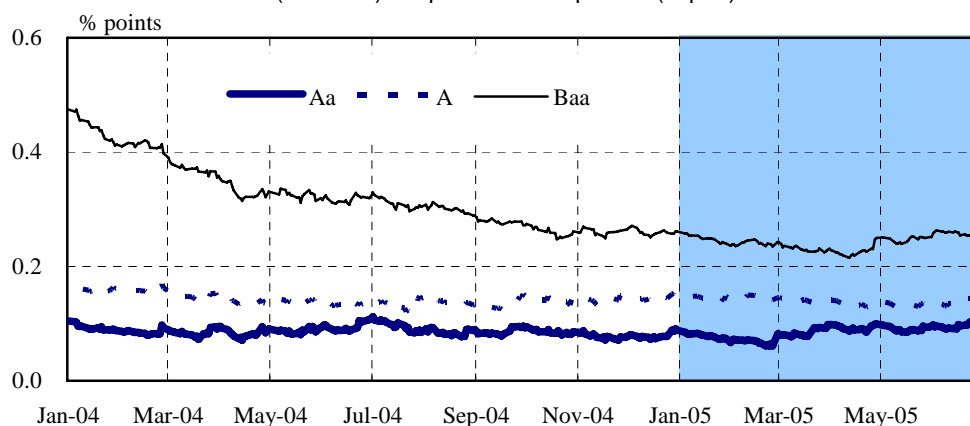


4. Credit markets

Credit spreads remained at extremely tight levels (Chart 28). The favorable environment for financing through products such as CPs, corporate bonds, syndicated loans and securitized products remain unchanged.

In the US and Europe, from March to May, corporate bond and credit default swap (CDS) spreads widened following the deteriorations of earnings and rating downgrades of GM and Ford (Chart 29, BOX 3). In Japan, while temporary knock-on widening effects were observed in the CDS as well as in the Samurai bond markets, overall spread levels, which are tight in comparison with US and European markets, was generally intact and overall influence of the events was muted (Chart 30).

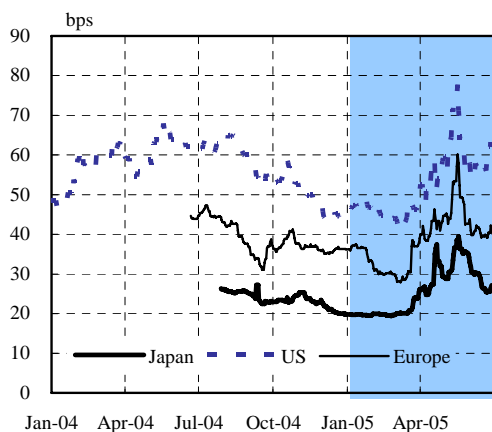
(Chart 28) Corporate bond spreads (Japan)



Notes: 1. Yields on bonds with 5-year maturity.
2. The indicated ratings are of Moody's.

Source: Japan Securities Dealers Association

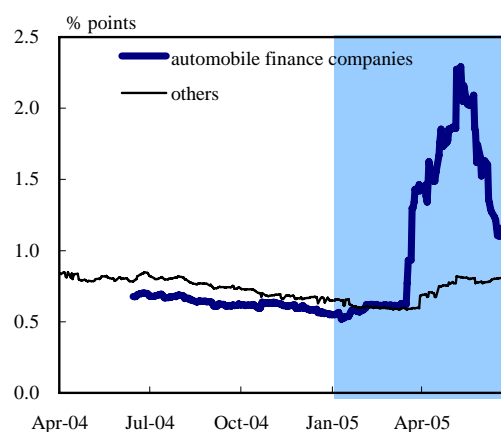
(Chart 29) CDS Indices (Japan, US, Europe)



Notes: Japan: iTraxx CJ, US:DJ CDX NA.IG,
Europe: iTraxx Europe

Source: Markit Group

(Chart 30) Samurai bond spreads



Notes: 1. Spreads (over JGB) of Samurai bonds with June 2007 maturity.
2. "Automobile finance companies" consists of 3 names, "others" include 5 names.

Source: Bloomberg

[BOX 3] Impact of the downgrades of GM and Ford

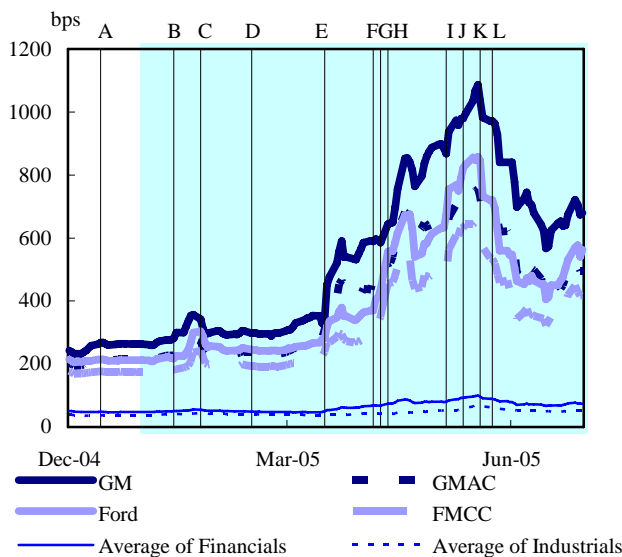
From March to May, US and European credit spreads had widened broadly on the heels of earning deteriorations and downgrades for GM and Ford (BOX Chart 5). Firstly, GM in March and Ford in April significantly lowered their guidance of earnings for 2005 respectively, which led the market to fear their downgrades to speculative grade and the resulting removal from major bond indices. As a result, pressure on investors to liquidate corporate bond positions of both issuers mounted. Furthermore, speculative grade bond spreads also widened on the concern that the size of the high yield bond market was not large enough to absorb the huge outstanding amount of bonds issued by the two firms and their affiliates. In addition, the implied losses incurred by hedge funds and early termination of then outstanding transactions, such as (1) the correlation trades between CDS Index tranches* and (2) the combination of the individual stock sale and the corporate bond purchase, were said to have precipitated a broader based widening of spreads.

Toward June, however, the spreads of both companies started to narrow after both firms released restructuring plans.

During the same period, spreads for medium to highly rated tranches of securitized products did not move as much as spreads for corporate bonds, CDS, and low rated tranches. This phenomenon can be interpreted that the loss probability of higher rated tranches was limited, despite the inclusion of deteriorated obligors in the underlying portfolio. This reflects the diversification effect of the underlying asset pool and the credit enhancement through senior-subordinated tranching structure. It has been commented that, after observing that these structures proved resilient under the stressed market environment, the confidence of investors in securitized products have been reinforced.

* combination of the purchase (in terms of risk) of high-risk tranche and the sale of low-risk tranche

(BOX Chart 5) CDS spreads on GM/Ford and related events



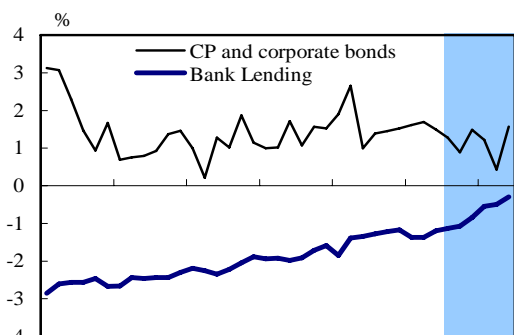
Source: Bloomberg

- (A) Dec 14, 04: GM and Fiat failed to reach agreement on the issue regarding the put option on Fiat Auto stocks.
- (B) Jan 13, 05: GM released its full-year 2005 earnings guidance.
- (C) Jan 24, 05: Lehman Brothers announced a change to the inclusion rules for its Global Family of Indices.
- (D) Feb 14, 05: Moody's changed its rating outlook on GM(Baa2) to negative. S&P unchanged.
- (E) Mar 16, 05: GM lowered its first-quarter and full-year 2005 earnings guidance. Fitch downgraded GM to BBB- from BBB. S&P changed its rating outlook on GM to negative. Moody's placed the ratings of GM/GMAC on review for downgrades.
- (F) Apr 5, 05: Moody's downgraded GM to Baa3 from Baa2 and GMAC to Baa2 from Baa1. Moody's placed the ratings of Ford/FMCC on review for downgrades.
- (G) Apr 8, 05: Ford significantly reduced its full-year 2005 earnings guidance. S&P changed its rating outlook on Ford/FMCC to negative.
- (H) Apr 11, 05: Fitch changed its rating outlook on Ford/FMCC to negative.
- (I) May 5, 05: S&P downgraded GM/GMAC to BB from BBB- and Ford/FMCC to BB+ from BBB-.
- (J) May 12, 05: Moody's downgraded Ford to Baa3 from Baa1 and FMCC to Baa2 from A3.
- (K) May 19, 05: Fitch downgraded Ford/FMCC to BBB from BBB+.
- (L) May 24, 05: Fitch downgraded GM/GMAC to BB+ from BBB-.

The outstanding of issued CPs and corporate bonds has remained slightly above the previous year, in contrast to bank lending which had continued to decline against the backdrop of subdued corporate demands for funds (Chart 31). During the first quarter, large BBB-rated issues and bank subordinated issues continued, and, Samurai bond issuance also increased (Chart 32). At the same time, in the CP market, the switch over to dematerialized CP (i.e. issuance in paperless form) progressed smoothly (BOX 4).

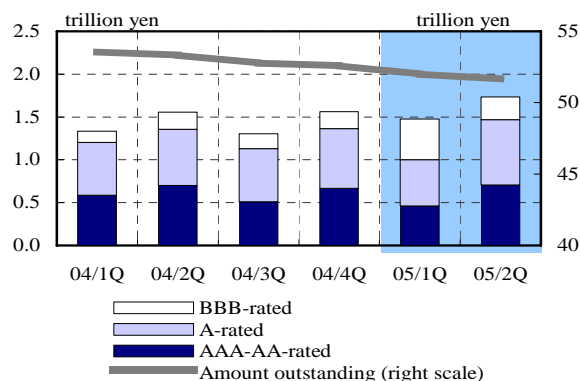
Among alternative financing tools such as securitization, products fulfilling the needs of investors and debtors have increased at a steady pace, while overall growth slowed, given the slow demand for funds. The syndicated loan market has grown steadily with the expansion of the borrower base including corporate restructuring related deals (Chart 33). The securitization market also has grown with the upsurge of residential mortgage backed securities (RMBS) issues as banks aimed, for example, to curtail interest rate risks (Chart 34). The long duration of RMBS meet the requirements of investors who are trying to match the maturities of their assets with their long-term liabilities. In addition, RMBS are favored by investors because of their relatively rich spreads when compared with straight corporate bonds and other products.

(Chart 31) Trends in bank lending, corporate bonds and CP



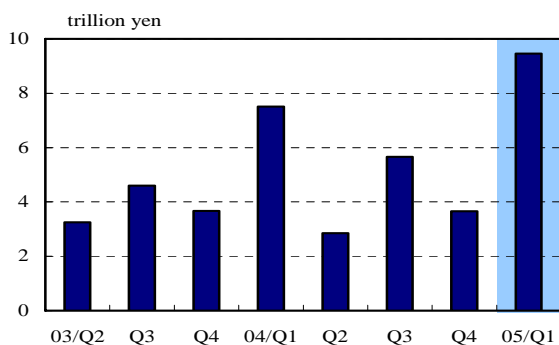
Apr-02 Oct-02 Apr-03 Oct-03 Apr-04 Oct-04 Apr-05
 Notes: 1. The bank lending amount is adjusted to exclude factors such as the liquidation of loans.
 2. The figures as of June 2005 are preliminary.
 Sources: Bank of Japan, Japan Securities Dealers Association, I-N Information Systems

(Chart 32) Domestic straight corporate bonds (Issuance and outstanding)



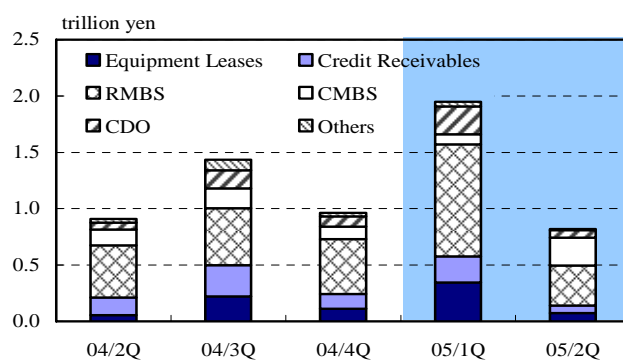
Notes: 1. Companies with multiple ratings are categorized by the best rating.
 2. The amounts outstanding for 05/2Q are the figures for end-May.
 Sources: Japan Securities Dealers Association, I-N Information Systems

(Chart 33) Syndicated loans



Source: Bank of Japan

(Chart 34) Securitized products



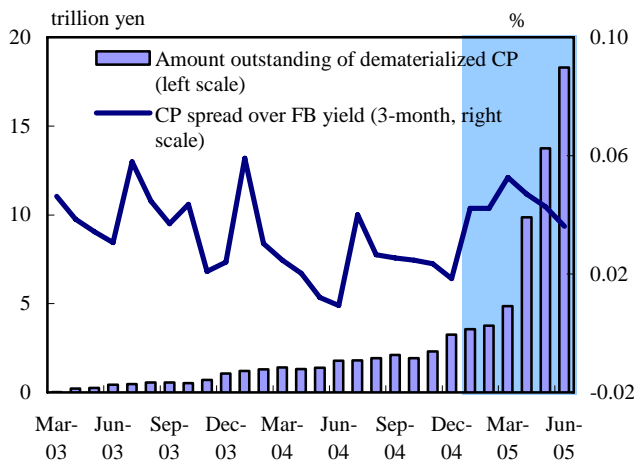
Source: Bank of Japan

[BOX 4] Acceleration in the issuance of dematerialized CP

In the CP market, the shift to dematerialized CP (short term corporate bonds) accelerated since April 2005 with the removal of favorable tax treatment for “tegata” CP (i.e. issuance in physical form as promissory notes) (BOX Chart 6). In June, with a few exceptions, almost all CP issues were dematerialized. Regarding this shift, there were some concerns in the market about an increase in issuance cost on the back of delays in preparations on the investor side. In particular, necessary investments to enable settlements via the book-entry system was said to be a major source of increased costs. Notwithstanding such concerns, issuance spreads remained low supported by strong investor demand, and transaction volume in the secondary market gradually increased.

While the issuance of dematerialized CP had started at the end of March 2003, with tegata CP still in place, the market growth had been limited. Thereafter, by April 2004, the remaining issues of tax and legal treatments for Samurai dematerialized CP (domestic dematerialized CP issued by foreign issuers) were resolved, and at the end of March 2005, the preferential stamp tax treatment for tegata CP was abolished (BOX Chart 7). With these changes, the transfer to dematerialized CP has finally taken off.

(BOX Chart 6) CP issuance



Sources: Bank of Japan, Japan Securities Depository Center (JASDEC)

(BOX Chart 7) Introduction of dematerialized CP

Apr 02	“The Law Concerning Book-Entry Transfer of Short-term Corporate Bonds, etc.” enters into force.
Jan 03	“The Law Concerning Book-Entry Transfer of Corporate Bonds, etc.” (revision of “The Law Concerning Book-Entry Transfer of Short-term Corporate Bonds, etc.”) enters into force.
Mar 03	JASDEC inaugurated its Short-term Corporate Bonds Book-Entry Transfer System (commencement of the issuance of dematerialized CP)
June 03	Government regulations concerning Samurai dematerialized CPs (short-term foreign bonds) enters into force.
Apr 04	Preferential tax exemption over withholding tax on redemption profit concerning Samurai dematerialized CPs enters into force.
Mar 05	Termination of preferential stamp tax treatment of tegata CP

(Recent changes in corporate behavior)

In the Japanese credit markets, credit spreads have continuously tightened since FY 2002 and the first half of 2005 was an extension of this trend (Chart 35, left).

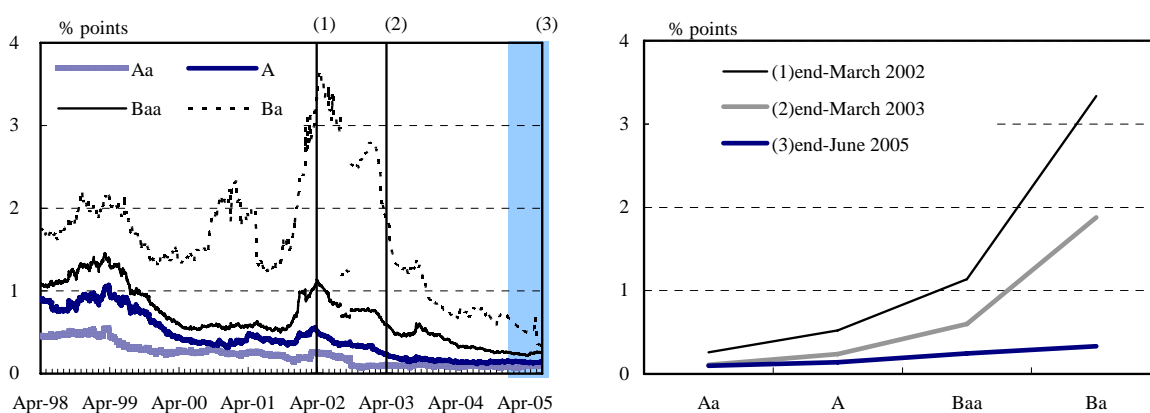
Three main factors seem to have driven recent credit spread tightening. Firstly, with corporate profits at levels above the bubble era, capital positions of the corporate sector have been further strengthened and their credit conditions have improved. Consequently, credit rating upgrades continue, and the number of corporate bankruptcies is declining. Secondly, corporations are maintaining high levels of cash-flow and are persistently reducing their interest-bearing liabilities. As a result, demand for funds in the credit markets remains weak. Thirdly, investors are actively taking on credit risks as interest rates across the curve stayed at low levels under the quantitative easing policy.

The tightening of credit spreads can also be expressed in terms of changes in spreads by rating grades (i.e. the change of the shape of credit curve). In FY 2002, spreads across the curve tightened, while from FY 2003 on, the tightening was concentrated more on the outer end of the credit curve with low-rated names (Chart 35, right). From around 2004, new investors including pension funds reportedly began investing in lower rated bonds, which corresponds with the spread movements.

During this period, banks' lending attitude has become more positive, as their risk-taking capacity has improved with the restoration in their capital adequacy ratios, and interest rates on bank loans have declined. This likely also had a large effect on the development of stable fundamental trends in the credit markets.

More recently, there are signs of a slight change in the tendency to place top priority on debt repayments (Box 5). Some corporations are increasing capital expenditures while others are rewarding equity holders with larger dividends or share buybacks. While it would be premature, at this point in time, to confirm that these actions imply the reversal of the fundamental trend, it deserves careful monitoring as corporate behavior is a significant factor affecting the credit markets.

(Chart 35) Long-term trends in credit spreads



Notes: 1. Yields on bonds with 5-year maturity. Since September 24, 2002, yields on corporate bonds have been calculated from an expanded pool of issues with maturity of 4 to 6 years.

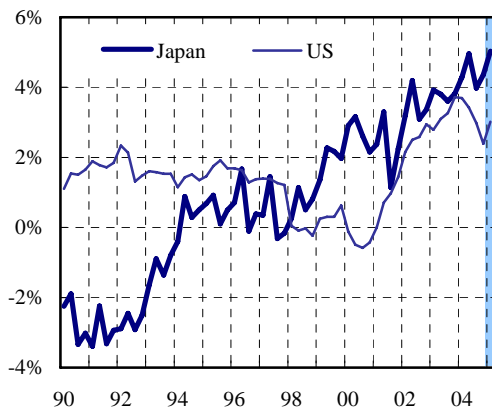
2. The indicated ratings are of Moody's.

Sources: Japan Securities Dealers Association

[BOX 5] Recent developments related to the reduction of corporate interest-bearing liabilities

Japanese corporations, with high level of profits, have been continuously reducing interest-bearing liabilities using their high level of free cash-flow (BOX Chart 8). However, more recently, more firms have started to expand capital expenditures and increase dividend payments to share holders (BOX Chart 9).

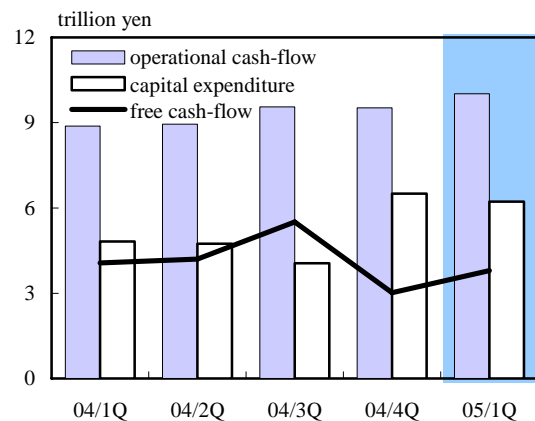
(BOX Chart 8) Free cash-flow (proportion to GDP)



- Notes: 1. Free cash-flow = (0.5 x current earnings + depreciation expense – capital expenditure excluding software investments)
2. The latest figures are for 2005/1Q

Sources: Ministry of Finance “Financial Statements Statistics of Corporations by Industry”, Cabinet Office, US Department of Commerce

(BOX Chart 9) Free cash-flow and capital expenditure



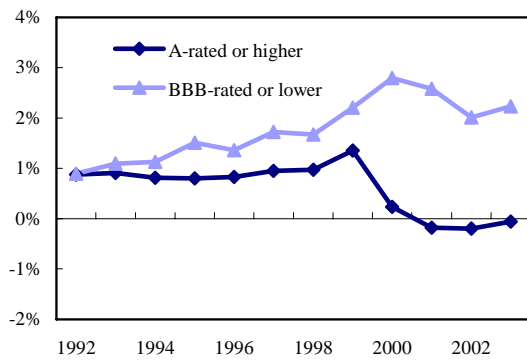
- Notes: 1. Corporations with capital equal to or exceeding JPY 1 billion
2. Operational cash-flow = 0.5 x current earnings + depreciation expense
Capital expenditure = tangible asset increase + intangible asset increase + net increase of construction suspense account - tangible asset sales
3. “free cash-flow” is defined here as the difference between operational cash-flow and capital expenditure. “Capital expenditure” includes “capital expenditure excluding software investments” (in BOX Chart 8), intangible assets increase and others.

Sources: Ministry of Finance “Financial Statements Statistics of Corporations by Industry”

Nishioka and Baba(2004) constructed a model as a benchmark for evaluating the debt equity ratios of corporations. The model calculates the optimal debt ratio in maximizing corporate value, taking into consideration the merits (e.g. tax exemption for interest payments) and demerits (e.g. rise of default probabilities with rising debt ratio) of holding debt. The analysis is based on financial data from FY 1992 to FY 2003 on non-financial corporations listed on the first section of the Tokyo Stock Exchange (TSE). Comparison of the actual debt ratio with the optimal debt ratio derived from the model reveals that (1) the divergence between the two ratios has gradually been reduced since around 2000, and (2) for highly rated corporations, actual ratios may have already come very close to optimal levels (BOX Chart 10). This analysis has limitations as it simplifies explaining factors such as cost of equity and debt, profit margin ratio, volatility of corporate value, and size of corporations, and the analyzed universe is confined to corporations listed on the first section of TSE, (i.e. large corporations with relatively high creditworthiness). Thus the results obtained must be interpreted with some reservations. Nonetheless, the results are consistent with the recent slowdown of the pace at which firms compress their debt.

In FY 2004, the total sum of dividend payments made by non-financial corporations listed on the TSE had reached 3.2 trillion yen (BOX Chart 11), which exceeded the levels recorded in the previous year. And the dividend yield climbed up to 1.2%, close to the yield of JGB (10-year, 1.3%). As a corporate governance culture favoring share holders begins to take root in Japan, corporate dividend policy has become a key factor in investment decisions for investors, and investment funds targeting high-dividend corporations have become popular among investors. This has precipitated corporations to accelerate their dividend payments.

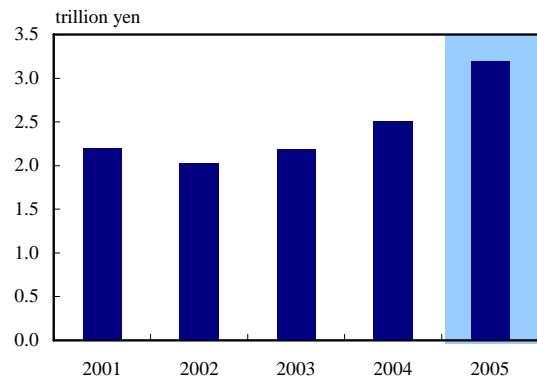
(BOX Chart 10) "Excess leverage"



Note: "Excess leverage" = actual leverage ratio – optimal leverage ratio, as defined in Nishioka and Baba [2004]

Sources: Financial Statements, Bank of Japan

(BOX Chart 11) Total amount of dividends



Notes: 1. All corporations listed on the Tokyo Stock Exchange at the end of corresponding accounting period (Corporations with fiscal year ending in March, excluding the financial services sector)

2. Latest data are as of March 2005

Source: Tokyo Stock Exchange

[References]

Nishioka, S., and N. Baba [2004], "Dynamic capital structure of Japanese firms: How far has the reduction of excess leverage progressed in Japan?", Bank of Japan Working Paper Series, No.04-E-16

Ueno, Y., and N. Baba [2005], "An empirical analysis of payout policy by Japanese firms: dividends and buybacks", Bank of Japan Working Paper Series (Japanese), No.05-J-6