, *National Tax Agency Annual Statistics Report*.

account for more than 50% of manufacturing shipment volume.⁶ Hence activating the potential vitality of SME businesses is one of the essential factors for reviving the Japanese economy.

One conventional view is that SME financing demand is weak, however, recent surveys and studies report that SMEs call for financing resources. The recent survey of SMEs by the Tokyo Chamber of Commerce and Lending states that about 70% of SMEs ask for loans without collateral or guarantee; they ask lenders to loan money based on SME potential or future cash flow.⁷ Moreover, Imai and Kawagoe (2000) find that the rate of new business start-ups in Japan has been falling recently. Callen and Nagaoka (2003) partly attribute the barrier on entrepreneurship to the unavailability of finance. In sum, SMEs are subject to severe financial constraints, even though a great amount of entrepreneurship still lies untapped in SMEs.

Under such tight credit constraints, SMEs are very dependent on the lending attitude of financial institutions. Charts 2 and 3 demonstrate the survey results on the business conditions index and the lending attitude index of financial institutions. As expected, since business conditions have been bad for more than ten years; the lending attitude of financial institutions has also been tight for SMEs. For intuitive understanding, we compute the contemporaneous correlation coefficients between these two indices from 1990:Q1 to 2003:Q2; the coefficients are 0.53, 0.89, and 0.98 for large, mid-sized, and small enterprises, respectively. Although these numbers do not imply any causality, there seems to be some clear evidence of obstacles in fundraising for SMEs.

2.2 Difficulties in SME fundraising

SMEs are vital to the Japanese economy, so the accessibility of SMEs to credit is a primary concern. The financial pressure forcing SMEs with potential ability away from financing is a grave problem. Next, we explore reasons why SMEs tend to be isolated from easy fundraising from the standpoints of both SMEs and loan providers.

SME borrowers have two serious problems. First, the conventional wisdom of credit rationing theory suggests that the moral hazard and adverse selection problems cause an inefficient allocation of credit, and thus SMEs are subject to borrowing constraints (Stiglitz and Weiss (1981)). These problems are particularly of concern to SMEs, since information about them

⁶ See OECD (2002).

⁷ Tokyo Chamber of Commerce and Lending, *The needs survey on relationship lending*, released on August 21, 2003 (in Japanese).

(e.g. degree of risk involved in their investment projects) is typically opaque or scarce from a lenders' point of view. Even SMEs with profitable projects, then, experience problematic financial contracting. Thus, lenders cannot easily verify whether the projects are of quality or not (adverse selection problem); and also, it is not easy for lenders to check if the funds are used in the way borrowers outlined in the loan plan (moral hazard problem, or agency problem). In addition, the ongoing monitoring of borrowers, which is costly, is needed to deliver expected returns on loans.⁸

Second, SMEs have been subject to a serious shortage of collateral in recent years. As explained in Berger and Udell (2003), there are a variety of tool boxes for small business loan contracts. These tool boxes, used in mitigating the above mentioned problems, are collateral, guarantees, and so on. In Japan, land has been the most commonly used form of collateral for loans; personal guarantees are also often used.⁹ The Credit Guarantee Associations provide public guarantees.¹⁰ However, most SMEs have not utilized assets that could also be considered as alternative forms of collateral. Examples include accounts receivable, notes receivable, and inventory. As revealed by Chart 4, the amount of accounts receivable and notes receivable account for more than that of land. Hence, the liquidation of these assets would give SMEs more accessibility to external credit, lifting the conventional credit limits through the shift of the credit supply curve to the right. However, a variety of reasons including legal matters prevent SMEs from doing so.¹¹

On the other hand, the financial sector has also incurred various problems. In Japan, financial institutions have long played a central role in providing external finance to the non-financial sectors through intermediation, accumulating credit risks of borrowers within the financial sector itself. Associated with the non-performing loan problem, the excess accumulation of credit risks in the banking sector has lowered banks' the ability to intermediate. Charts 6 and 7 present such characteristics whereby the corporate finance in Japan appears to make less (more) use of liquidated assets (loans) than that in the US.

Since the 90s, credit-creating activities of financial intermediaries have been squeezed due to

⁸ Berger and Udell (2003), Beshouri and Nigro (1994), and Nathan (1998) provide good literature review on this topic.

⁹ Personal guarantee indicates that lenders ask entrepreneurs to provide recourses for any troubles in full repayment of their loans.

¹⁰ The credit complementation system conducted by these associations strives to contribute to the healthy development of SMEs without sufficient collateral through a credit guarantee. As of the end of March 2001, this system had a total of 41.2 trillion yen credit guarantees outstanding.

¹¹ See Shimizu, Inamura, and Nishizaki (2002). For example, accounts receivable is typically associated with terms restricting assignment of accounts receivable, which may be difficult to remove. Chart 5 suggests that the progress of securitizing accounts receivable in Japan is behind that in the US.

the non-performing loan problem and other reasons, so that the effectiveness of monetary policy through financial intermediation has been limited. The efficacy of monetary policy is prone to be affected by this overconcentration of credit risks, and the seriousness of this problem from overconcentration depends on a macroeconomic condition and a real estate market condition. Excess accumulation of credit risk was not necessarily a negative factor (may have been considered a good factor) until the 1990's collapse of the asset price bubble, since financial intermediation could function well due to the rise in the value of collateral. Even SMEs could be flush with liquidity. Land collateralized lending could be an effective propagation mechanism of monetary policy. Unfortunately, the fact that a certain portion of loans to SMEs are associated with real estate collateral is a double-edged sword in general. After the bubble burst, the decline in the value of collateral has squeezed the lending capacity of the financial sector, thus serving a severe blow to SMEs with very restricted access to secondary markets. Therefore, the lowered short term interest rates through monetary easing have been often cited to have had limited impact on the economy, i.e., the transmission mechanism functioned little. Consequently, depressed aggregate investment followed by the contraction of bank credit has led to the declining aggregate output, creating a negative influence on asset prices, thus causing the iterating downward spiral.

Partly due to the aforementioned problems, there is a serious mismatch between lenders and borrowers. The level of lending rates is thought to be set according to the creditworthiness or risk premium of borrowers or their projects. However, this is not the case with Japanese financial intermediation. The lending rates in Japan do not relevantly reflect the credit risks of borrowers. Chart 8 demonstrates the distribution of borrowers with respect to lending rates. Loan providers with low risk preferences are domestically licensed banks, while those with high risk preferences are non-bank financial companies. Typically, the former asks debtors to provide collateral or guarantees, while the latter offers very high lending rates instead of asking for collateral or guarantees. As clearly shown in Chart 8, the puzzling fact is that there is a *missing area* where no middle risk taking lenders exist, implying that borrowing opportunities are unavailable for middle risk enterprises. This fact leads to the question: who are the middle risk enterprises? Chart 9 answers this question. This chart illustrates the distribution of enterprises with respect to rating.¹² The vast majority of enterprises located in the middle risk area are SMEs. Hence the biased distribution of loan providers' risk

¹² The ratings are computed by the credit scoring model *RADAR* using the SME database, *CRD*, because comprehensive rating information on SMEs is unavailable. *Radar* is a model for estimating credit ratings developed by R&I, Mizuho Financial group, and FTRI. See <http://www.r-i.co.jp/ftri/eng/index.html> for details. *CRD*, Credit Risk Database, contains financial data information on more than one million SMEs. For details, refer to Shimizu, Inamura, and Nishizaki (2002).

preferences is seriously problematic for SMEs. Policy action would be needed in order to fill this gap and create a sound borrowing environment, which in turn is expected to create a smooth monetary transmission mechanism. We will henceforth call this mismatch problem the *missing middle-risk taker problem*.

3 Overview of Securitization

In this section, we discuss if securitization is a possible way to solve this *missing middle-risk taker problem*. Before beginning this section, let us first take a brief look at the basic concept of securitization.

3.1 What is Securitization?

(Asset) Securitization is a state of the art financial method, by which contingent and scheduled streams of cash flow arising from pooled (illiquid) loans, receivables, inventories, or other assets are transformed into tradable securities. These securities are issued by special purpose vehicles (SPV) and are tailored to appeal to different classes of investors.

Securitization has not been a widespread method of financing in Japan, and it is only very recently that this form of finance has taken off. As shown in Chart 10, the issuance of these securities has been gradually growing in recent years. Chart 11 shows that the ABS and ABCP markets are yet underdeveloped, compared to the markets in the US and Europe.

There are a variety of types of securitization that give SMEs access to funding. Chart 12 provides a standard model of a small business loan securitization, a so-called Collateralized Loan Obligation (CLO). The SPV purchases bank loans from the loan originators (financial institutions), while issuing senior/subordinated classes of securities. These securities are designed to be attractive to third party investors who have a variety of risk preferences, and the remnant (a small amount of equity) is usually owned by the originator. It should be noted that this methodology can enhance the credit status or rating of the SMEs through diversification effects.¹³ Chart 13 also illustrates the case of securitizing accounts receivable, supplying an opportunity to raise short-term funds. For example, SMEs sell their accounts receivable to the SPV, which then sells ABCP to investors and sales proceeds are paid to SMEs.

¹³ For example, see Kohier (1998) for brief explanation on CLO.

3.2 Specific problems in securitization of SME-related assets

In spite of growing interest in SME-related securities during Japan's current state, where the credit intermediary function of financial institutions has not been fully restored, there are a couple of reasons why these securities appear not to be widespread. First, interest payments on the underlying loans often do not sufficiently cover the credit risk of the borrowers, i.e., the *missing middle-risk taker problem*. Hence, it would be difficult to bear attractive returns, and the originators may incur additional costs under such conditions. Note that this first reason is somewhat attributed to the lack of adequacy of bank capital.

Second, the infrastructure necessary for the development of securitization is still under way. For example, the obstacles in the smooth assignment of claims are a large legal burden and psychological resistance of creditors in the assignment of claims.¹⁴ Additionally, tailoring standardized products is far from easy particularly in the case of SME-related asset securitization. Consistent origination and underwriting meet the needs of easily structuring ABS, whereas flexible origination and underwriting standards meet the heterogeneous (case-by-case) financial needs of SMEs. This trade-off is not peculiar to the securitization of mortgage loans, but is also the case when SME-related assets are securitized (See Nathan (1998)).

The third problem arises from information asymmetry. The lack of risk assessment information prevents investors from making informed investment decisions. Credit risk underwriting requires significant knowledge such as sufficient data and analytical tools, as well as disclosure criteria.¹⁵ In the case of the US, it is widely recognized that there are significant difficulties in doing relevant credit risk evaluation on pooled loans to SMEs.¹⁶

¹⁴ In other words, the transfer of claims to a third party can be difficult.

¹⁵ See Dietsch and Petey (2002) for the recent studies of credit scoring.

¹⁶ See Acs (1999), Beshouri and Nigro (1994-1995), Glassman (1995), and Nathan (1998).

4 Purchase of SME-related ABS by the BOJ

The purchase scheme is intended to motivate investors to buy ABS, offering a “jump-start” to the further development of the ABS markets. Yet, this policy action is not the first policy on ABS markets conducted by the BOJ. We will first briefly refer to the past BOJ policies on ABS and move on to explaining the framework of the purchase and its background ideas.

4.1 History of ABS and the BOJ

The BOJ announced that it would accept eligible asset-backed securities as collateral for maintaining current accounts with the BOJ in October 1999. This policy, encouraging market participants to make use of ABS, would be expected to ensure a smooth flow of corporate finance. See Appendix 1 for more details.

4.2 Framework of ABS purchase by the BOJ¹⁷

The Monetary Policy Meeting (MPM) decided the outline of the scheme for outright purchase of ABS this June, and the new scheme, taking account of the opinions of market participants, was put in place at the end of July. The MPM determined the specific design of the purchasing scheme (see Appendix 2) considering (1) to what extent the purchase will strengthen the transmission mechanism; (2) how to avoid distorting market mechanisms; and (3) how to maintain the financial soundness of the BOJ.¹⁸

In order to make this scheme most effective, the BOJ purchases various types of ABS as eligible assets, including those with relatively high credit risk. The BOJ purchases ABS with a broad range of underlying assets, including loans, receivables, and leases, if they are deemed to contribute to smooth financing of SMEs. The BOJ sets the maximum amount outstanding of purchases at one trillion yen for the time being in order to give maximum support to the development of the ABS market, while maintaining the financial soundness of the BOJ itself. Moreover, the BOJ works together with relevant authorities and government financial institutions to support the effort of market participants.

4.3 Spirits of the ABS purchase by the BOJ

¹⁷ This section is based upon the Monetary Policy Meeting announcements, *Purchases of Asset-Backed Securities* on June 11, 2003, and *Examination of Possible Purchase of Asset-Backed Securities* on April 8, 2003. They are available at <http://www.boj.or.jp/>.

¹⁸ In the US, the Riegle Community Development and Regulatory Improvement Act in 1994 was legislated for the development of a secondary market for SME loans. See Acs (1998), and Temkin and Kormendi (2003).

First of all, the cardinal rule of this policy action is that the policy framework must be designed to effectively improve SME access to credit or liquidity through accelerating the development of ABS markets, without causing distortions in the ABS markets and without endangering the sound banking system. In doing so, the policy framework, which shall be valid until end-March 2006, is carefully formulated reflecting the public opinion of market participants.

In order to avoid moral hazards, the BOJ shall not purchase the first loss class. If the BOJ purchases the equity class, the originators can well gain high degrees of loss protection, and this policy would facilitate the creation of ABS deals. However, this will not necessarily contribute to the fostering of ABS markets as a whole. In addition, buying equity would lower the financial soundness of the BOJ.

On the other hand, the BOJ shall purchase the mezzanine tranche with ratings higher than BB, in which the maximum amount of purchase is limited to less than half of the tranche. Similar to lending markets, there are a very limited number of middle risk taking investors in the ABS markets, whereas there are sufficient numbers who take low risk (= buy the senior tranche). This fact implies that mezzanine tranche buyers are in need. In other words, purchasing the mezzanine tranche will have a “leverage effect” to expand the number of ABS issued. Chart 14 shows hypothetical cases of tranching, i.e., creation of senior/subordinate structure from the pool of the underlying assets. Credit risk (in the ABS) is “like air in a squishy balloon (Economist (2003))” that can be squeezed into any shape, given that the amount of “air” remains the same. Even though all cases are structured from the same pool of underlying assets and the senior tranche is assumed to have AAA rating, the BOJ shall purchase the mezzanine tranche only in Case 1. Compared with Case 1, the mezzanine tranches in Cases 2 and 3 are more risky due to the larger share of the senior tranche and the smaller share of the equity, respectively. It should also be noted that, on behalf of the long-term autonomous development of the ABS markets, the encouragement of less risk averse investment is needed, while the over-dominance of the mezzanine tranche by the BOJ should be avoided.

As mentioned previously and implied throughout this paper, transparency is a key factor. The scheme is designed to provide originators an incentive to disclose relevant information. As argued in Greenspan (2003), transparency requires originators and arrangers to open their information to the public in a way that accurately mirrors credit risks involved in ABS. Thus, the prevalence of using more than two third party rating services is expected to solve the asymmetric information problem through multi-angle assessments of the credit quality and risk of the underlying assets. In addition, the BOJ only accepts publicly-offered ABS, which is

more transparent in its information than private ABS.¹⁹

Finally, it should be stressed that the BOJ does not intend to be a giant in the ABS markets. Thus, the maximum amount outstanding of the Bank's purchases is set at one trillion yen.

4.4 Potential benefits of this policy

There are three main benefits of this policy. First, by transferring the credit risk of SMEs to banks, investors, the BOJ, and other public sector institutions, the funding capabilities of SMEs will be improved, while banks' lending capacities will be reinforced.²⁰ Second, the scheme increases the market liquidity of ABS, thereby reducing funding costs and increasing the availability of funds. Third, this policy paves the way for providing SMEs with a new financing channel, contributing to the strengthening of the transmission mechanism and, thus, the effectiveness of monetary easing.

4.5 The implication for macroprudential framework

From a macroprudential perspective, the outright purchase scheme is designed to reinvigorate Japanese economic activity by encouraging the functional interactions among the financial markets, the banking sector, and the real economy (= the *triangle*).

The purchase is intended to enhance the flexibility of channeling funds and to strengthen the financial stability. When SMEs solely rely on financial intermediation, the flow of funds to SMEs is a single line. On the other hand, when SMEs rely both on financial intermediation and disintermediation, the flow of funds to SMEs is multi-tracked. In addition to financial intermediation, SME financing directly betters off by liquidating accounts receivable; and that also indirectly betters off by securitizing loans to SMEs, and leases to SMEs.

The new policy is expected to defuse negative feedback effects in the triangle by encouraging the development of the dynamics of the financial markets, which leads to ease the burden of credit risks of borrowers in the banking sector. As a consequence, smoother fundraising supports the spirit of innovation and entrepreneurship in SMEs. The frontier of systemic risk research, the so-called *triangle view*, emphasizes that the feedback effects of stress are multiplied when the banking sector is under difficult conditions (See Hosoya and Shimizu (2002)). Having loan securitization in mind, Murray (2001) states that the proliferation of securitization would strengthen the financial system in times of stress. This is because banks

¹⁹ Purchasing only publicly-offered ABS also makes the purchasing price public.

²⁰ Sales proceeds and fees enhance the originators' lending capacity by improving their liquidity, thus motivating them to provide extra loans to SMEs.

tend to more cautiously demand the repayment of loans from the ABS holders who seek returns from underlying assets (=loan). Securitization of loans can be a tool whereby loan originators retain an extra presence in the financial markets, in contrast with the case of no securitization. This is due to the fact that lenders can use sale proceeds to originate more loans. As a result, securitizing loans helps increase the effectiveness of monetary transmission mechanism through widening the credit channel, leading to more funds available to SMEs as the engine of the economy, contributing to boost the real economy. The increased acceleration of this positive circulation will in turn enhance the bonds of the *triangle*. The expected goal of the new policy is to provide a positive momentum towards enhancing the monetary transmission mechanism.

5. Conclusion

Greenspan (1993) states that it is essential to remove the sources of difficulties in bank credit availability of SMEs, to the extent of not imperiling “the safety and soundness of the banking system.” This is applicable in the Japanese case, and the new policy of purchasing private debt, SME-related ABS is designed to remove obstacles to credit.

Moreover, the new policy looks one step ahead. This scheme is tailored to appeal to all the agents in the markets, while cautiously evading the moral hazard problem and market distortion. In so doing, we believe that the policy will act as a positive catalyst for the future expansion of the ABS markets, promoting the overall stability of the *triangle*, and the economy as a whole.

Appendix 1 BOJ Policies on ABS and ABCP

October 1999	ABS becomes eligible collateral.
February 2002	ABCP becomes eligible collateral and eligible asset for CP purchasing operations under repurchase agreements. ABS backed by mortgage loans and cash flows generated from real estate becomes eligible collateral.
June 2002	The BOJ begins publicly releasing data on the outstanding levels of collateral accepted by the BOJ.
January 2003	The BOJ begins accepting a broader range of asset-backed commercial paper as eligible collateral.
March 2003	Dematerialized ABCP becomes eligible collateral.
July 2003	The BOJ begins to purchase ABS and ABCP.

Appendix 2 Outline of the Scheme

This Appendix reprints *Outline of the Outright Purchase Scheme for Asset-Backed Securities*, announced on June 11. Note that *the Bank* in the announcement suggests the Bank of Japan.

Outline of the Outright Purchase Scheme for Asset-Backed Securities

1. Eligible assets to be purchased

(1) Types of eligible assets

- Asset-backed securities (publicly-offered)
- Synthetic-type securities (publicly-offered credit-link notes)
- Asset-backed commercial paper (including dematerialized commercial paper)

(2) Eligibility criteria

<1>Characteristics of securities

- Securities shall be denominated in Japanese yen.
- Securities shall be issued in Japan.
- Securities shall be governed by Japanese law.

<2>Underlying assets

- Underlying assets* shall be those deemed to contribute to smooth financing of small and medium-sized enterprises. The eligible assets shall not be limited to loans or receivables.

* In the case of synthetic-type securities, “underlying assets” mean pools of assets whose credit risk is transferred by financial transactions such as credit derivatives.

- 50 % or more of the value of underlying assets shall be composed of assets related to small and medium-sized enterprises (i.e. enterprises with capital of 1 billion yen or less).
- When underlying assets are pools of bank loans, their borrowers shall be those classified as “normal” based on the FSA’s examination manual through banks’ self-assessment of

loan portfolio.

<3>Creditworthiness

a. Asset-backed securities and synthetic-type securities

- Securities shall be rated BB or higher by all rating agencies (minimum of two ratings).
- Original maturities shall be up to three years.
- Proceeds raised through the issuance of synthetic-type securities shall be invested in pools of financial assets deemed appropriate by the Bank in terms of their marketability and creditworthiness (e.g. JGBs).

b. Asset-backed commercial paper

- Commercial paper shall be rated a-1 by at least two rating agencies.
- Original maturities shall be up to one year.
- Asset-backed commercial paper fully supported by the financial institutions that have current accounts with the Bank may also be eligible (as prescribed in the temporary rules for eligible collateral).

2. Purchasing procedures

(1) Asset-backed securities and synthetic-type securities

- After an initial public offering is closed, the Bank will purchase the requested amount of the securities from the selected counterparties at their request. Purchase prices shall be decided based on those applied for the public offering.
- Eligible counterparties shall be selected in advance from the financial institutions that have current accounts with the Bank's Head Office, mainly based on their creditworthiness.

(2) Asset-backed commercial paper

- The Bank purchases eligible commercial paper through competitive auctions.
- Eligible counterparties shall be selected in advance from those for the purchase operations of commercial paper with repurchase agreements.

3. Maximum amount of purchases

(1) Total amount outstanding

- For the time being, the maximum amount outstanding of the Bank's purchases shall be 1 trillion yen.

(2) Limit per issue

- For asset-backed securities and synthetic-type securities, the amount purchased by the Bank shall not exceed 50% of each tranche of an issue.

4. Others

- This purchase scheme shall be valid until end-March 2006.
- The outline mentioned above, including the range of asset-backed securities to be purchased, the purchasing procedures, and the maximum amount of purchases, shall be reviewed and changed, if necessary, depending on factors such as development of the asset-backed securities market as well as the financial soundness of the Bank.

References

- Acs, Zoltan J. "Development and Expansion of Secondary Markets for Small Business Loans," Federal Reserve Bank of Chicago, *Business Access to Capital and Credit*, March 1999, 625-643.
- Berger, Allan N., Goldberg, Lawrence G., and White, Lawrence J., "The Effects of Dynamic Changes in Bank Competition on the Supply of Small Business Credit," *European Finance Review*, 2001, 5 (1-2), 115-139.
- _____, and Udell, Gregory F., "Small Business Credit Availability and Relationship Lending: The Importance of Bank Organisational Structure," *Economic Journal*, February 2002, 112 (477), 32-53.
- _____, and _____, "Small Business and Debt Finance," in Acs, Zoltan J., and Audretsch, David B. eds., *Handbook of Entrepreneurship Research*, May 2003, Kluwer Academic Publishers.
- Beshouri, Christopher P., and Nigro, Peter J., "Securitization of Small Business Loans," *Journal of Small Business Finance*, 1994-1995, 4 (1), 1-29.
- Dell'Ariccia, Giovanni, "Banks and Credit in Japan," in Callen, Tim and Ostry, Johnathan D. eds., *Japan's Lost Decade, Policies for Economic Revival*, February 2003, International Monetary Fund, 43-64.
- Callen, Tim, and Nagaoka, Takashi, "Structural Reforms, Information Technology, and Medium-Term Growth Prospects," in Callen, Tim and Ostry, Johnathan D. eds., *Japan's Lost Decade, Policies for Economic Revival*, February 2003, International Monetary Fund, 80-109.
- Dietsch, Michel, and Petey, Joel, "The Credit Risk in SME Loans Portfolios: Modeling Issues, Pricing, and Capital Requirements," *Journal of Banking and Finance*, March 2002, 26 (2-3), 303-22.
- Economist, "Who's carrying the can?" *Economist*, August 16, 2003.
- Forbes, Kristin, and Chinn, Menzie, "A Decomposition of Global Linkages in Financial Markets Over Time," National Bureau of Economic Research Working Paper, 9555, March 2003.

- Glassman, Cynthia A., "The New Tool Set: Assessing Innovations in Banking -- Securitization of Small Business Loans," Federal Reserve Bank of Chicago, *Bank Structure and Competition*, May 1995, 34-44.
- Greenspan, Alan, "Corporate Governance", remarks at the 2003 Conference on Banking Structure and Competition, May 2003.
- _____, "Statements to the Congress before the Committee on Small Business", *Federal Reserve Bulletin*, May 1993, 79 (5), 473-476.
- Hausler, Gerd, "The Globalization of Finance," *Finance and Development*, March 2002, 39 (1).
- Hirata, Hideaki, "Japanese Business Cycles in the Global Economy," March 2003, mimeo.
- Imai, Yutaka, and Kawagoe, Masaaki, "Business Start-ups in Japan: Problems and Policies," *Oxford Review of Economic Policy*, 2000, 16 (2), 114-123.
- Johnson, Manuel H., "Guides to Monetary Policy in a Global Economy," *Cato Journal*, Fall 2001, 21 (2), 177-182.
- Kasa, Kenneth, "Borrowing Constraints and Asset Market Dynamics: Evidence from the Pacific Basin," *Federal Reserve Bank of San Francisco Economic Review*, 1998, 3, 17-28.
- _____, "Contractionary Effects of Devaluation," *FRBSF Economic Letter*, November 13, 1998, 98 (34).
- Kaufman, Henry, "Protecting Against the Next Financial Crisis," *Business Economics*, July 1999, 34 (3), 56-64.
- Kohler, Kenneth, *Collateralized Loan Obligations: A Powerful New Portfolio Management Tool for Banks*, Mayer, Brown, Rowe & Maw LLP, 1998.
- Kose, M. Ayhan, and Yi, Kei-Mu, "The Trade Comovement Problem in International Macroeconomics," Federal Reserve Bank of New York Staff Reports, 155, December 2002.
- Murray, Alan P., "Has Securitization Increased Risk to the Financial System?" *Business Economics*, January 2001, 36 (1), 63-67.
- Nathan, Luxman, "The growing securitization of small business loans," Federal Reserve Bank of Boston, *Communities and Banking*, Summer 1998, 22, 2-8.

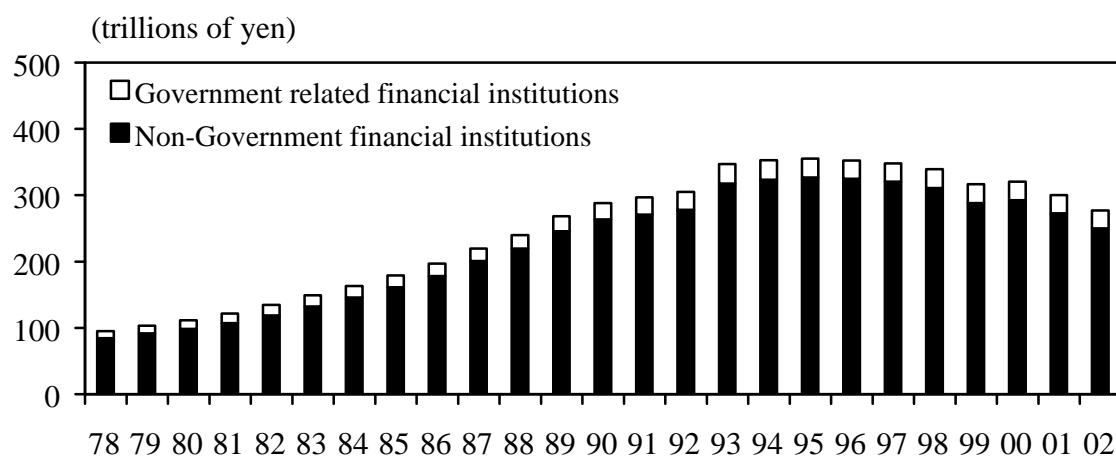
OECD, *OECD Small and Medium Enterprise Outlook 2002*, 2002, OECD.

Rouwenhorst, Geert K., Goetzmann William, and Li, Lingfeng, “Long-Term Global Market Correlations”, National Bureau of Economic Research Working Paper, 8612, November 2001.

Shimizu, Tokiko, Inamura, Yasunari, and Nishizaki, Kenji, “Recent Efforts for Developing the ABCP Market: Improving Financing Conditions for Small to Medium-sized Enterprises and Exploiting Opportunities for Securitization”, Bank of Japan Financial Markets Department *Market Review*, June 2002, 2002-E-2.

Stiglitz, J. E., and Weiss, Andrew, “Credit rationing in Markets with Imperfect Information”, *American Economic Review*, June 1981, 71 (3), 393-410.

Temkin, Kenneth, and Kormendi, Roger C., “An Exploration of a Secondary Market for Small Business Loans”, Office of Advocacy, Small Business Agency, April 2003, mimeo.

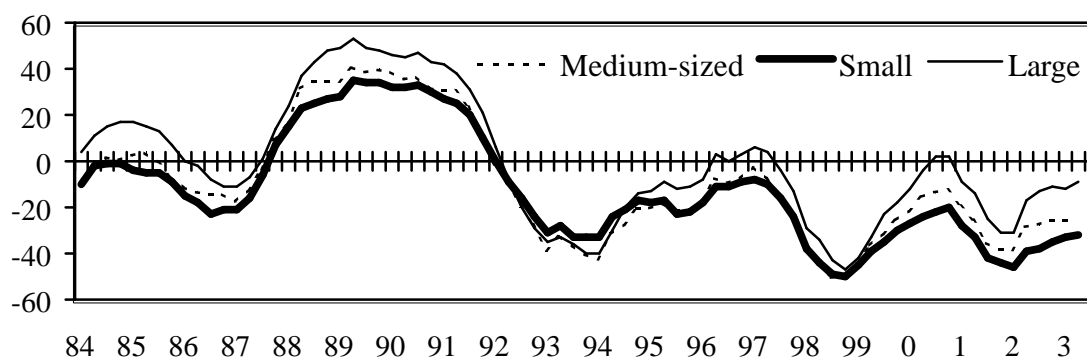
Chart 1**Outstanding loans to SMEs**

Sources: Bank of Japan, *Financial and Economic Statistics Monthly*; SME Agency, *Monthly Small and Medium Enterprise Survey*.

- Notes:
1. Outstanding loans at the end of December for each year. Figures up to and including 1992 do not include overdrafts but do include foreign yen loans.
 2. Non-government financial institutions include city banks, regional/second-tier regional banks, other banks, credit unions, and credit associations. Note that the lending of credit associations includes personal lending, etc.
 3. Government related financial institutions include the Shoko Chukin Bank, Japan Finance Corporation for Small Business, and the National Life Finance Corporation.
 4. The figures for total outstanding loans to SMEs do not include domestically licensed bank trust accounts.

Chart 2

Business conditions



Sources: Bank of Japan, *Short-term Survey of Enterprises in Japan (TANKAN)*

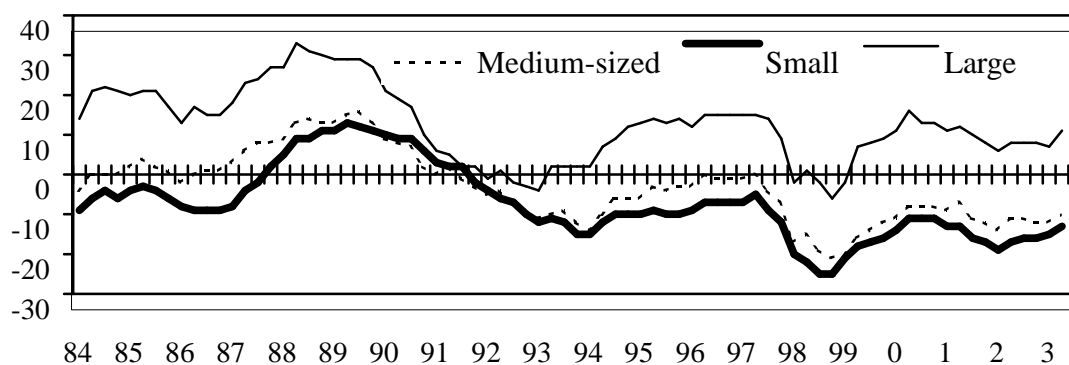
Notes: 1. The figures represent the diffusion index of business attitudes by large enterprises (large), medium-sized enterprises (medium-sized), and small enterprises (small).

2. The responding enterprises have three choices on business conditions: favorable, not so favorable, and unfavorable.

3. The diffusion index is computed by the difference between the share of enterprises answering favorable and that answering unfavorable. Thus the maximum and minimum of this index are 100 and -100. The lower the index is, the more unfavorable business conditions are.

Chart 3

Lending attitude of financial institutions



Sources: Bank of Japan, *Short-term Survey of Enterprises in Japan (TANKAN)*

Notes: 1. The figures represent the diffusion index of lending attitudes of financial institutions toward large enterprises (large), medium-sized enterprises (medium-sized), and small enterprises (small).

2. This index is answered not by financial institutions but by the enterprises mentioned above. The enterprises have three choices on lending attitude: accommodative, not so severe, and severe.

3. The diffusion index is computed by the difference between the share of enterprises answering accommodative and that answering severe.

Thus the maximum and minimum of this index are 100 and -100.

The lower the index is, the more severe lending attitudes are from the standpoint of enterprises.

Chart 4

Balance sheet of Japanese SMEs

Assets			Liabilities		
Cash and deposits	94	(14%)	Notes payable	40	(8%)
Notes receivable	29	(4%)	Account payable	65	(12%)
Accounts receivable	93	(14%)	Short-term debt	93	(18%)
Land	99	(15%)	Long-term debt	160	(30%)
Others	337	(52%)	Bonds	2	(0%)
			Others	172	(32%)
Total	652	(100%)	Total	532	(100%)
			Capital	120	

Sources: Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*

Notes: 1. This chart is computed by aggregating balance sheets of SMEs surveyed in

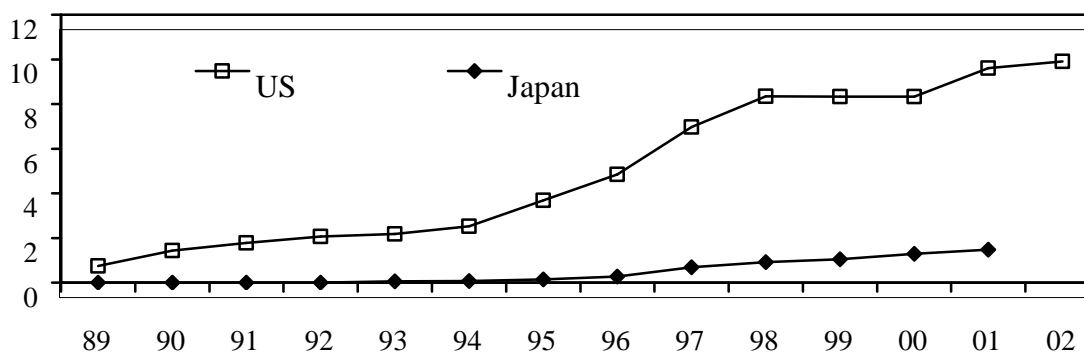
Financial Statements Statistics of Corporations by Industry.

2. As of the end of March, 2002.

3. Figures are in trillions of yen.

Chart 5

Ratio of securitized accounts receivable to total assets



Sources: Bank of Japan, *Flow of Funds*; Federal Reserve Board of Governors, *Flow of Funds*.

Notes: 1. Figures are taken at the end of each fiscal year and calendar year for Japan and the US, respectively.

Chart 6**The structure of corporate finance in Japan and the US**

	SMEs	Large enterprises	All enterprises	All US enterprises
Liabilities with interest	304 (100%)	194 (100%)	498 (100%)	4.9 (100%)
Loans and bills	302 (99%)	112 (58%)	414 (83%)	1.9 (39%)
Corporate bonds / CP	2 (1%)	72 (37%)	74 (15%)	2.8 (58%)
Accounts receivable	122 (40%)	94 (48%)	216 (43%)	2.7 (56%)
Ratio of the securitized	-	-	1.5%	9.6%
Asset backed securities	0.3 (0.1%)	7.0 (3.6%)	7.3 (1.5%)	0.4 (8.2%)

Sources: Bank of Japan, *Financial and Economic Statistics Monthly, Flow of Funds*; Ministry of Finance, *Financial Statements Statistics of Corporations by Industry*; Federal Reserve Board of Governors, *Flow of Funds*

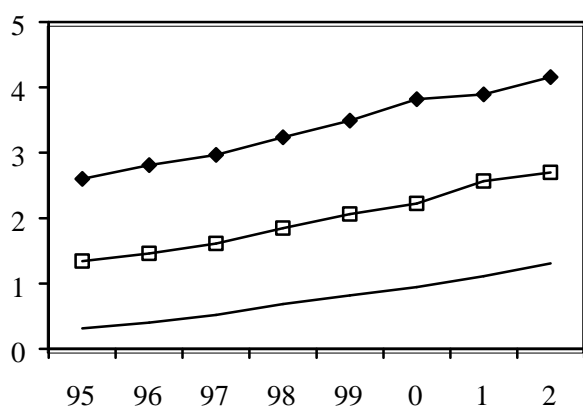
Notes 1. All figures on Japanese enterprises are in terms of trillion yen; while those on US enterprises are in terms of trillions of dollars.

2. "All enterprises" is the sum of "SMEs" and "Large enterprises".
3. The figures on Japanese loans and bills are taken at the end of March 2003.
4. The figures on Japanese corporate bonds and commercial papers are taken at the end of March 2003 and March 2002 for SMEs and large enterprises, respectively.
5. The figures on Japanese accounts receivable, defined as the sum of notes receivable and accounts receivable, are taken at the end of March 2002.
6. The figures, taken at the end of March 2003, on Japanese asset backed securities are the sum of ABCP and ABS. ABCP are backed by accounts receivable, bills receivable, and loans. SMEs' ABS are press released CLOs backed by loans to SMEs. Large enterprises' ABS are computed by the difference between the amount of domestic publicized ABS issued, provided by the JSDA, and SMEs' ABS.
7. The ABS of US enterprises consist of receivable assets and loans to enterprises. All US figures are taken at the end of September 2002.

Chart 7

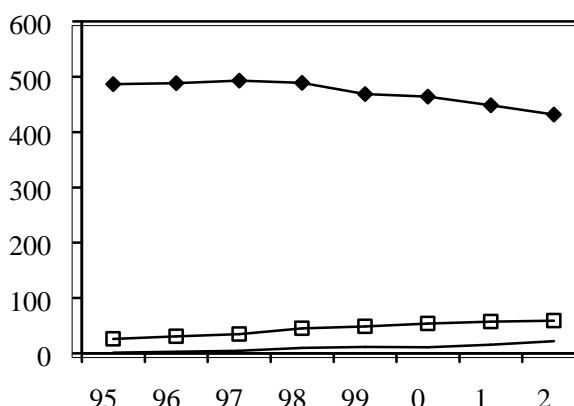
International comparison of credit markets

US



—□— Bonds — ABS —◆— Loans

Japan



—□— Bonds — ABS —◆— Loans

US Sources:

Bonds : The figures are taken from Federal Reserve Board of Governors, *Flow of Funds* .

ABS: The figures are taken from BMA.

Loans: The figures (commercial bank lending and loans) are taken from the FDIC.

Japanese Sources:

Bonds: The sum of public offerings and private offerings of corporate bonds are taken from the Japan Securities Dealers Association, *Securities Dealers Report* .

ABS: Structured-financing instruments are taken from the Bank of Japan, *Flow of Funds*

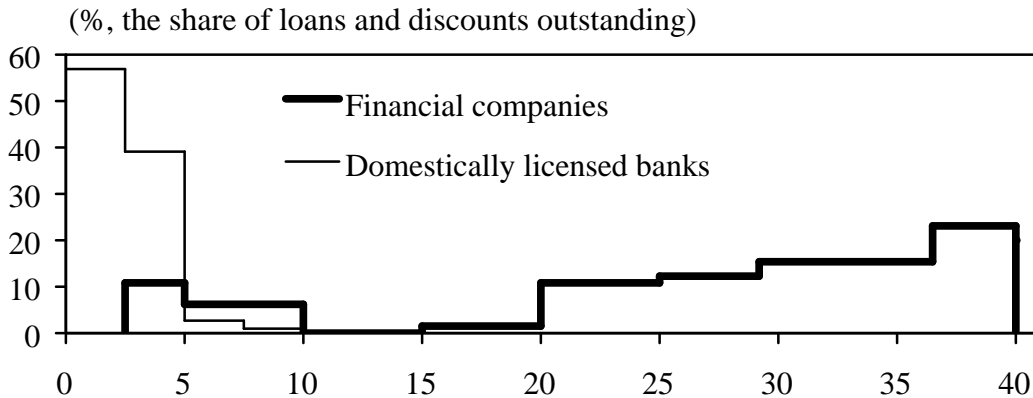
Loans: Loans and discounts outstanding of domestically licensed banks are taken from the Bank of Japan, *Financial and Economic Statistics Monthly* .

Notes:

1. US figures are in trillions of US dollars, while those of Japan are in trillions of yen.
2. All figures are taken at the end of 2002.

Chart 8

The distribution of lending rates



Sources: Bank of Japan, *Financial and Economic Statistics Monthly*; Federation of Moneylenders Associations of Japan, *White Papers on the Moneylending Industry*.

Notes: 1. All figures are taken at the end of March, 1998.

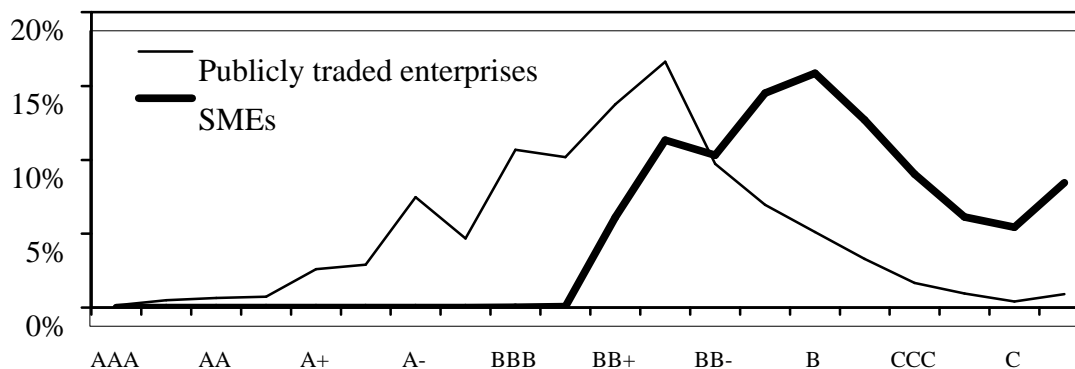
2. The amount outstanding originated by domestically licensed banks is 466.1 trillion yen at the end of March 1998. Note that this amount outstanding is for both individuals and corporations.

3. The amount outstanding originated by financial companies including moneylenders (Shoko lenders) is 51.8 trillion yen, computed by *Flow of Funds* statistics, at the end of March 1998. The amount outstanding corresponds to about 20.7% of the amount outstanding for SMEs originated by the domestically licensed banks. Note that this amount outstanding is both for corporations and governments.

4. Thanks to the revision of the moneylender's law, the upper limit of lending rates was lowered from 40.004% to 29.2% as of June 2000. The lending rates at the end of September 2000 were 27.7% on average.

Chart 9

The distribution of enterprises



Sources: Credit Risk Database (CRD), and Rating and Investment Information, inc. (R&I)

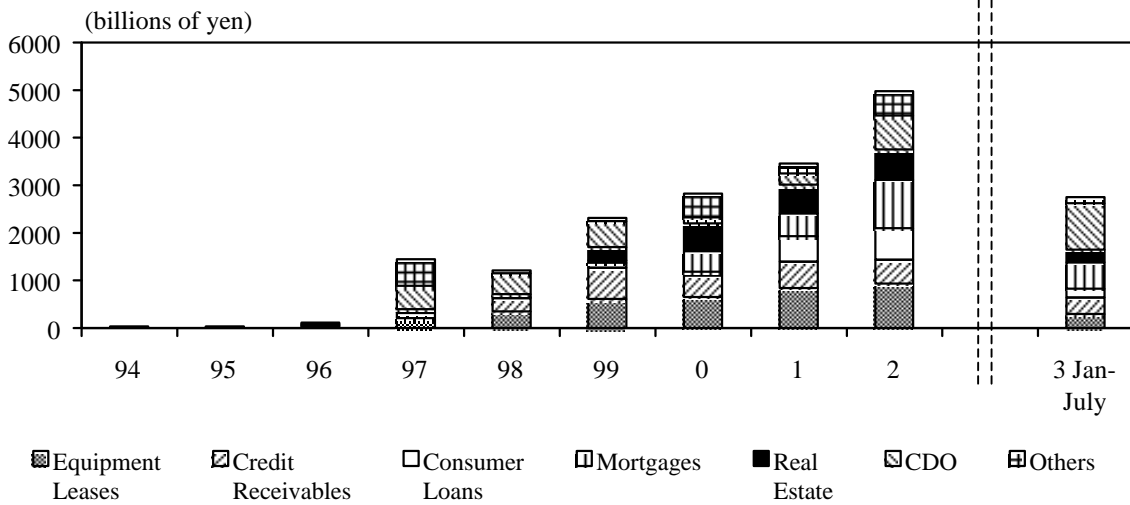
Notes: 1. These figures are based on 1999 financial statements.

2. The numbers of publicly traded enterprises and SMEs are 3435 and 104183, respectively.

3. Enterprises selected from the CRD fulfill all the required data for running the RADAR model.

Chart 10

ABS issuance in Japan



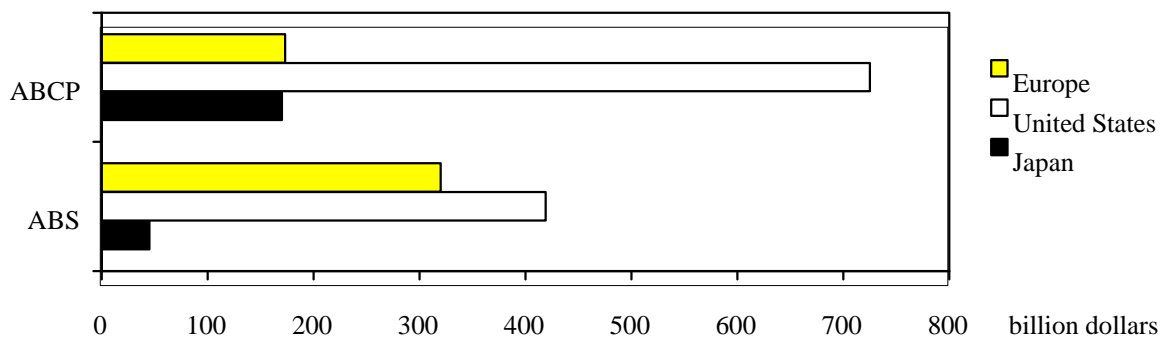
Sources: Deutsche Securities Limited Securitization Research with permission.

Notes: 1. The figures illustrate the amount of annual issuance.

2. Credit receivables include auto loan backed issues. Mortgages include GHLC bonds.

Chart 11

International comparison of ABS / ABCP markets



Note: 1. The amounts of ABS issued are reported in 2002, while those of ABCP outstanding are reported at the end of 2002. Note that ABCP figures for Japan are given as outstanding of the maximum amount issuable at the end of March 2003.

2. As for the exchange conversion, \$1 = 119.02 yen at the end of March 2003 is used.

The rate is taken from Bank of Japan, *Financial and Economic Statistics Monthly*.

3. The data on the US and Europe is taken from Moody's. The US ABCP figures are taken from Federal Reserve Board of Governors, *Flow of Funds*.

4. As for data on Japan's ABS, the data is taken from Deutsche Securities Limited Securitization Research with permission. ABCP figures are taken from the BOJ announcement, *Examination of Possible Purchase of Asset-Backed Securities* on April 8, 2003.

Chart 12

Example of SME loan securitization

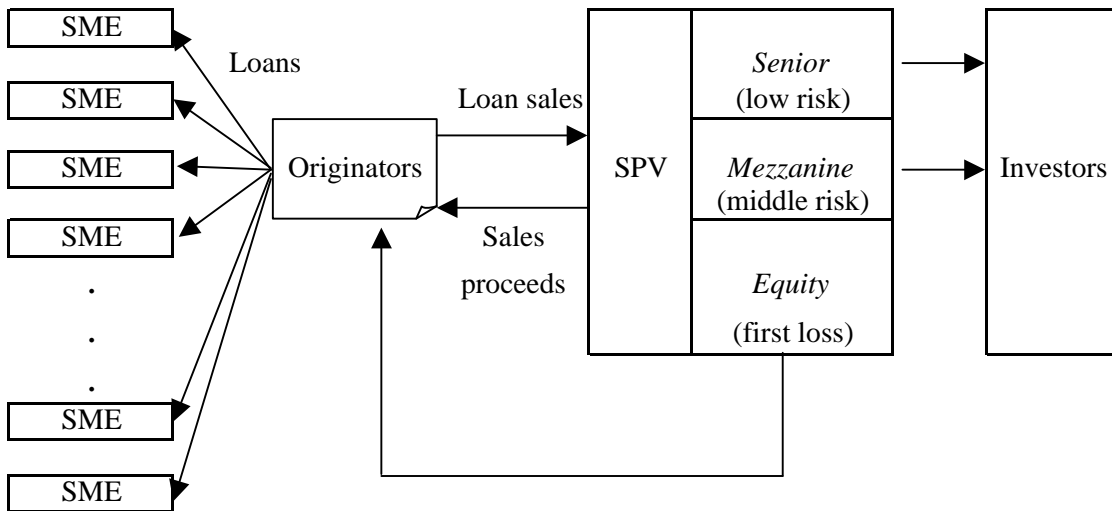


Chart 13

Example of SME accounts receivable securitization

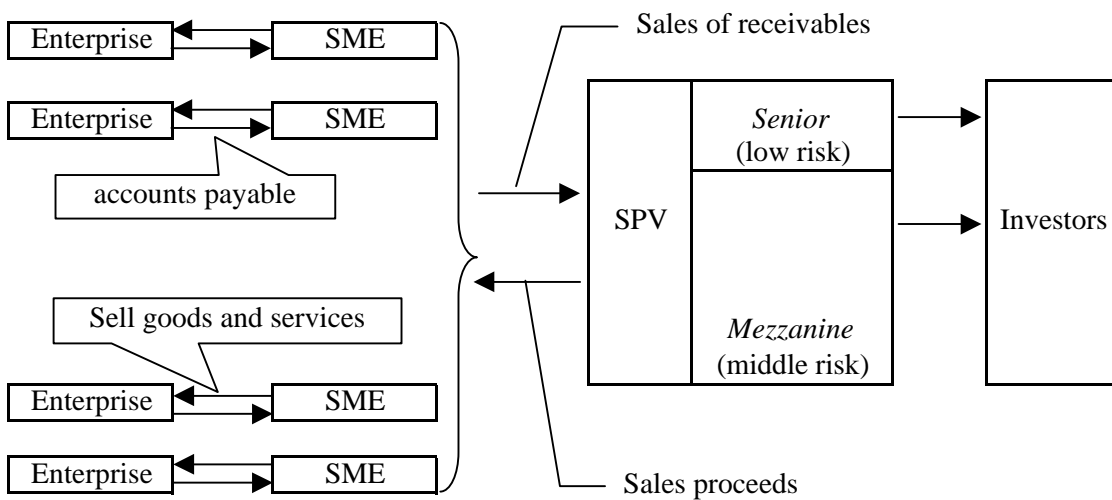


Chart 14

Hypothetical tranching

