Unofficial translation

[Overview]

It is assessed that Korea's financial system has maintained stability overall. Despite the vulnerabilities due to the accumulation of household debt, financial institutions' and the foreign exchange sector's capacities for absorbing domestic and external shocks have been favorable. In view, however, of the high uncertainties surrounding domestic and external conditions, of the trends of rising market interest rates, and of the possibility of continuing slumps in corporate business conditions, there is a need going forward to bear in mind concerns that financial system stability could decline.

A look at financial stability conditions in the different sectors finds private sector leverage in the household and the corporate sectors to have shown contrasting movements. With the pace of household sector credit growth accelerating household debt ratios are very high, and if the recent trend of increase in market interest rates continues, vulnerable households in particular could face debt repayment difficulties. In the corporate sector the pace of credit increase has in contrast slowed, due for instance to the continuing slumps in business conditions and to the effects of restructuring, but financial soundness has improved owing among other factors to the low interest rates and oil prices and to companies' efforts for business management rationalization.

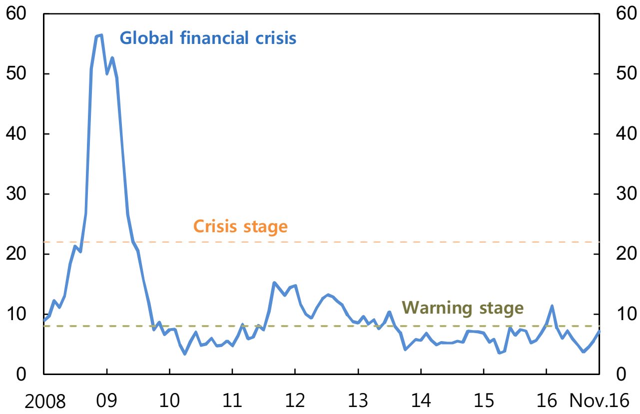
In the asset markets, the volatilities of price variables such as stock prices and interest rates have expanded, as the uncertainties concerning domestic and external conditions have heightened since November. Housing market prices and transaction volumes have been generally stable, but the markets for new housing sales in some regions have shown signs of overheating.

Among financial institutions, asset soundness at commercial banks is improving, owing for example to their efforts to sell and write-off bad loans, and their profitability has also recovered somewhat. At non-bank financial institutions asset soundness has shown trends of slow improvement, but there is a need to watch very carefully the surging household lending and rising leverage ratios in some non-bank financial sectors.

The Korean financial system's resiliency, i.e. its capacity for withstanding domestic and external shocks, is assessed as generally favorable. First, for example, provision coverage ratios and capital adequacy ratios have risen at both banks and non-bank financial institutions. And from the standpoint of external payment capacity, amid trends of continual increases in net external assets and foreign exchange reserves, the short-term external debt ratio has also maintained a low level.

In reflection of the overall financial system's circumstances, the Financial Stability Index (FSI)[1] stood at 7.1 during November 2016, slightly below the warning stage level (8.0).

Financial Stability Index (FSI)[1]



Note: 1) Calculated by standardizing 20 monthly real and financial sector indicators which affect financial stability conditions. The FSI is measured based on values between 0 and 100, and the closer it comes to 100 the higher the level of instability. <Asian financial crisis (1998.1)=100>
Source: The Bank of Korea

[Financial Stability Conditions]

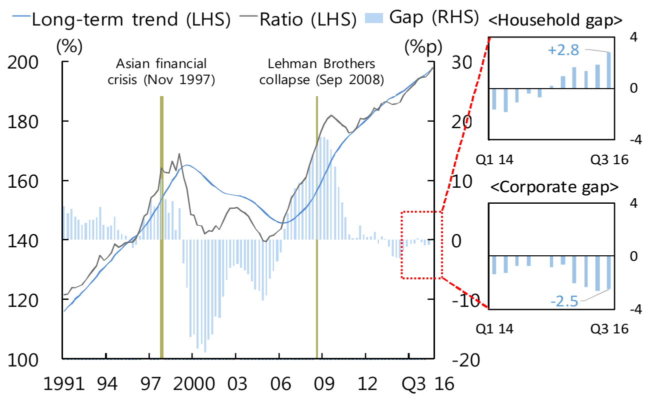
Ⅰ. Credit Markets

1 As examined based on the private credit-to-nominal GDP ratio and gap, the level of leverage of the private sector as a whole does not seem to be high. However, since household credit has risen to a large extent in 2016 as well, there is a need to devote attention to the widening positive household credit-to-nominal GDP gap.

The private credit-to-nominal GDP ratio, showing the level of private sector leverage, rose from 194.4% at year-end 2015 to 197.8% as of the end of the third quarter of 2016, influenced by the sharp rise in household credit. The private credit-to-nominal GDP ratio gap, which shows the degree to which this ratio has diverged from its long-term trend, had through the second quarter of this year shown negative figures for three consecutive quarters, before then reversing to a positive figure (+0.3% point) in the third quarter due to the large-scale increase of household credit.

Credit leverage has shown conflicting movements across the different sectors. While the household credit gap relative to nominal GDP has sustained positive (+) figures since the second quarter of 2015, the corporate sector credit gap has shown negative (−) figures since Q4 2013 and widened.

Private credit−to−nominal GDP[1] ratio and gap[2)3)]



Notes: 1) Sum of nominal GDPs in quarter concerned and in immediately preceding three quarters
2) Difference between private credit/nominal GDP ratio and its long−term trend
3) Estimated figures for Q3 2016
Source: The Bank of Korea

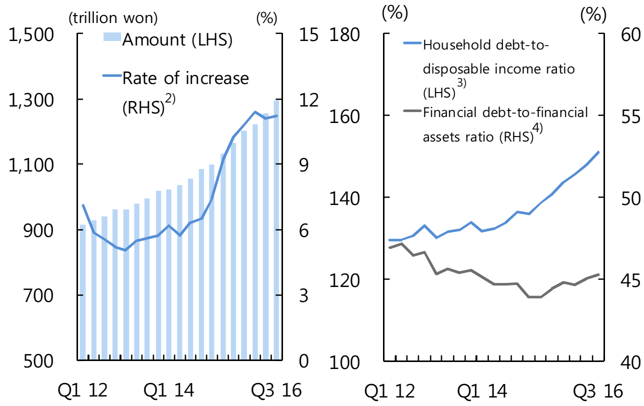
1) A single index made through a synthesis of major indices related to financial stability, the FSI is used more as a measure for judging current financial stability conditions than expected ones. The critical threshold Warning and Crisis stages are calculated through the "noise−to−signal ratio" approach, 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)" (p. 148).

2 As household credit has grown substantially households' ratios of debt relative to their incomes have risen, but their overall debt repayment capacities appear good. There is however a potential for debt repayment capacities to fall, especially among vulnerable households, owing to factors such as the possibility of a delay in economic recovery or the upward pressures on interest rates.

Household debt (household credit statistics basis) stood at 1,295.8 trillion won at the end of Q3 2016, having increased by 11.2% year-on-year. The household debt-to-disposable income ratio was 151.1%, and had risen by 7.4% points since year-end 2015.

However, since financial assets have also increased steadily together with financial liabilities, households' ratio of financial liabilities to financial assets, which was 45.3% at the end of the third quarter of 2016, has maintained its normal years' average (2010-15 45.9%). The qualitative structure of household debt has in the meantime also improved, with the proportion among banks' home mortgage loans of fixed interest rate-amortizing loans rising and the average remaining loan maturity lengthening.

Household debt[1)]–related indicators



Notes: 1) Household credit statistics basis
2) Year-on-year
3) Disposable income for Q1 to Q3 2016 estimated using the ratio of household disposable income to GNI (average for preceding three years)
4) Based on flow of funds statistics; estimated figure for Q3 2016

Source: The Bank of Korea

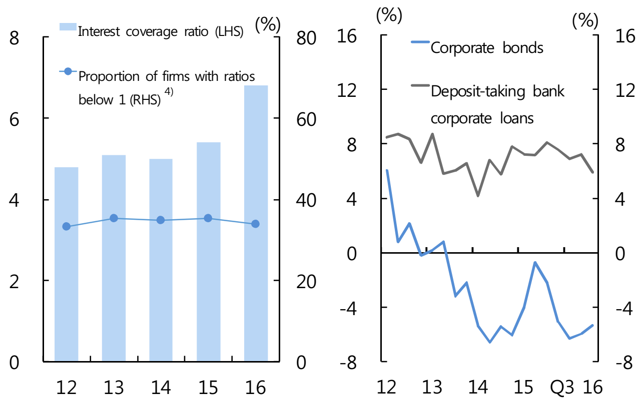
3 The pace of increase in corporate credit has slowed, due to factors such as the continuing slumps in business conditions and credit concerns as a result of the ongoing restructuring. Amid these circumstances companies' financial soundness has improved, thanks for example to the low interest rates and low oil prices, and to their efforts for business management rationalization. Going forward, if the slumps in business conditions become prolonged and the pace of growth in corporate credit slows further in consequence, there is a need to keep in mind the possibility of corporate soundness declining.

At the end of Q3 2016 deposit-taking banks' corporate loans had increased by just 5.9% year-on-year, and in the fourth quarter their extent of increase continued to decline. In the corporate bond market also, the net redemption positions recorded since the second half of last year continued.

As companies' profitabilities rise, due to the low interest rates and oil prices on top of the slowed growth in their credit, their interest repayment capacities have improved overall. The interest coverage ratio (operating income-to-interest expenses) stood at 6.8 during the first half of 2016, and had risen for two consecutive years since 2014. However, the proportion of firms with interest coverage ratios below 1 continued to show a high level as before, at 33.9%.

Corporate interest coverage ratios,[1)2)] and rates of growth in corporate bond issuance balance and deposit-taking banks' corporate loans[3)]

〈Interest coverage ratio〉 〈Rates of corporate credit growth〉



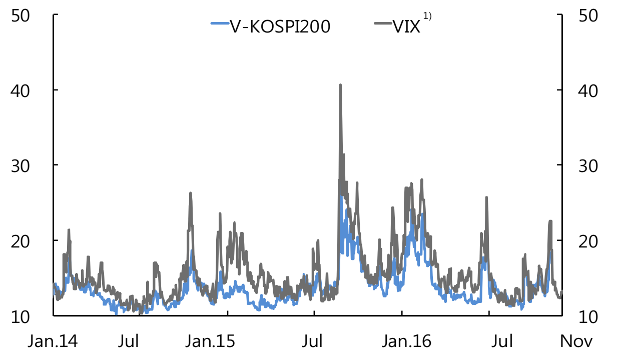
Notes: 1) Operating income / interest expenses
2) First half basis 3) Year-on-year
4) Including firms with operating losses
Sources: The Bank of Korea, KIS-Value, Banks' business reports

II. Asset Markets

1 In the stock markets, share prices have fluctuated within a certain range but have also shown high volatility temporarily in line with changes in conditions in Korea and abroad. During the second half of 2016 factors such as the results of the UK Brexit referendum and the US general election, as well as the issue of interest rate hikes by the US Federal Reserve, worked to cause increases in stock price volatility.

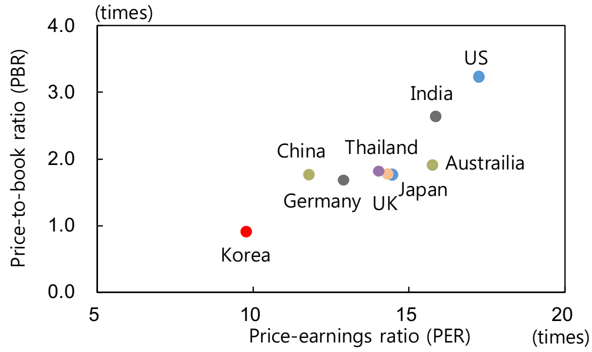
Meanwhile, the price-earnings ratio (PER), whick reflects companies' profitability, and the price-to-book ratio (PBR), which shows the stock price level relative to its liquidation value, stood at 9.8 and 0.9 respectively as of end-November 2016 —low levels compared to those in other major countries.

Stock price volatility indices



Note: 1) Volatility index calculated with prices for options on S&P 500 index
Source: Bloomberg

Major country's PERs[1)] and PBRs[2)]

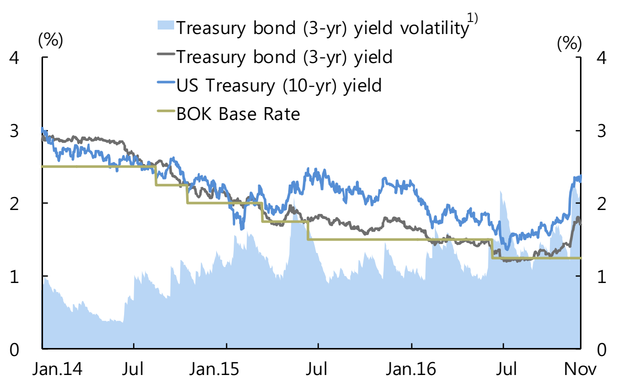


Notes: 1) MSCI, end-November 2016 basis
2) End-November 2016 basis
Sources: Bloomberg, Thomson Reuters

2 Long-term market interest rates rose to a substantial extent entering November 2016, while corporate bond credit spreads have widened greatly since the latter part of September.

The Treasury bond (3-year) yield fell to fluctuate at an all-time low level (around 1.20%) in July 2016, but from late August then sustained a trend of increase, influenced by the issue of a US Federal Reserve interest rate hike, by weakening expectations of monetary policy easing by the ECB and the Bank of Japan, and so on. In the latter part of November, notably, it rose to its highest level of the year at around 1.8%, in concert with the rise in US Treasury bond yields after the US general election.

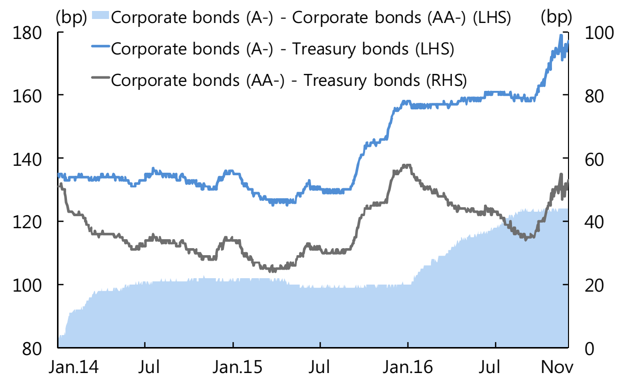
BOK Base Rate, Korean and US Treasury bond yields



Note: 1) Daily volatility calculated based on exponential weighted moving average (EWMA)
Sources: Korea Financial Investment Association, Bloomberg

In the corporate bond market, credit spreads on both prime and subprime bonds have widened greatly since late September 2016, as investment sentiment has contracted due for example to a rise in interest rate volatility.

Corporate bond credit spreads,[1] and spread across credit ratings

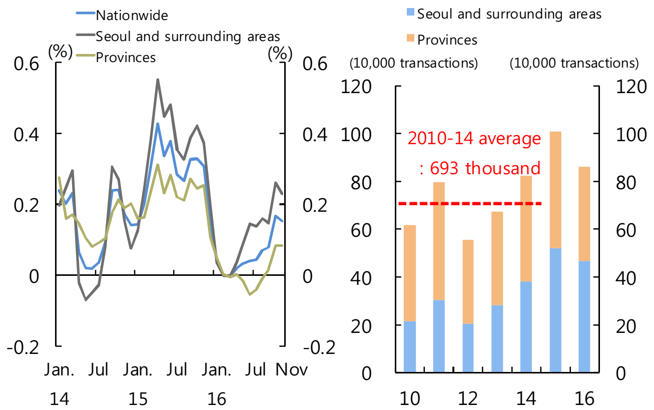


Note: 1) 3-year maturity basis
Source: Korea Financial Investment Association

3 Housing market prices and transaction volumes have shown generally stable pictures during 2016, with exceptions in some regions. In the commercial real estate market, transaction volumes have increased on the back of favorable returns, but vacancy rates especially for offices have risen.

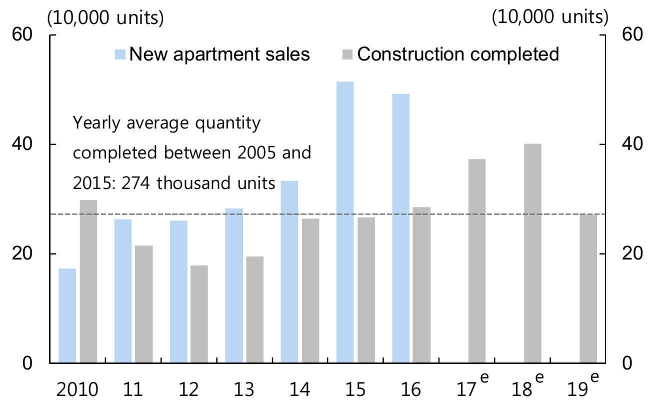
Purchase prices in the existing housing market rose by 0.6% during the January to November 2016 period, to fall below their extent of increase (+3.4%) during the same period the year before. The housing purchase transaction volume, at 862 thousand transactions between January and October, although exceeding its normal years' average (693 thousand transactions between January and October, from 2010 to 2014) also contracted compared to the same period in 2015 (1,008 thousand).

Housing purchase price rates of change,[1] and transaction volumes[2]



Notes: 1) Compared to previous months
2) January to October basis
Source: Korea Appraisal Board

New apartment sales, and quantities completed[1]

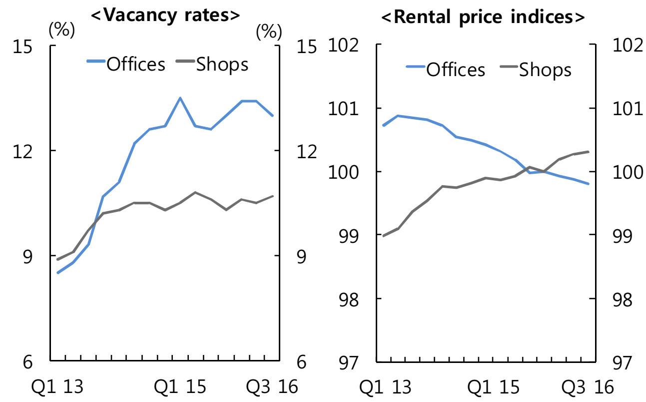


Note: 1) 2017–19 based on scheduled quantities
Source: Real Estate 114

In the market for new housing sales, 458 thousand apartments (expected December quantity included) were supplied during 2016, and just as during last year (518 thousand apartments) this greatly exceeded the normal years' average (263 thousand from 2010 to 2014). A look at the quantities of apartments scheduled for completion (during 2017-2018) relative to the numbers of registered households (as of end-November 2016), shows their ratios to have exceeded the nationwide average (3.7%) to considerable extents in Gyeonggi-do, Gyeongsangnam-do and Chungcheongnam-do.

In terms of commercial real estate, meanwhile, in the case of shops the vacancy rates have been relatively low, owing for example to steady rental demand, and rental fees have also continued their trends of increase. The vacancy rate for offices has on the other hand risen, due among other factors to shrinking rental demand following the movements of public institutions from Seoul to the provinces, and rental fees have shown trends of declining.

Commercial real estate vacancy rates and rental price indices[1]



Note: 1) Q4 2015 = 100
Source: Korea Appraisal Board

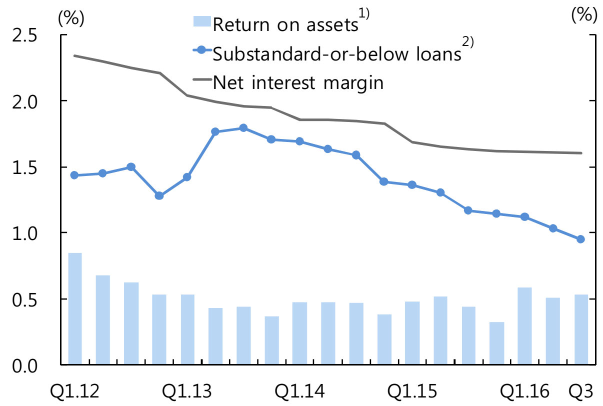
Ⅲ. Financial Institutions

1 Commercial bank soundness has risen on the whole, with asset soundness improving and profitability also recovering slightly. However, very careful monitoring is called for of the effects on borrowers' credit risk caused by factors such as ongoing slumps in corporate business conditions, the trend of rising market interest rates, etc.

Commercial bank assets totaled 1,444 trillion won at the end of the third quarter of 2016, having thus risen by 3.9% year-on-year. Asset soundness had continued its trend of improvements, due to banks' strengthening of risk management related to for example corporate lending and to active efforts for disposal of bad loans. The substandard-or-below loan ratio was 0.95% at the end of Q3 2016, down by 0.20% point compared to year-end 2015.

Profitability has recovered somewhat in 2016 — thanks to declines in loan loss provisions following reductions in newly arising bad loans, to increases in interest incomes due to expanded extensions of household loans, etc. Commercial banks' return on assets (ROA) was 0.53% (annualized) during the Q1 to Q3 2016 period, and had risen by 0.21% point compared to last year.

Commercial bank profitability and asset soundness



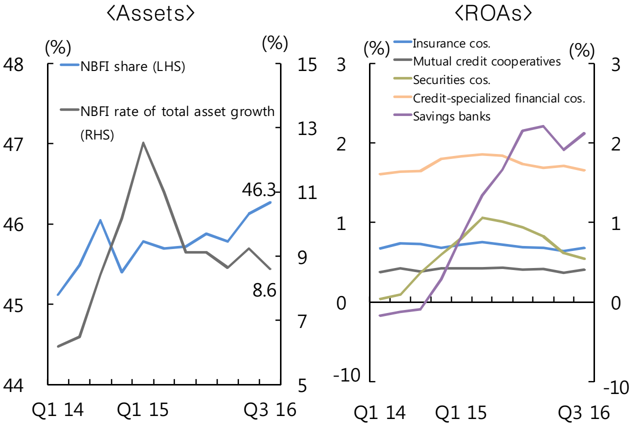
Notes: 1) Accumulated quarterly incomes annualized
2) End-period basis
Source: Banks' business report

2 At non-bank financial institutions, meanwhile, amid expansions in their asset volumes their soundnesses in terms of assets for example have generally improved. In some non-bank sectors operation of risky assets is growing, however, as the search for yield intensifies, and the possibility must be borne in mind of the related risks growing larger in the future.

Non-bank financial institutions' total assets amounted to 2,242 trillion won at the end of the third quarter of 2016, having jumped by 8.6% since the same time one year previous. The share in total financial sector (bank and non-bank) assets accounted for by non-bank financial institutions had risen by 0.4% point from 45.9% at the end of 2015 to 46.3% at end-Q3 2016.

Asset soundness has continued its trend of improvement, with delinquency rates and substandard-or-below loan ratios declining for example, thanks to the easing of borrowers' debt repayment burdens in line with the low interest rates, to financial institutions' risk management efforts, etc. Profitability has meanwhile generally fallen in 2016, except at savings banks. In particular, the ROA of securities companies has declined considerably, owing to reductions in bond sales and valuation gains in line with the limited scope for additional drops in interest rates.

NBFI share[1] and rate of increase in total assets[2], and returns on assets (ROAs)[3]

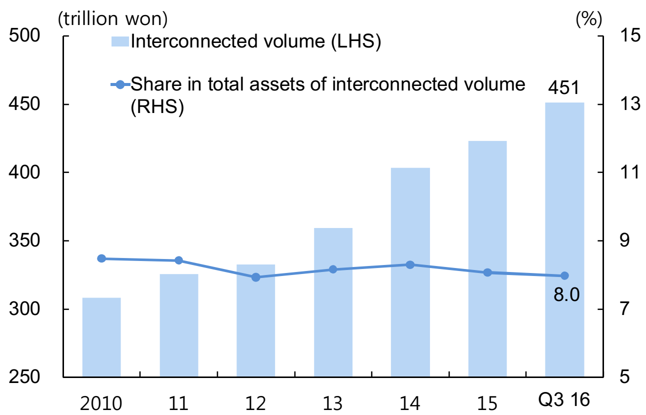


Notes: 1) Relative to total financial institution assets
2) Year-on-year
3) Net income / average total assets over the past one year period
Sources: Financial institutions' business reports

3 The extent of interconnectedness among financial institutions in their assets and liabilities has expanded somewhat, but among total financial sector assets the proportion of interconnectedness has maintained the same level as at the end of last year.

The volume of financial institutions' interconnected assets and liabilities stood at 451 trillion won at the end of Q3 2016, higher by 8.8% (+36 trillion won) than at the same time in 2015. By sector, the volumes of interconnectedness among non-bank financial institutions (+11 trillion won) and between banks and non-bank financial institutions (+24 trillion won) had increased by larger extents than that among banks (+2 trillion won). However, among total financial sector assets the proportion of those that were interconnected was just 8.0% at the end of the third quarter of 2016, and has not shown any large changes since 2010.

Volume of asset and liability interconnectedness across financial business sectors[1)2)]



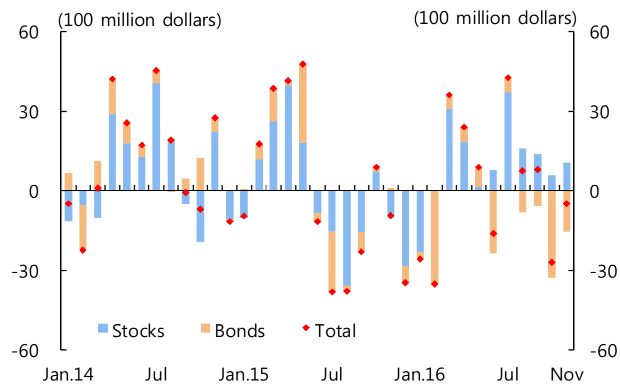
Notes: 1) Sum of amounts of funding among financial institutions through marketable financial products such as financial debentures, RPs, CDs, CP, etc.
2) Period-end basis
Sources: Estimations made using financial institutions' business reports, Korea Securities Depository data, Flow of Funds statistics, etc.

Ⅳ. Capital Flows

In- and outflows of portfolio investment funds of foreigners have sustained their normal years' level of volatility in 2016, owing to increases in the uncertainties surrounding conditions domestically and abroad, and there is a possibility of this situation continuing in the future as well. However, the Korean economy's favorable fundamentals, including its persistent current account surplus, its considerable volume of foreign exchange reserves, the high level of its sovereign credit rating, etc., are seen as likely working to reduce the possibility of any abrupt outflow of foreigners' securities investment funds.

Foreigners' securities investment funds flowed out of Korea in net terms at the time of the Brexit referendum in the United Kingdom in June 2016, before then reversing to large-scale net inflows in July, centering around stock funds, as expectations of an interest rate hike by the US Federal Reserve weakened. From October they shifted back to net outflows, however, as international financial market volatility expanded due to the emergence of the issue of an interest rate increase by the Federal Reserve, to the uncertainties surrounding the economic policies of the new US government administration, etc.

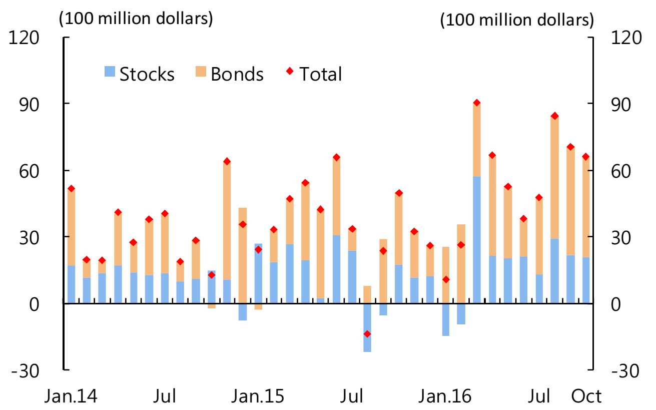
Changes in foreigners' portfolio investment funds[1)]



Note: 1) A '+' means net inflow, and a '−' net outflow.
Source: The Bank of Korea

Overseas portfolio investment by residents has meanwhile sustained its high rate of increase, against a background of the underlying low interest rates, the large-scale Korean current account surplus, etc. Overseas portfolio investment has been led by institutional investors such as the National Pension Fund, insurance companies, etc., and among the instruments invested in a high proportion is made up of prime bonds and stocks of advanced countries. Overseas portfolio investment is exposed to the risks of not only price volatility but exchange rate volatility as well, and in this regard there is thus a need for caution.

Changes in residents' overseas portfolio investment[1)]



Note: 1) A '+' means net investment, and a '–' net withdrawal.
Source: The Bank of Korea

[Resilience]

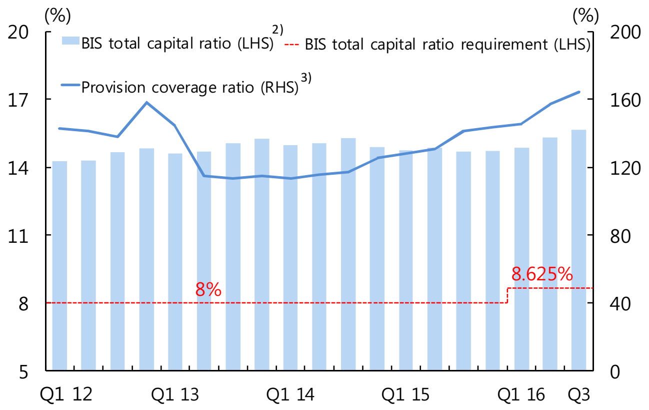
Ⅰ. Financial Institutions

1 Commercial banks' provision coverage and capital adequacy ratios are continuing their trends of increase, and their resiliency is assessed as good. However, amid the recent upward pressures on market interest rates, attention needs to be paid to the significant heightening of uncertainties related to economic conditions in Korea and abroad.

Commercial banks' liquidity coverage ratio (LCR) and foreign currency liquidity ratio, indicative of their capacities for responding to sudden fund outflows, maintained favorable levels of 106.2% and 105.8% respectively as of end-September 2016.

The provision coverage ratio, which shows the capacity for absorption of expected losses, was 164.2% at the end of the third quarter of 2016, up by 20.5% points compared to the end of 2015. The Basel III-based total capital ratio, meanwhile, revealing capacities for shock absorption in response to unexpected losses, had also increased by 0.95% point since the previous year-end to stand at 15.64%.

Indicators of commercial bank loss absorption capacities[1)]

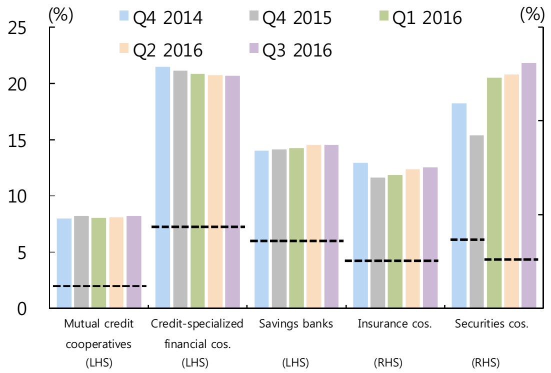


Notes: 1) End-period basis
2) Basel II-based before Q3 2013, and Basel III-based after Q4 2013
3) Loan loss provisions (including loan loss reserves) / substandard-or-below loans
Sources: Commercial banks' business reports

2 Most non-bank financial institution sectors have maintained satisfactory levels of resiliency. In some sectors, however, risky asset investment aimed at boosting profitability is expanding, and the fact that this can become a factor causing future resilience to weaken should be kept in mind.

Non-bank financial institutions' capital adequacy ratios have greatly exceeded the supervisory standards in all sectors. As of the end of Q3 2016 life insurance companies' risk-based capital (RBC) ratio stood at 300.5%, and all insurance companies were exceeding the required ratio (100%). Capital adequacy indicators in other non-bank financial sectors were also mostly satisfying the regulatory standards.

NBFI capital adequacy ratios[1)2)]



Notes: 1) Insurance companies' risk-based capital ratio (supervisory requirement 100%), mutual credit cooperatives' net capital ratio (2%; community credit cooperatives 4%; NongHyup 5%), securities companies' net capital ratio (100%; previously, net operating capital ratio 150%), credit-specialized financial institutions' adjusted-capital ratio (7%; credit card companies 8%), savings banks' BIS capital ratio (6%; companies with assets over 2 trillion won 7%)

2) Dotted lines show the supervisory standards (in the case of securities companies, the net capital ratio was applied from 2016)

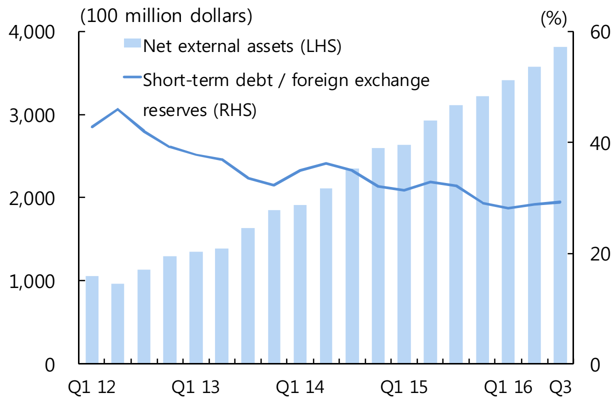
Sources: Financial institutions' business reports

Ⅱ. External Payment Capacities

A look at the external payment capacity finds the nation's net external assets and its foreign exchange reserves to be continuing their trends of increase, while the short-term external debt ratio has also maintained a low level.

Korea's net external assets (external assets - external debts) grew by 61.3 billion dollars compared to year-end 2015 to stand at 383.5 billion dollars at the end of the third quarter of 2016, and its foreign exchange reserves increased by 4.03 billion dollars between January and November this year to total 372.0 billion dollars at end-November. The ratio of short-term external debt to foreign exchange reserves maintained a low level of 29.6% as of the end of Q3 2016.

External payment capacity indicators



Source: The Bank of Korea

Ⅲ. Financial Market Infrastructures

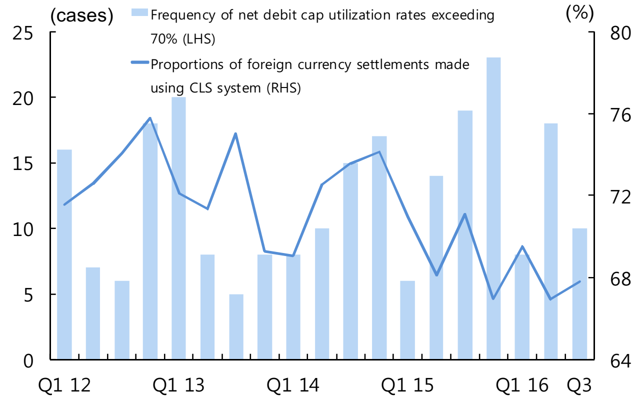
BOK-Wire+ and the other major payment and settlement systems have been operated stably, with their settlement risks declining for example. In the future, as the payment and settlement instruments are expected to become even more complicated and diverse with the spread of Fintech, it will be necessary to strengthen the efforts to secure payment and settlement system stability.

Among all settlements made through BOK-Wire+, the large-value payment system, the proportion in settlement value carried out near the closing time (16:00-17:30) and the share of payment orders in queue for settlement recorded averages of 61.3% and 4.1% respectively during the Q1 to Q3 2016 period — lower by 1.3% and 0.4% points respectively year-on-year. The maximum intraday overdraft cap exhaustion rate, which reveals the levels of secured settlement liquidity of BOK-Wire+ participants, also fell.

In the cases of the retail payment systems operated by Korea Financial Telecommunications & Clearings Institute, the number of cases of net settlement participants' net debit cap utilization rates exceeding the 70% warning level totaled 36 over the Q1 to Q3 2016 period, having decreased a bit compared to that (39 cases) during the same period of 2015.

Meanwhile, among foreign exchange settlements carried out through the foreign exchange settlement systems, the share handled by the CLS payment-versus-payment system decreased slightly from 69.5% in the first quarter of 2016 to 67.8% in the third quarter, on a decline in transactions in the dollar, a main CLS settlement currency, owing for example to the shock from the June 2016 Brexit referendum results.

Retail payment and foreign exchange settlement system-related indicators



Source: The Bank of Korea