

## [Executive Summary]

Korean financial stability has maintained a generally favorable picture overall, although it is in part unsatisfactory from the standpoint of macroprudential soundness conditions such as household and corporate financial soundness.

Looking at macroprudential soundness conditions first, in the external sector the economies of advanced countries including the United States have improved, but growth in emerging market economies has slowed and, affected by the tapering off of quantitative easing by the U.S. Federal Reserve, unstable movements in some vulnerable countries have appeared. Domestically the rate of economic growth has risen, but the impacts of this are not yet extending to improvements in the financial soundness of households or enterprises. In the household sector, the ratio of debt to disposable income

has risen slightly. In the corporate sector, financial soundness has not been improving due to delays in profitability improvement.

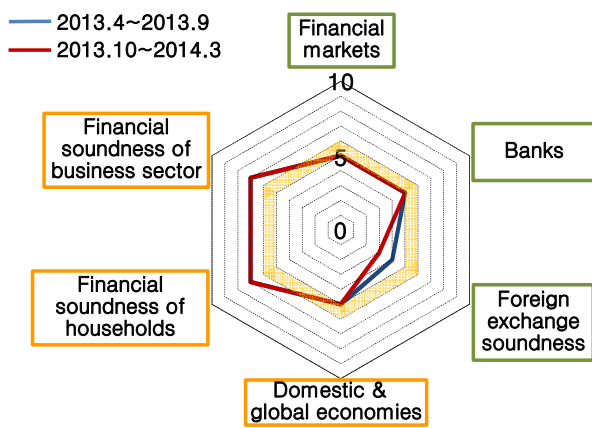
Looking next at the financial system, the profitability and asset quality of banks have worsened somewhat, but capital adequacy is satisfactory. The financial markets have been showing trends of stability overall, even despite the QE tapering by the U.S. Fed and resulting financial unease in emerging market countries, with price variable volatility maintaining low levels. Foreign exchange soundness has meanwhile shown a further improvement, owing to the continuation of the current account surplus, to a heightening of the external payment capacity, and so on.

These macroprudential soundness and financial system stability conditions are shown in the Financial Stability Map.<sup>1)</sup>

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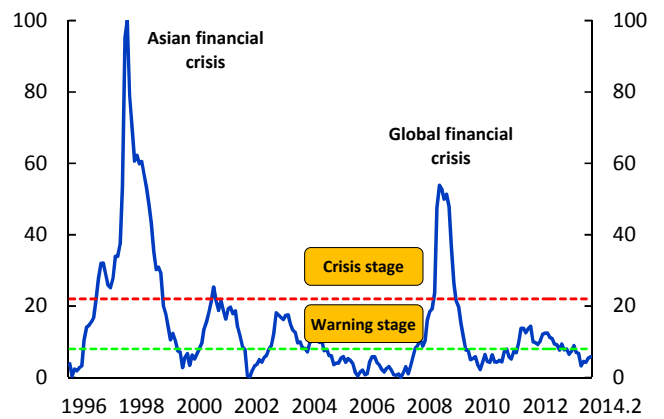
1) The Financial Stability Map presents a comprehensive picture of stability in six dimensions – three concerning the financial system (the financial markets, banks and foreign exchange soundness) and three on macroprudential

Financial Stability Map<sup>1)2)</sup>



Notes: 1) The closer to the center, the greater the degree of stability  
 2)   Financial system dimensions  
  Macprudential soundness condition dimensions

Financial Stability Index (FSI)<sup>1)</sup>



Note: 1) The Financial Stability Index is measured based on values from 0 (min) to 100 (max). The closer it is to 100, the higher the level of instability. <The level during the Asian financial crisis (Jan. 1998) equals 100>  
 Source: The Bank of Korea

The Financial Stability Index<sup>2)</sup>, which indicates the situation related to financial stability, is showing that situation to be favorable, having sustained a downward trend since August 2012 and been below the Warning stage threshold (8) since August 2013.

Examining financial stability conditions through the detailed composition of the sectoral degrees of contribution to the FSI<sup>3)</sup>, the current (October 2013 ~ February 2014 period) overall situation appears to have improved greatly compared to that six months ago (the April ~ September 2013 period), as the degrees of contribution to financial instability have fallen in all sectors

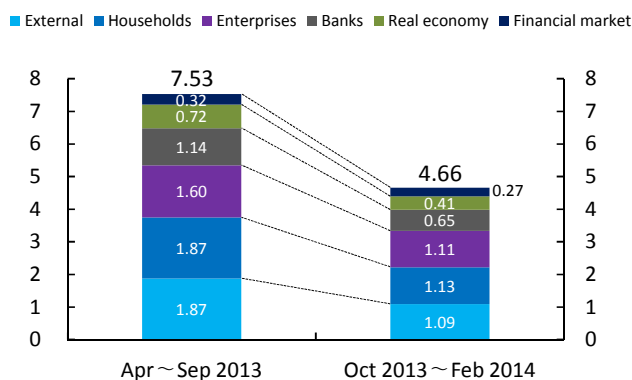
soundness conditions (the domestic and global economies, the financial soundness of the household sector and the financial soundness of the business sector). If the decile reading of a particular dimension is 5~6, this may be seen as a degree of stability in that dimension corresponding to its average levels in the past (since 1995).

2) The Financial Stability Index (FSI) is an index created by converting a variety of different financial stability indicators into a single index, and can be used as one of the indicators for judging overall macroprudential conditions. Here the optimum critical threshold Warning and Crisis stages are calculated on the basis of the “noise-to-signal ratio” approach, at 8 and 22 respectively. For further details, please refer to the April 2012 Financial Stability Report, <Box IV -1> “Outline of Financial Stability Index (FSI)”

3) The FSI is composed of six sectors (banks, the financial market, the real economy, the external sector, households and corporations), and assessed on the basis of six-month period averages.

including the external sector (1.87 out of the total 7.53 FSI level six months ago → 1.09 out of the total 4.66 level at present). The degrees of contribution to financial instability of the financial market and the real economy have fallen since 2012, while the degrees of contribution of the corporate and the household sectors account for roughly half of the total FSI.

**Changes in Financial Stability Index sectoral degrees of contribution to financial instability (period averages)**



Source: The Bank of Korea

The main risk factors<sup>4)</sup> that the Korean economy is now facing are seen to be the QE tapering by the Fed and the financial unease

stemming from it in emerging market countries. These risk factors can negatively impact financial stability by reducing foreign exchange soundness through changes in CDS spreads and capital flows for example, and by causing the volatility of financial market prices (interest rates, stock prices, exchange rates, etc.) to expand. Along with this, on the real economy side, the possibility of a China's economy slowdown is also recognized as a medium-term risk.

Domestically, the fact that credit risk is being maintained at continued high levels, centering around sub-prime large enterprises, remains a medium-term risk factor. Despite the recent trend of economic recovery corporate profitability has not been improving yet, and the gap in performances between non-prime and prime enterprises has widened as well. Amid increasing household

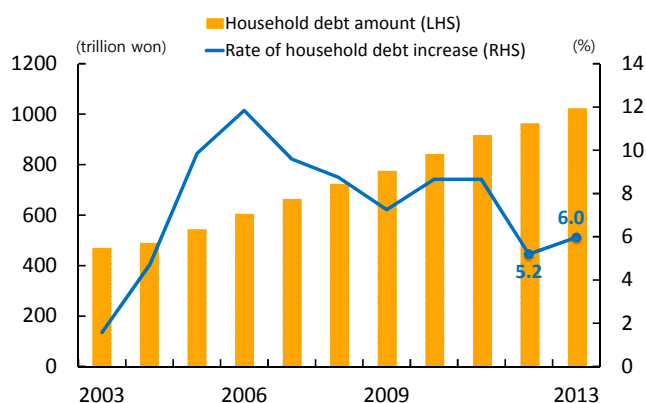
4) The possibility of an expansion in volatility of the yen's value, and geopolitical risk related to North Korea, are also being brought up as risk factors. For the assessments of risk factors by financial experts, refer to <Box 1-1> 「Results of H1 2014 Systemic Risk Survey」.

debt, the pace of growth in household incomes has been limited and expenditures of an inflexible nature have risen, and from the medium- to long-term perspective the fact that household financial soundness is not clearly improving should also be borne in mind. The deteriorations in corporate and household financial soundness could constrain corporate investment and private consumption activities, and work in the medium- to long-term as factors weakening the growth potential. Meanwhile, with the interlinkages among financial institutions increasing, led for example by securities companies and credit-specialized financial institutions, the fact that these institutions' management soundness has declined is also seen as a financial stability-related risk factor.

## [Household and Corporate Financial Soundness]

**1** Household financial soundness has maintained its favorable conditions from the aspect of asset and liability holdings, but amid growing burdens due to household expenditures of an inflexible nature, such as housing expenses, the pace of increase in incomes has been limited. Household debt grew by 6.0% in 2013 relative to the end of 2012, as its pace of increase expanded somewhat compared to that in 2012 (5.2%). In reflection of this, the ratio of household debt to disposable income rose (end-2012 133.1% → end-2013 134.7%).

### Household debt amount<sup>1)</sup>, and rate of increase<sup>2)</sup>

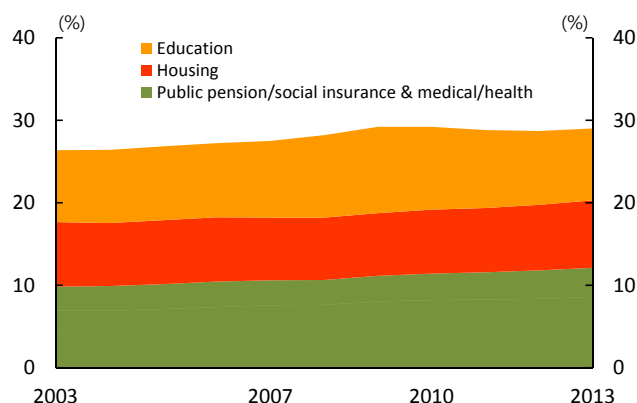


Notes: 1) Household credit statistics basis  
 2) Compared to the previous year—ends  
 Source: The Bank of Korea

The proportion in household expenditures of those of inflexible natures, such as housing and educational expenses, public pension and social insurance and medical and health payments, is growing. Housing expenses are rising under the influences for example of increases in management fee and in public utility charges for example for electricity and gas. Public pension and social insurance and medical and health expenditures are also increasing, in line with the progress of population aging. In the case of educational expenses, public education fees are showing a

decline, owing mainly to the limits put on university tuition hikes, but private education fees are as ever rising.

### Proportions of household expenditures of inflexible nature<sup>1)</sup>



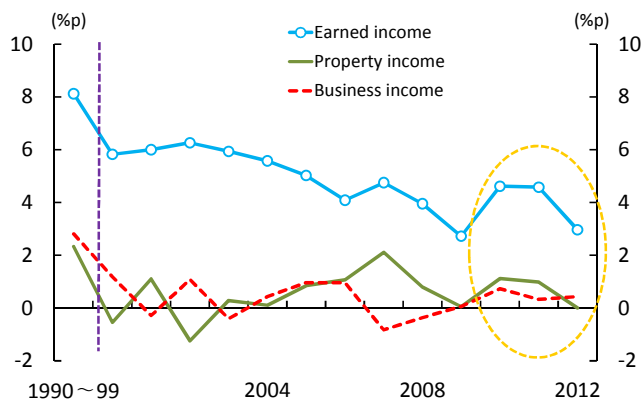
Note: 1) Proportions in total household expenditures; nominal basis  
 Source: Statistics Korea

Amid an increasing proportion of household expenditures of an inflexible nature, the pace of increase in household incomes is not improving. A look at the degrees of increase in household income sources shows that those of earned income, property income and business income have all declined. This is judged to have been due mainly to the slowdown in the rate of real wage growth, to the relatively

low interest balance, and to the worsening of the business environment for self-employed business operators.

the slowing pace of growth in household incomes, the rate of increase in household expenditures is declining by a greater extent than that of incomes.

Degrees of increase<sup>1)</sup> in household income<sup>2)</sup>, by source

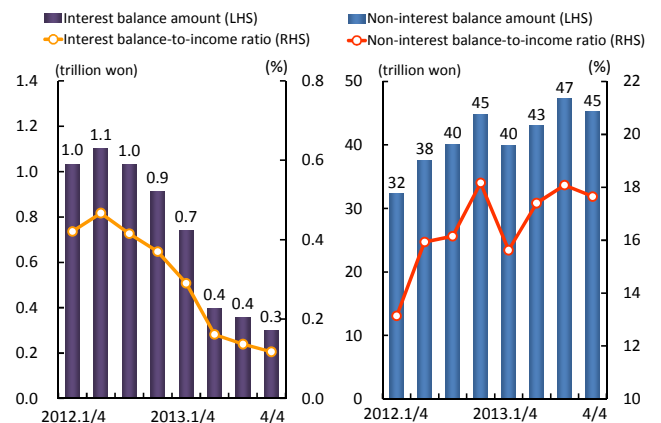


Notes: 1) Yearly average degrees of increase in household income, by sources  
 2) Sum of household and non-profit organization earned incomes (compensation of employees), business incomes (operating surpluses) and property incomes

Source: The Bank of Korea

Looking at households' income / expenditure flows from the perspective of the household balance, we see in the case of the interest balance that the size of its surplus has not been large and has been clearly shrinking since 2013. The surplus in the non-interest balance is meanwhile rising slightly, but it is hard to see this as a desirable trend since it is due to the fact that, amid

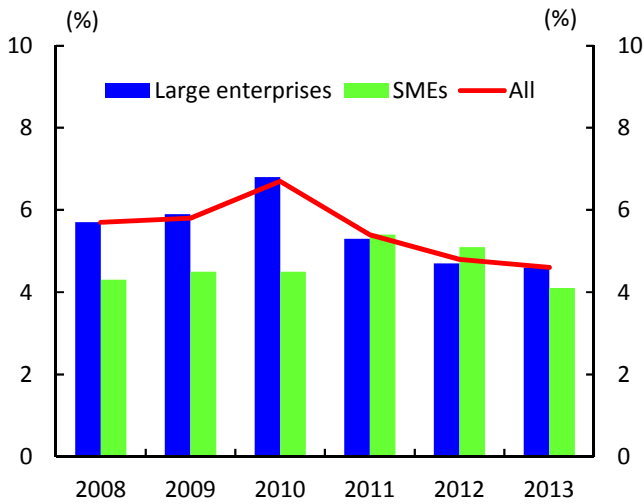
Household interest and non-interest balances



Source: The Bank of Korea

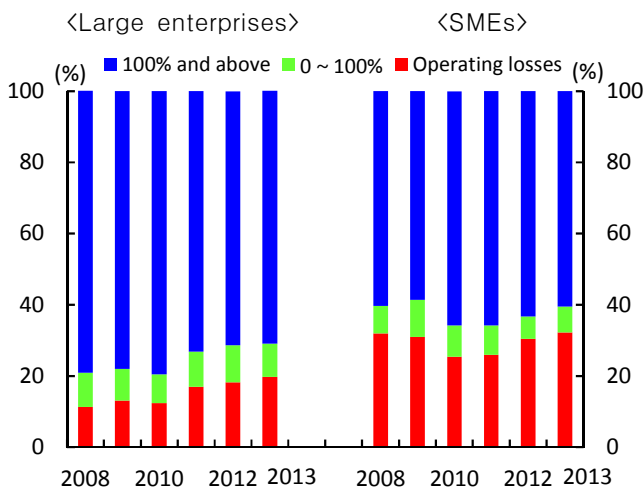
**2 Corporate sector financial soundness is not improving, with short-term payment capacities falling and debt burdens rising, amid slightly declining profitability.**

### Operating income-to-sales ratios<sup>1)</sup>, by company size



Note: 1) Operating income / Sales  
Source: The Bank of Korea

### Interest coverage ratio<sup>1)</sup> distributions

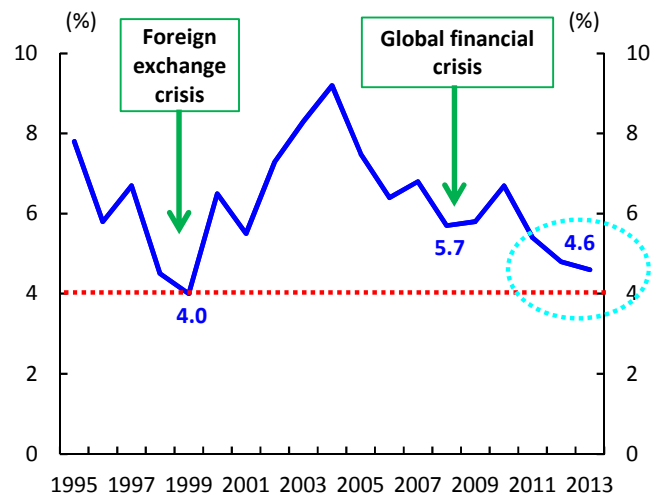


Note: 1) Operating income / Interest expenses  
Source: The Bank of Korea

Corporate profitability is recording its lowest levels since the foreign exchange crisis. The proportion of enterprises having low operating

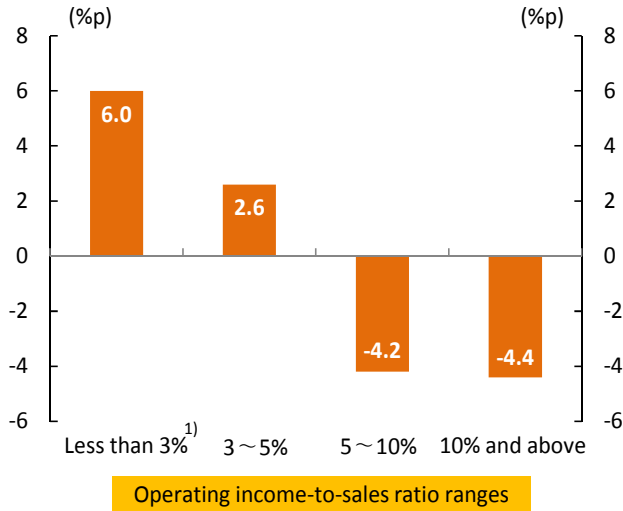
income-to-sales ratios has moreover risen, and that of those with high ratios fallen. The main cause of this lies in the continuation of the slump in the business environment, but it also appears to be due in part to the fact that the oversupply in some business sectors cannot be resolved owing to the existence of marginal enterprises. If companies' low profit ratios persist, this can lead corporate investment to shrink further, and cause companies' profit generating capacities to weaken additionally going forward.

### Long-term operating income-to-sales ratio<sup>1)</sup> trends



Note: 1) Operating income / Sales  
Source: The Bank of Korea

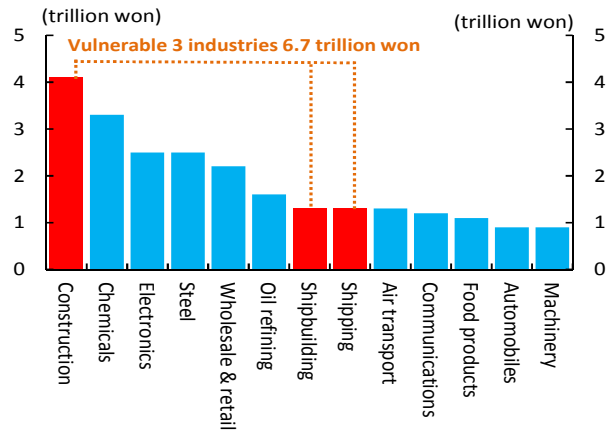
Changes in proportions of enterprises in different operating income-to-sales ratio ranges, during past three years<sup>1)</sup>



Note: 1) Including companies in deficit  
Source: The Bank of Korea

While the corporate bond market and other major financial markets related to corporate funding shrink, the amount of corporate funding is declining and the gap in funding expenses between prime and non-prime enterprises is expanding. Liquidity risk seems to be growing in line with this, centering around some non-prime enterprises with large volumes of corporate bonds reaching maturity in 2014.

Amounts of corporate bonds<sup>1)</sup> maturing in 2014, by industry



Note: 1) Based on non-guaranteed, general publicly issued corporate bonds (excluding financial institution and public institution bonds, and securitized bonds)

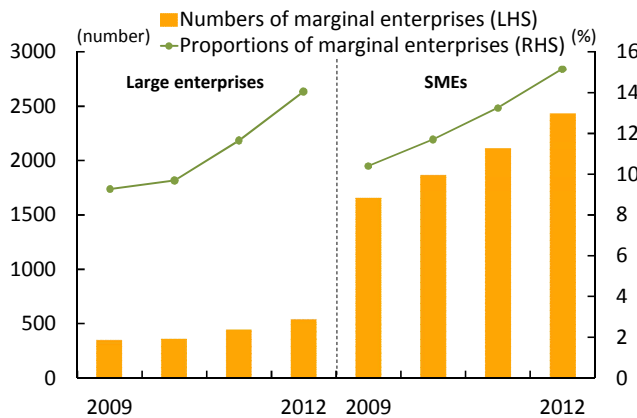
Source: Korea Securities Depository

The number of marginal enterprises<sup>5)</sup> has meanwhile been growing steadily since the global financial crisis. And among these enterprises, notably, “chronic marginal enterprises,” those with past experiences as marginal enterprises that are facing this situation again, also make up the majority (76.1%). If marginal enterprises continue to accumulate there are worries that the power for economic growth will decline, owing to a contraction in corporate facilities investment, to a drop in resource allocation efficiency, and so on.

5) Refers to enterprises that have had interest coverage ratios below 100% for three consecutive years.

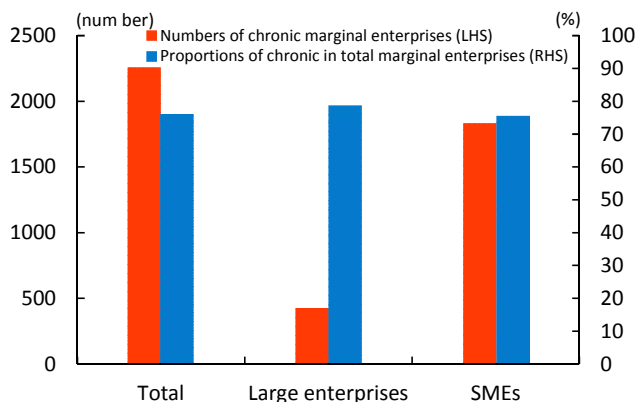


### Numbers and proportions<sup>1)</sup> of marginal enterprises<sup>2)</sup>



Notes: 1) Number of marginal enterprises / Number of enterprises subject to external audits  
 2) Enterprises whose interest coverage ratios have been below 100% for three consecutive years  
 Source: KIS-Value

### Status of chronic marginal enterprises



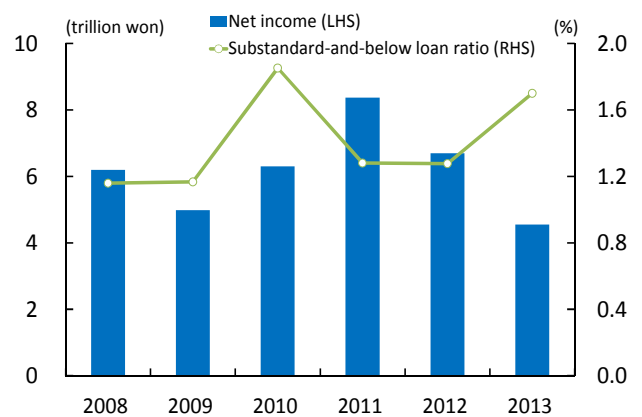
Note: 1) 2012 basis  
 Source: KIS-Value

### [Financial System Stability]

**3** In the banking sector, capital adequacy is sufficient and loss absorption capacity satisfactory, but with profitability and asset quality

declining, affected by the contraction in the loan-to-deposit interest rate spread, by corporate restructuring, and so on, there is a potential for bank soundness to weaken.

### Commercial bank net income and substandard-and-below loan ratio

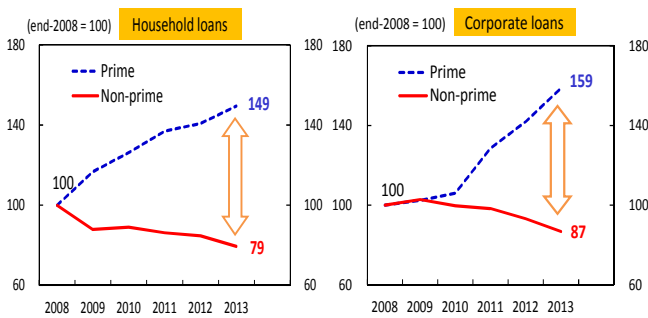


Sources: Commercial banks' business reports

As banks' lending attitudes have tightened, owing for example to the increase in corporate credit risk since the global financial crisis and to the rise in concerns about household financial soundness, banks' fund provision to medium- and low-credit household and small and medium-sized enterprise (SME) borrowers is becoming increasingly strict. In particular, the application of fund supply terms and conditions

related to interest rates, collateral, maturities, etc., in a discriminatory manner unfavorable to SMEs, is intensifying.

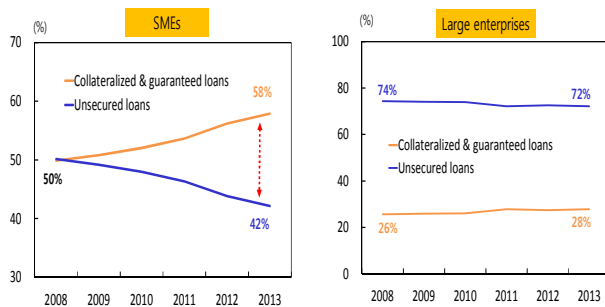
**Rates of increase<sup>1)</sup> in household and corporate loans, by borrower credit rating<sup>2)</sup>**



Notes: 1) Nine banks; year-end basis  
 2) Prime means grades 1~4, non-prime grades 5~10  
 Source: The Bank of Korea

funding cost burdens will grow severely heavy, and that corporate borrowers' liquidity conditions will deteriorate. From the banks' position as well, if they maintain their prime borrower-focused lending attitudes, while limiting their loan volumes and only passively attracting deposits by keeping their deposit rates low, there is a possibility of their profitabilities worsening in the medium to long term.

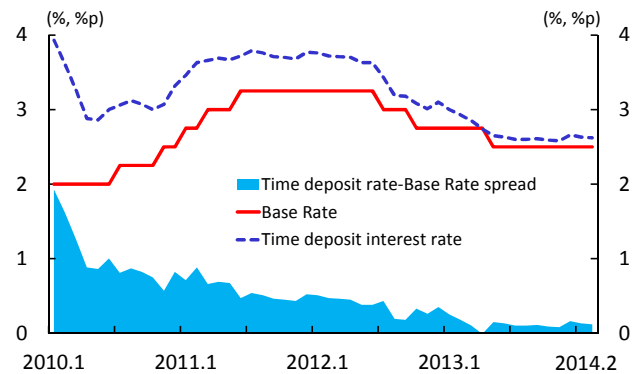
**Bank proportions<sup>1)</sup> of collateralized / guaranteed and unsecured loans, by borrower type**



Note: 1) Year-end basis  
 Sources: Domestic banks' business reports

If this differentiation in banks' fund supply deepens, there are concerns that household borrowers'

**Spread between bank time deposit interest rate<sup>1)</sup> and Bank of Korea Base Rate**

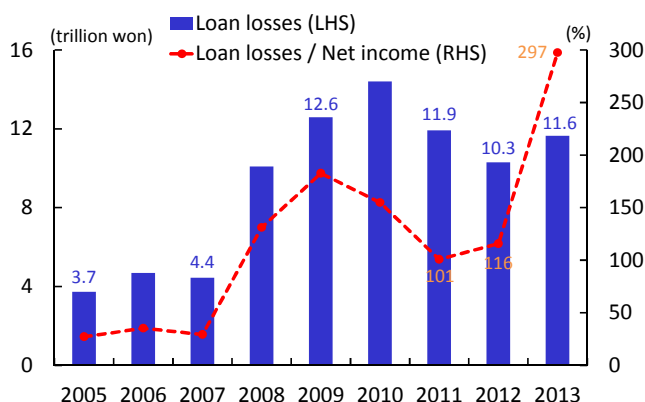


Note: 1) Based on new deposits  
 Source: The Bank of Korea

With the recent acceleration of corporate restructuring the amount of new bad loans is increasing, and there are worries that bank

soundness from the standpoints of profitability and loss absorption capacity can decline in the short term. Banks' loan losses have in fact increased greatly, and impairment losses on stocks held by banks related to debt-for-equity swaps are also rising to a great extent.

Bank loan losses<sup>1)</sup>

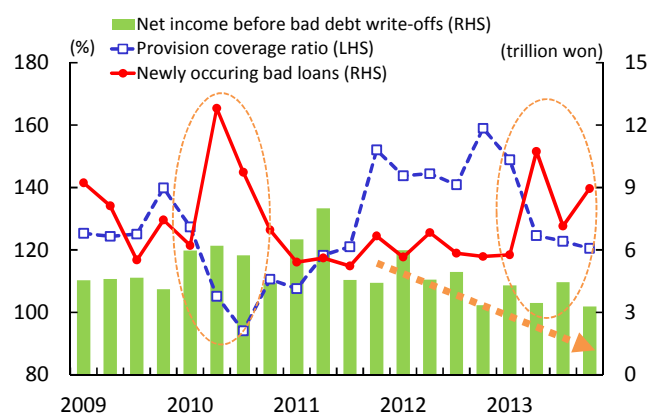


Note: 1) Provisions + Losses on disposals of loans  
Sources: Domestic banks' business reports

Considering the increase in marginal enterprises, the possibility of declines in corporate borrowers' asset soundness, etc. the need for corporate restructuring to also continue for the time being appears large. In as much as domestic banks' capital adequacy is satisfactory, short-term financial

burdens from the increases in bad loans do not seem likely to severely lessen their management soundness, but continuous attention will have to be given to the possibility of declines in bank management soundness related to the carrying out of corporate restructuring.

Bank net income before write-offs of bad debt<sup>1)</sup>, newly occurring bad loans, and provision coverage ratio

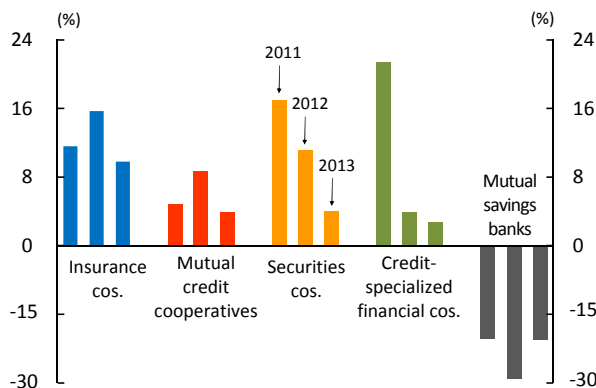


Note: 1) Net income + Loan loss reserves + Bad debt expenses  
Sources: Domestic banks' business reports, Financial Supervisory Service

**4 Non-bank financial institutions are maintaining satisfactory levels of capital adequacy, but with their paces of asset increase slowing and their profitabilities worsening, their management soundness has declined somewhat.** The rates of increase in

total assets at mutual credit cooperatives, insurance companies, securities companies, etc. have slowed, owing to declines in deposit interest rates and in rates of return on financial products, to reductions in tax benefits, and so on.

### Non-bank financial institution rates of total asset increase<sup>1)</sup>, by financial sector

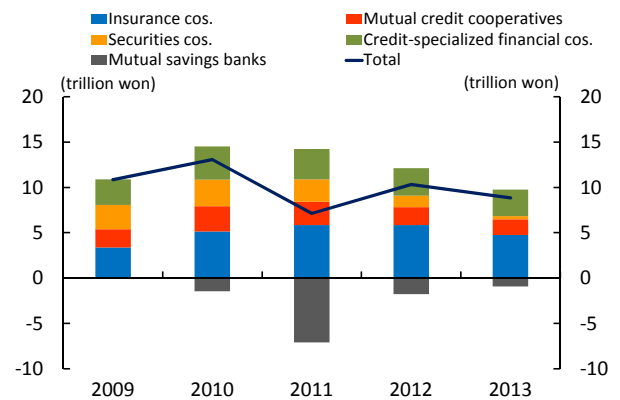


Note: 1) Excluding increases due to new market entries (NongHyup Life Insurance, NongHyup Property & Casualty Insurance and Woori Card)

Sources: Financial institutions' business reports

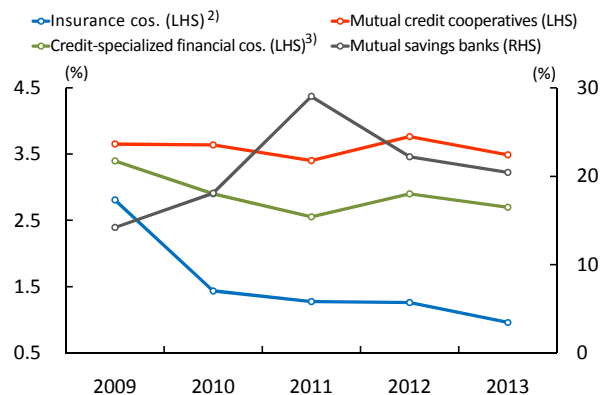
Profitability has worsened, centering mainly around insurance companies, securities companies and mutual credit cooperatives, but asset soundness has shown improvements generally, with delinquency rates in most non-bank financial sectors falling.

### Non-bank financial institution net incomes



Sources: Financial institutions' business reports

### Non-bank financial institution delinquency rates, by financial sector<sup>1)</sup>



Notes: 1) Based on delinquencies of one month or longer (for mutual credit cooperatives and mutual savings banks based on principal delinquent for one day or longer)

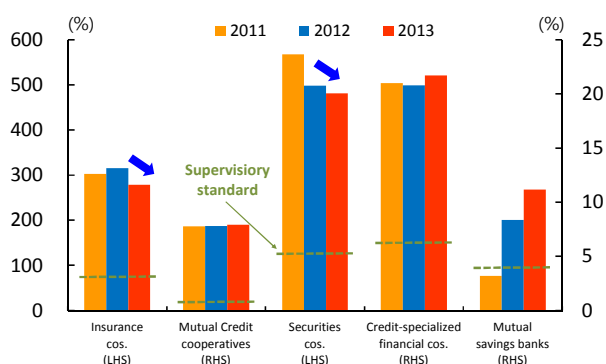
2) Excluding policy loans

3) Including card lease (excluding credit card receivables) and installment assets

Sources: Financial institutions' business reports

Capital adequacy has declined in some non-bank financial sectors, including securities companies and insurance companies, but has on the whole sustained its satisfactory situation by exceeding the supervisory standards.

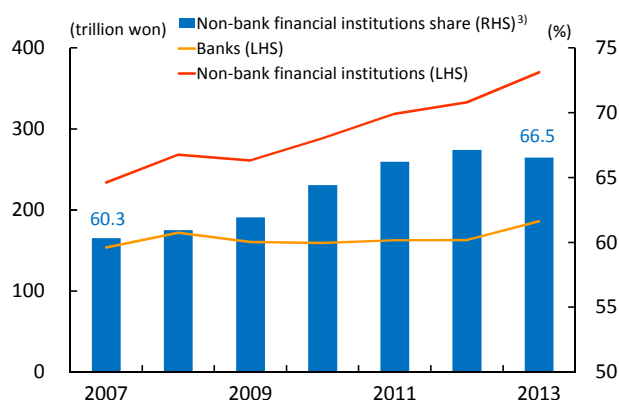
### Non-bank financial institution capital adequacy ratios<sup>1)</sup>



Note: 1) Risk-based capital ratio for insurance companies, net capital ratio for mutual credit cooperatives, net operating capital ratio for securities companies, adjusted-capital ratio for credit-specialized financial institutions, and BIS capital ratio for mutual savings banks

Sources: Financial institutions' business reports

### Amounts of interconnectedness<sup>1)</sup> among financial institutions<sup>2)</sup>



Notes: 1) Aggregate amounts (funding + operation) of interconnectedness among the financial institutions concerned

2) Based on banks and non-bank financial institutions (insurance companies, mutual credit cooperatives, securities companies, credit-specialized financial institutions, and asset management companies) (the same hereafter)

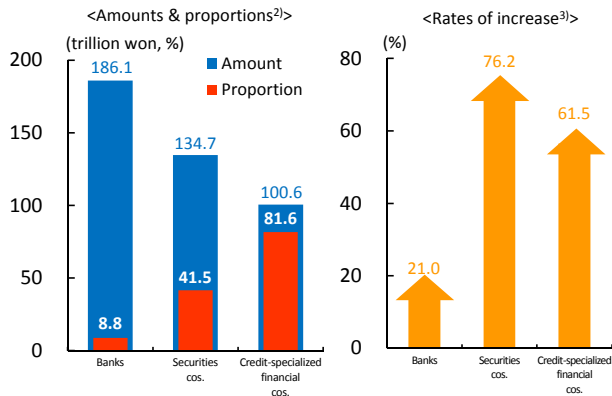
3) Amount in total financial institution interconnectedness accounted for by non-bank financial institutions

Sources: Aggregate estimates using flow of funds statistics, Korea Securities Depository data, etc

The interconnectedness among financial institutions has grown, centering around non-bank financial institutions. The interlinkages among financial institutions increased from an amount of 387.8 trillion won at the end of 2007 to 556.2 trillion won as of end-2013, up by 43.4%. And while the amount of interlinkages of banks rose by just 21.0% during that period, that of non-bank financial institutions increased by 58.2% to lead the expansion.

By financial institution sector, the amount of the interlinkages of banks is the largest, but the proportion in banks' total funding that this accounted for at year-end 2013 was a low level of 8.8%. Among non-bank financial institutions, in contrast, as of end-2013 the amounts of interlinkages of securities companies and credit-specialized financial institutions accounted for high levels of 41.5% and 81.6% respectively of their total funding.

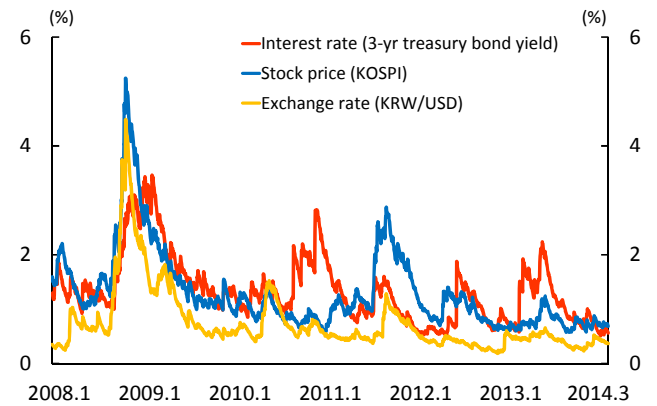
Amounts, proportions<sup>1)</sup> and rates of increase of interconnectedness in major financial sectors



Notes: 1) Interlinkage amount/Total funding amount  
 2) End-2013 basis  
 3) Rates of increase between end-2007 and end-2013  
 Sources: Aggregate estimates using flow of funds statistics, Korea Securities Depository data, etc

**5** The domestic financial markets have maintained stability on the whole, even despite the QE tapering by the U.S. Federal Reserve and resulting unease in emerging market countries, with price variable volatility maintaining low levels for example.

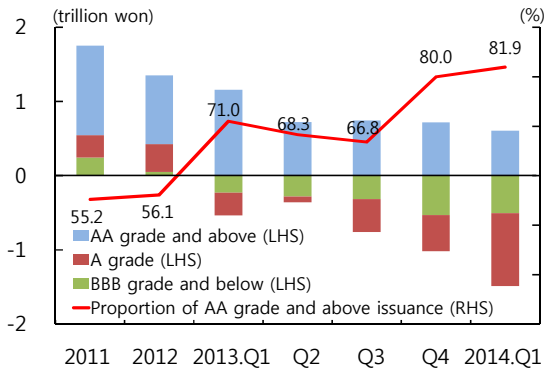
Interest rate, stock price and FX volatilities<sup>1)</sup>



Note: 1) Daily volatility calculated using exponential weighted moving average (EWMA) method  
 Source: The Bank of Korea

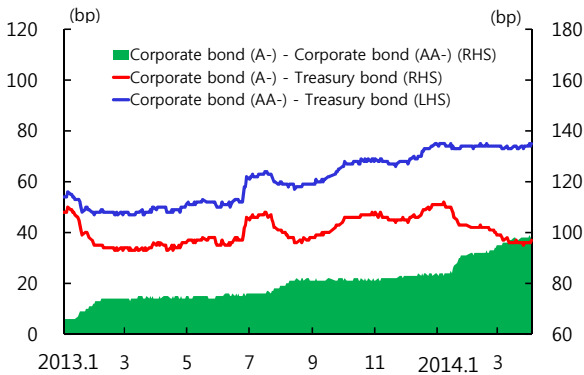
Non-prime enterprises have been experiencing difficulties raising funds in the corporate bond market, however, in line for instance with the default of the Tongyang Group. Owing to a lack of investment demand for corporate bonds issued by non-prime enterprises, these firms have continued their net redemptions in the corporate bond market. Moreover, the credit spreads between prime (AA grade and above) and non-prime (A and below) products have expanded greatly.

**Status of corporate bond<sup>1)</sup> net issuance<sup>2)</sup>, and proportion of prime bond issuance**



Notes: 1) Excluding issuance by financial holding companies  
 2) Monthly average basis  
 Sources: Korean Securities Depository, The Bank of Korea

**Corporate bond credit spreads<sup>1)</sup>, and spread across grades**

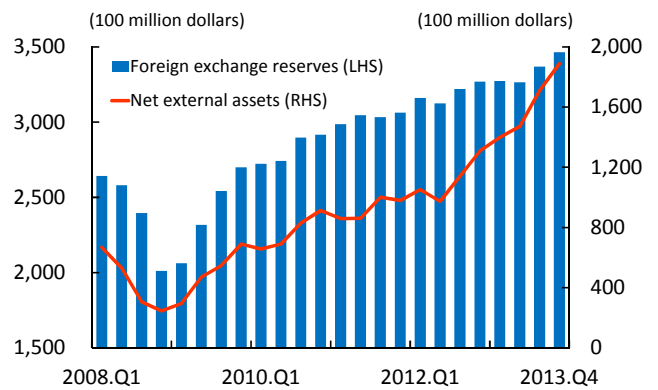


Note: 1) 3-year maturity basis  
 Source: Korea Financial Investment Association

**6** Foreign exchange soundness has sustained its trend of improvement, influenced for example by the continuation of the current account surplus, by a rise in the external payment capacity, and so on. The external payment capacity has been

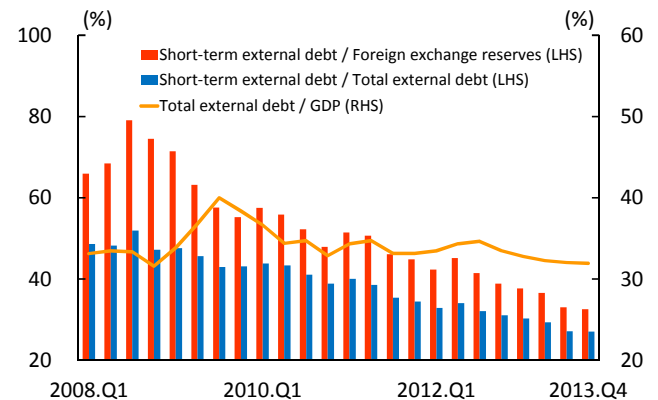
heightened; the pace of growth in net external assets has continued, and the ratios of short-term external debt to foreign exchange reserves and to total assets have fallen.

**Foreign exchange reserves and net external assets**



Source : The Bank of Korea

**External debt repayment and liquidity indicators**

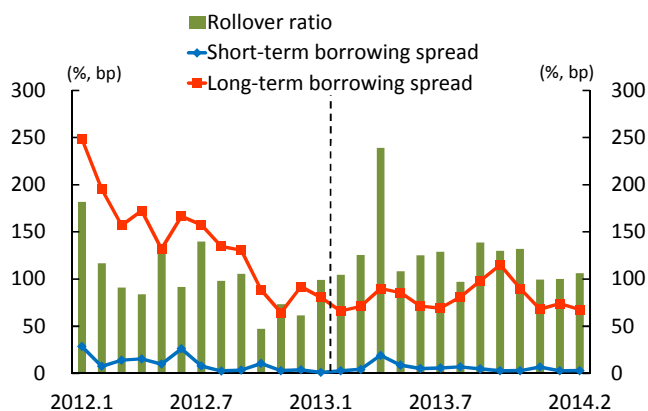


Source : The Bank of Korea

Domestic banks' foreign currency funding conditions have also sustained their favorable situations, with long- and short-term foreign currency borrowing spreads having maintained low levels since the second half of 2013.

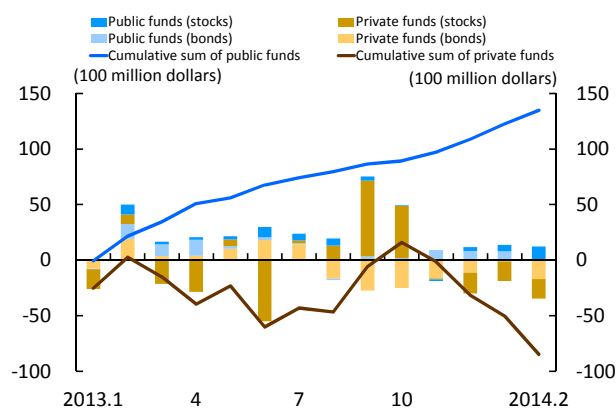
the Chinese economy slow greatly. However, international public funds for example of foreign central banks are steadily increasing their investment in the Korean markets, and this seems likely to ease capital flow volatility in part.

Domestic bank foreign currency borrowing rollover ratio<sup>1)</sup>, and spreads on long- and short-term borrowings<sup>2)</sup>



Notes: 1) Total amount of newly extended loans during period / Total amount of loans maturing during period  
 2) Borrowing spreads on LIBOR basis (based on nine domestic banks); weighted average borrowing amounts  
 Source: The Bank of Korea

Foreign investor securities investment fund flows



Source : The Bank of Korea

However, the possibility of a future expansion in capital flow volatility remains, centering around private funds, should the QE tapering by the U.S. Fed reach full-scale and the financial unrest in emerging market countries due to it spread, or should

### [Future Policy Challenges]

**7** The trends of economic growth domestically and abroad have been improving since the second half of 2013, but there are potential domestic risk factors such as the constraints on household income



growth, the increases in credit risks at non-prime enterprises, and so on. Moreover, the external uncertainties related to QE tapering by the U.S. Federal Reserve, to the financial instabilities in emerging market countries, and to the possibility of a Chinese economic slowdown are also continuing. Giving comprehensive consideration to these conditions, in order to boost financial system stability emphasis needs to be devoted to policy efforts such as the following:

**8** The Bank of Korea plans to place emphasis on conducting monetary policy so as to keep consumer price inflation within the inflation target range (2.5~3.5%) over a medium-term horizon while supporting the continued recovery of economic growth. In addition, to secure operational harmony between monetary policy and macroprudential policy, it will strengthen its identification and analysis related to domestic and overseas systemic risks

that can damage macroprudential soundness.

**9** To improve households' financial soundness, the foundations for household income will have to be strengthened. While boosting wage incomes on the one hand, through the creation of high-quality jobs, there is also a need to expand property-related incomes, centering around the improvement of interest balances, by reducing the degree of dependence on non-bank financial institutions with the accompanying high levels of financial transaction costs. Efforts from the expenditure side will also have to be made in parallel, to improve household balance trends through the devising of measures that can alleviate the household expenditure burdens centering around educational fees.

**10** Smooth corporate restructuring will have to be encouraged. If it is delayed the momentum of growth at the macroeconomic level can be

limited, owing for instance to the buildup of marginal enterprises. Creditor financial institutions will have to appraise companies' future potentials strictly, and on this basis push actively ahead with corporate restructuring. While corporate restructuring will have to be encouraged on the one hand, through M&As, etc. in the capital markets, a bad loan market will have to be developed as well, to ensure that bad loans can be disposed of smoothly.

**11** There is a need to promote normalization of the corporate bond and CP market functions. While on the one hand boosting the credibility of corporate credit ratings through improvement of the credit rating system, the transparency and efficiency of the primary and secondary markets will have to be improved to ensure that corporate bond and CP interest rates can well reflect companies' credit risks. There is a need as well to expand

the demand base related to non-prime corporate bonds, through the revitalization of high-yield funds, corporate bond funds, etc., while at the same time supporting the conversion issuance of corporate bonds of companies temporarily going through difficulties.

**12** Financial institutions' financial intermediary functions must be strengthened. Financial institutions will have to strengthen their capacities for borrower credit assessment, and cultivate their abilities to supply funds on the standard not of borrower capacities for collateral provision but on their technical competitiveness and future potentials. On this foundation, related also to borrowers lacking in collateral or having low credit ratings, financial institutions will have to pursue asset soundness and profitability in a balanced way, by ensuring that they can supply funds while applying interest rates corresponding to borrowers' credit risks.

**13** Monitoring related to shadow banking will have to be strengthened, and the boosting of non-bank financial institution management soundness promoted.

The interlinkages among non-bank financial institutions, and between non-bank financial institutions and banks, have been deepening, through shadow banking including RPs, moneys in trust and derivatives-linked securities. In this regard, while on the one hand strengthening monitoring so that potential risks do not accumulate, the related systems will have to be supplemented to ensure that systematic supervision can be achieved. The possibility will also have to be checked of declines in management soundness of non-bank financial institutions including credit card companies, whose business foundations are weakening due for example to customer flight following incidents of customer information leakage.