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Macroeconomic Developments

The Korean economy has maintained its upward trend with the continuing recovery of domestic economic activity. The domestic economy is expected to continue on an upward track, even in the presence of external risks. In terms of overseas risk factors, there remains uncertainty stemming from the possibility of a hike in global raw material prices and instability in global financial markets due to fiscal debt troubles in southern European countries. On the supply side, potential growth as measured by smoothing real GDP growth rates continued its downward trend seen over the last several decades, mainly due to the long-run slowdown in input growth.

Outlook for 2011

The Korean economy in 2011 is anticipated to continue to remain on a robust recovery path due to improving global and domestic conditions. We forecast GDP growth of 4.4% y.o.y. for 2011 on the strength of an expansion in both domestic demand and export growth. Growth is forecast to be 3.9% and 4.8% y.o.y. in the first and second half of 2011, respectively. Private consumption and facilities investment are also expected to increase, moving up 3.4% and 6.6% y.o.y. respectively in 2011. Significant uncertainties, however, do appear
to exist. The run-up in global raw materials prices, including oil prices, and the bubble effects of the fiscal policy stimulus may serve as downside risk factors.

Exports and imports are expected to increase 8.6% and 11.1%, respectively, in 2011. Therefore, the balance of payments is expected to register a current account surplus of 20.0 billion USD in 2011, smaller than the 29.7 billion USD figure from the previous year. The reduction should occur mainly from a faster recovery of imports than exports and rising raw materials prices.

Financial Markets

Long-term market interest rates, which maintained a downward trend in the fourth quarter of 2010, have rebounded since the end of year because of the fear of higher inflation and a rise in US Treasury bond rates. In 2011, the base rate of the Bank of Korea is expected to move higher in order to suppress increasing inflationary expectations. Treasury bond (3yr) yields are expected to be 3.8%, or 0.1%p higher than 2010.

In 2011, the won/dollar exchange rate is expected to average 1,060, down from the 1,156 figure of 2010. The rate is to be affected by the continuous current account surplus in Korea, foreign portfolio investment inflows and the ongoing monetary easing policy by the Fed. The downward trend in the won/dollar exchange rate will, however, be slowed by high raw materials prices.

The stock market in 2010 increased nearly 21.9% from the end of 2009, with a gain of 368 points in the last quarter. The index has been mainly buoyed by foreign investors, who net purchased 9,225 and 21,380 billion won in the last quarter and 2010 overall, respectively. In 2011, Korea’s equity market is expected to continue its upward trend, fueled by growth in the domestic economy and abundant global liquidity.
Money and Credit

In October and November, the money supply continued to increase, but at a slower pace than the third quarter. M2 and Lf growth fell to 7.5% and 7.3% in those period versus 8.6% and 8.2% in the third quarter of 2010.

During the fourth quarter of 2010, total depository banks’ corporate lending decreased 6.8 trillion won, but household lending increased 8.9 trillion won, more than the 3.7 trillion won of the previous quarter, as mortgage loans increased 7.7 trillion won. In 2011, corporate and individual bank lending is expected to continue to rise as the recovery of the Korean economy progresses further. However, its growth will be limited by banks’ strict risk management and by a rise in the base rate.

Financial Industries

In the third quarter of 2010, Korean banks’ assets increased slightly, while net income showed a huge increase. Meanwhile, the NPL ratio and the coverage ratio deteriorated dramatically. The BIS capital ratio continued to improve with the tier 1 ratio hitting a record high. In 2011, growth opportunities and profitability will show small improvement, with concern over the soundness of SME and household loans serving as downside risk factors.

In the third quarter of 2010, most non-banking financial institutions experienced asset growth. Except for leasing companies, the net income of non-banking financial institutions was positive. In spite of improved asset growth and profitability, the loan soundness of non-banking financial institutions deteriorated. Most non-banking financial institutions need to enhance their risk management to address their insolvent loans. Excepting credit card companies and leasing companies, capital adequacy improved.

The assets of securities companies increased 8.9% to 207 trillion won during the third quarter of 2010, up
from 190 trillion won in the same quarter last year. The increase of bond holdings was the main reason, going up 5.0% over the same period securities companies’ profits were up for the year, at 957 billion won. Profits from securities trading drove total profits up. The net capital ratio fell 24.4%p from 558% at the end of the third quarter of 2009 to 534% at the same period of 2010. The expansion of bond holdings raised total risk due to the higher exposure to interest rate risk. Profitability is expected to rise as securities companies diversify their income sources. The assets of securities companies are projected to increase modestly due to a stable stock market.

The total assets and premium income of both the life and non-life insurance industry in FY2011 are forecast to trend upward as the economy recovers and the financial environment improves. On the investment business side, insurers are expected to see improved returns from a favorable environment of rising interest rates and a continued rally in the stock market.

**Current Issues**

The first paper deals with Korean banks’ job field HRM (human resources management). As an intermediary for the real sector and a cross-seller of various financial products, banks must possess a diversity of financial professionals with superior screening and advisory capabilities. The paper evaluates Korean banks’ current job field HRM systems as a way of securing financial professionals and explores future tasks surrounding them.

The second paper deals with the dollar carry-trade in the international financial markets. After the global financial crisis, the dollar carry-trade has been conducted in a large scale as global financial market uncertainty eased and low-rate dollar funding targeted higher interest rates in emerging economies including Korea. The paper discusses the possibility of the unwinding of the dollar carry-trade due to global financial market conditions, but also expects its persistence using other
currencies that feature low interest rates.

The last paper is titled “FX Financing and the Interconnectedness of Financial Markets”. The Korean financial system has proven vulnerable to capital outflows and rollover risk on foreign debt during the recent crisis. To account for this, this article focuses on the financial interconnectedness associated with external debt. It attempts to describe how foreign external funding and domestic financial markets are intertwined, and how this interconnectedness propagated the external shocks to the overall Korean financial system. In this context, regulations on FX swap transactions imposed by the Korean government in 2010 were designed to directly reduce this interconnectedness.
The underlying upward trend of the Korean economy appears to have been maintained. Exports have sustained their buoyancy and consumption has steadily increased even though construction investment has been subdued. Labor market conditions have shown an improving trend, led by the private sector. Considering the risk factors in domestic and overseas economies, however, there still remains uncertainty. The run-up in oil and other global raw materials prices and the bubble effects of policy stimulus measures may serve as downside risk factors. In addition, uncertainties over changes in the policy direction in major countries and a recurrence of financial instability in some European countries are likely to hinder global recovery.

A. Demand and Supply

1. Aggregate Demand

Hyoung-Seok Lim (hslim@kif.re.kr)

The Korean economy continues to expand solidly, with most demand and production indicators maintaining upward trends. Exports have sustained their buoyancy and consumption has steadily increased even though construction investment has continued to be subdued. Labor market conditions have shown an improving trend, led by the private sector. The domestic economy is expected to continue on an upward track, even in the presence of external risks.

Real GDP (chained volume measure) increased by 4.4% y.o.y. in the third quarter of 2010. On a q.o.q. basis, real GDP increased 0.7% in the quarter. On the production side, manufacturing increased by 10.1% and services 2.7%. On the expenditures side, facilities investment and exports of goods grew. Construction investment, however, shrank by 2.3%.

Domestic shipments and export shipments increased by 8.3% and 15.4%, y.o.y. in the third quarter of 2010 and 8.0% and 15.0% y.o.y, respectively, in November (Fig-
Industrial production and service industry production have maintained their upward trend. The industrial production index registered increases of 11.9% and 10.4% y.o.y. in the third quarter and November respectively in 2010 (Figure 1.2). The service industry activity index, following a 2.1% upswing in third quarter, increased by 3.0% and 3.6% y.o.y. in October and November, respectively (Figure 1.3).

**Economic Growth**

The upward trend of the Korean economy appears to have been maintained, even in the presence of external risks. Exports have sustained their buoyancy and consumption has steadily increased. And, led by the private sector, labor market conditions have shown an improving trend.

Growth accelerated to 4.4% y.o.y. in the third quarter of 2010 and 0.7% over the previous quarter. The improvement is attributable to steady growth of investment that increased by 24.3% y.o.y. in the third quarter of 2010, due mainly to the growth in investment in machinery such as semiconductor manufacturing equipment and precision equipment.

Exports in the national accounts grew 11.1% y.o.y. in the third quarter, led mainly by increased exports of semiconductors and machinery, automobiles and petrochemical products. Imports also expanded 14.7% y.o.y. in the same quarter, centering on increases in petroleum and natural gas and general machinery imports.

In December, the trade surplus totaled $3.74 billion. Exports climbed 23.1% to $44.34 billion, while imports went up 23.3% to $40.6 billion. Exports of most of Korea’s 13 major export items showed an upward trend. Notably, outbound shipments of petroleum products and automobile parts grew 34.2% and 35.3% y.o.y., respectively.
1.1 Domestic Demand

Aggregate consumption growth has maintained its upward trend, increasing 3.2% y.o.y. in the third quarter of 2010. Private consumption rose by 3.3%, with increased expenditures on durables and semi-durables, while government consumption slightly increased, growing to 2.8%, after rising 3.2% in the previous quarter. The contribution of aggregate consumption to economic growth recorded 2.2%p, slightly down from 2.5%p in the previous quarter (Table 1.2).

Fixed investment expanded 6.6% y.o.y. in the third quarter of 2010. Even though contribution investment has continued to be subdued, facilities investment has continued to see a marked increase, rising 24.3% over the same period of the previous year. Fixed investment’s contribution to real GDP growth was 1.9%p in the third quarter of 2010 (Table 1.2).

Private Consumption

Private consumption in the national accounts rose 3.3% y.o.y. in the third quarter, reflecting increasing household purchasing power and positive consumer confidence stemming from government measures to boost consumption, the rise in asset prices and the improvement in labor market conditions (Table 1.1).

Consumption-related indicators also showed a continued rise. The consumer goods sales index went up considerably by 4.2% and 6.9% y.o.y. in October and November 2010, respectively. This was driven by both base effects and increased sales of durable goods. By sector, durable goods consumption registered high growth of 14.1% and 12.3% y.o.y. in October and November 2010, and quasi-durable and non-durable goods consumption registered 10.2% and 2.7% increases, respectively, in November (Figure 1.6).

The service sector also maintained an overall upward trend. The service industry activity index increased 3.0% and 3.6% y.o.y. in October and November 2010,
respectively (Table 1.3).

On the sector level, all service sectors except for real estate & leasing increased in November. In particular, business activities, finance & insurance and transportation contributed to output growth, increasing by 9.7%, 8.9% and 7.8% y.o.y., respectively (Table 1.3).

Consumer confidence has brightened generally, helped by the recovery in the economy. The consumer expectations index, a measure of prospects for the coming six months versus the present, recorded 108 and 105 in November and December 2010, respectively, despite having fallen to 115 in April, and still remained well above the base 100.

The Consumer Evaluation Index, a measure of current conditions in comparison with six months earlier, recorded 95 in December, down 2.0 points from November’s 97 (Figure 1.7).

Real gross domestic income (GDI) went up 4.6% y.o.y. in the third quarter of 2010. On a q.o.q. basis, Real gross national income (GNI) expanded by just 0.2%, as trading losses rose with the worsening of terms of trade compared to the previous quarter (Figure 1.8).

**Fixed Investment**

Fixed investment growth in the national accounts rose 6.6% y.o.y. in the third quarter, reflecting stronger equipment investment. It leapt 24.3% y.o.y., due mainly to the growth in investment in machinery such as semiconductor manufacturing equipment and precision equipment. Construction investment, however, declined △2.3% y.o.y., owing to an increase in civil engineering, which offset the shrinkage of investment for building construction (Table 1.1), after diminishing △2.9% in the second quarter of 2010.

Estimated equipment investment growth (current value) also showed slower growth, at 9.7% and 4.5% y.o.y. in October and November 2010, respectively, due
to an increase in machinery investment.

Domestic machinery orders (current value), a leading indicator, changed from positive to negative, sinking ∆14.2% in November from 11.4% in October due to base effects from the public sector.

The Business Survey Index (BSI) which is produced by the Bank of Korea as a gauge of the level of confidence in the Korean economy, dropped to 92 points in the third quarter of 2010, from 95 points in the last quarter (Figure 1.10). Similar indices produced by the Federation of Korean Industries and the Korea Chamber of Commerce & Industry showed comparable findings.

Construction orders, a leading representative indicator, shrunk ∆59.6% and ∆48.7% y.o.y. in October and November 2010, respectively, due to the sluggishness of the construction sector and the bases effects of civil work orders. Construction completed (current value) recorded ∆1.8% and ∆3.0% growth in October and November, respectively.

From October 2008, the Bank of Korea shifted to an expansionary monetary policy, with the base rate lowered from 5.25% to 2.00%, its historically lowest level. The Bank of Korea, however, has decided to raise the base rate up to 2.75% as of January 2011 over concerns about consumer price inflation. The BOK announced that it would conduct monetary policy in such a way as to help the economy maintain price stability, while sustaining sound growth under an accommodative policy stance.

1.2 External Demand and the Balance of Payments

Sungwook Park (swpark@kif.re.kr)

The US economy is recovering, but progress has become more hesitant. The US economy increased at an annual rate of 2.6% q.o.q. in the third quarter of 2010, higher than the 1.7% in the second quarter. Per-
sonal consumption expenditures increased 2.4% q.o.q. in the third quarter of 2010, following an increase of 2.2% in the previous quarter. In contrast to private consumption, private fixed investment increased 1.5% q.o.q. in the third quarter from an increase of 18.9% q.o.q. in the previous quarter. Exports of goods & services increased 6.8% q.o.q. from an increase of 9.1% q.o.q. in the previous quarter. Exports of goods & services increased 16.8% q.o.q. Meanwhile, the US unemployment rate recorded 9.7% in October and November 2010.

The eurozone economy accelerated in the third quarter by 2.2% y.o.y. from 2.0% y.o.y. in the previous quarter, boosted by strong performance in Germany and France, which grew 3.9% and 1.7% y.o.y., respectively. And with the strongest expansion among the major eurozone countries in the third quarter of 2010, Sweden’s economy grew by 6.8% y.o.y. The main drag on the eurozone was Greece, where GDP contracted 4.6% y.o.y. Eurozone consumer expenditures increased 1.2% y.o.y., and government spending rose by 0.8% y.o.y.. Exports and imports rose 10.9% y.o.y. and 11.5% y.o.y., respectively, in the third quarter. Meanwhile, eurozone unemployment hit marked 10.0% in October. This figure is approaching the historical high of 10.7% in January of 1997.

Japan’s GDP grew at a 4.5% annual pace, q.o.q., in the third quarter of 2010, driven by an increase in private demand and exports. Private consumption recorded 1.2% q.o.q. growth in the third quarter from 0.3% q.o.q. in the second quarter. Private residential investment rose 1.2% q.o.q., compared with a decrease of △0.8% q.o.q. in the previous quarter. Public demand contracted △0.1% q.o.q. compared with an increase of 0.3% in the previous quarter. Exports of goods & services grew only 2.5% q.o.q. in the third quarter, down from the 5.6% in the previous quarter. Meanwhile, Japan’s employment situation still remains severe, while movements of an incipient recovery could be seen recently. The unemployment rate remained the same at 5.1% in October, as in the third quarter of 2010.
The Chinese economy grew at 9.6% y.o.y. in the third quarter of 2010 from 10.3% y.o.y. in the second quarter. Total retail sales of consumer goods grew 18.7% y.o.y. in November, which was 0.1%p higher than that in October. Investment in fixed assets grew 24.9% y.o.y. in November, 0.5%p higher than that in October. China’s exports increased 34.9% and 17.9% y.o.y. in November and December, respectively, but the pace of growth slowed from the recent peak of 38.1% in July. Imports rose 37.7% and 25.6% y.o.y. in November and December.

Korea’s current account surplus recorded 6.8 billion USD in the first two months of the fourth quarter, down from 9.4 billion USD in the third quarter of 2010, but remaining positive thanks to brisk exports backed by the global economic recovery. The current account accumulated a surplus of 25.1 billion USD from January to November 2010.

The goods account registered an 8.7 billion USD surplus from October to November to hit 12.3 billion USD for the third quarter, with global economic conditions improving in neighbor economies and trading partners. In particular, daily exports averaged a high 1.8 billion USD.

The services account deficit stood at 1.4 billion USD in October to November, from 3.2 billion USD in the third quarter, as travel and advertising expenses increased.

The income account shifted to a deficit of 33.1 million USD from a surplus of 0.5 billion USD due to the increase in dividend payments overseas. And the current transfers account deficit recorded 0.5 billion USD during October to November, down from 0.9 billion USD in the third quarter of 2010.

Exports (customs-cleared basis) rose 24.5% y.o.y. to 84.6 billion USD from October to November 2010. Imports increased 26.0% y.o.y. to 75.5 billion USD in the same period.

Export volume in most key industries was up signifi-

![Table 1.7 Monthly Exports and Imports](chart)

<table>
<thead>
<tr>
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<th>2010</th>
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<tbody>
<tr>
<td>Exports Total</td>
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<tr>
<td>Growth Rate</td>
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<tr>
<td>Daily Exports</td>
<td>18.3</td>
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<tr>
<td>Imports Total</td>
<td>353.9</td>
</tr>
<tr>
<td>Growth Rate</td>
<td>37.8</td>
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<tr>
<td>Daily Imports</td>
<td>15.4</td>
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<tr>
<td>Balance</td>
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Table 1.8 Exports and Export Growth By Sector

(f.o.b., Units: 100 mil. USD, %, y.o.y.)

<table>
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<tr>
<th></th>
<th>2009</th>
<th>2010</th>
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<tr>
<td></td>
<td>4/4</td>
<td>1/4</td>
</tr>
<tr>
<td>Vessels</td>
<td>115.3</td>
<td>98.9</td>
</tr>
<tr>
<td>(Δ11.8)</td>
<td>(Δ8.4)</td>
<td>(Δ10.1)</td>
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<tr>
<td>Petroleum &amp; Derivatives</td>
<td>69.4</td>
<td>62.9</td>
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<tr>
<td>(Δ5.4)</td>
<td>(Δ44.0)</td>
<td>(Δ54.1)</td>
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<td>Machinery</td>
<td>75.0</td>
<td>77.8</td>
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<td>(Δ7.3)</td>
<td>(Δ33.3)</td>
<td>(Δ43.7)</td>
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<tr>
<td>Wireless Network Equipment</td>
<td>76.1</td>
<td>66.1</td>
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<tr>
<td>(Δ8.9)</td>
<td>(Δ10.6)</td>
<td>(Δ23.3)</td>
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<tr>
<td>Automobiles</td>
<td>81.3</td>
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<td>(Δ6.9)</td>
<td>(Δ51.2)</td>
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<tr>
<td>Semiconductors</td>
<td>103.7</td>
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<tr>
<td>(Δ73.3)</td>
<td>(Δ120.7)</td>
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<td>Petrochemicals</td>
<td>76.7</td>
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<td>(Δ35.0)</td>
<td>(Δ58.3)</td>
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<td>Steel</td>
<td>60.0</td>
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<td>(Δ10.6)</td>
<td>(Δ14.8)</td>
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<td>Liquid Drugs</td>
<td>66.8</td>
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<td>(Δ78.4)</td>
<td>(Δ64.1)</td>
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<td>Automobile Parts</td>
<td>39.3</td>
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<td>(Δ37.9)</td>
<td>(Δ107.6)</td>
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<tr>
<td>(Δ25.4)</td>
<td>(Δ23.0)</td>
<td>(Δ18.1)</td>
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Note: 1) %, y.o.y. 2) Interim figures.
Source: KITA.

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Export volume in most key industries was up signifi-
Automobiles, automobile parts, steel, petrochemicals, vessels and semi-conductors kept expanding due to the pick up in overseas demand. Stronger exports such as petroleum and derivatives, machinery and liquid devices increased continuously. However, exports of wireless communication equipment and computers recovered slowly to increase 5.1% y.o.y. and 12.1% in October to November for an increase of 19.3% and 1.9% y.o.y. in the third quarter of 2010, respectively.

Growth rates of Korea’s exports to China, U.S, and the ASEAN region increased in the fourth quarter of 2010. Exports to China, Korea’s top overseas market, increased 28% y.o.y. in October to November. Exports to ASEAN countries and the US rose 24% and 38% y.o.y., respectively, in October to November, while shipments to the EU were up 2% y.o.y. in the same period. Exports to the Middle East jumped 35% y.o.y., or 5.3 billion USD, in the same period.

2. Aggregate Supply

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Potential Growth

Potential growth measured by smoothing real GDP growth rates has been still hovering around 3%, though recently its downward trend has slowed. This was mainly because real GDP growth has been high since the fourth quarter of 2009 on the strength of the world economic recovery, as well as base effects.

3% potential growth means real GDP growth can attain 3% without inflation or other adverse effects by fully utilizing its resources.

Viewing potential growth from a long-term perspective, it peaked at 10.8% during 1986 and 1987. Since then, the rate has been in a steady decline. The major factor in the downward trend is population changes like the low birthrate and rapid aging. Births per female in

---

Table 1.9 Exports by Region (Unit: $100 mill, %, y.o.y.)

<table>
<thead>
<tr>
<th>Region</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>235</td>
<td>255</td>
</tr>
<tr>
<td>Japan</td>
<td>58</td>
<td>62</td>
</tr>
<tr>
<td>EU</td>
<td>110</td>
<td>136</td>
</tr>
<tr>
<td>ASEAN</td>
<td>111</td>
<td>121</td>
</tr>
<tr>
<td>US</td>
<td>98</td>
<td>100</td>
</tr>
<tr>
<td>Latin America</td>
<td>77</td>
<td>76</td>
</tr>
<tr>
<td>Middle East</td>
<td>59</td>
<td>63</td>
</tr>
</tbody>
</table>

Note: 1) ( ) denotes export growth. Source: KITA.

Figure 1.13 Real and Potential GDP Growth

Note: Potential growth rate was estimated using HP Filtering. Source: BOK.

Table 1.10 Contributions of TFP and Factor Inputs to Average GDP Growth (Unit: %, %p)

<table>
<thead>
<tr>
<th>Period</th>
<th>GDP Growth</th>
<th>TFP</th>
<th>Physical Capital</th>
<th>Human Capital</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>'87~'96 (A)</td>
<td>8.67</td>
<td>2.01</td>
<td>3.62</td>
<td>0.94</td>
<td>2.11</td>
</tr>
<tr>
<td>'00~'09 (B)</td>
<td>4.41</td>
<td>0.76</td>
<td>2.04</td>
<td>0.57</td>
<td>1.04</td>
</tr>
</tbody>
</table>

Source: BOK, NSO, KIF.
2009 were just 1.15 compared with 1.47 in 2000, 1.72 in 1990 and 4.01 in 1970. These factors might lead to a long-run slowdown in input growth. Further, the recent global financial crisis also harmed potential growth.

**Total Factor Productivity**

Growth accounting analysis using the Cobb-Douglas production function with human capital shows that Total Factor Productivity (TFP) has made up 0.76%p of the 4.41% real GDP growth for the period from 2000 to 2009. It accounts for effects in total output not explained by the amount of inputs used in production. During the period from 2000 to 2009, TFP’s portion of real GDP growth was 17.2% (TFP/GDP growth), lower than the 23.2% for the 10 years from 1987 to 1996 (Table 1.10).

During 2008 and 2009, the contribution of TFP growth was negative. Especially, in 2009 it was $\Delta -1.0\%$ of the 0.2% real GDP growth (based on 2005 prices) after comprising $\Delta -0.3\%$ of the 2.3% real GDP growth in 2008. It was because employment in 2009 decreased 0.3% and gross capital formation decreased 15.0%, affected by the global financial crisis (Figure 1.14). Decreasing TFP during the global financial crisis indicates that the economy has been less efficient.

However, R&D intensity (R&D expenditures as a percentage of GDP) which are known to be one of the most important determinants of TFP growth has been increasing steadily (Figure 1.15). This shows that TFP growth will remain robust as long as R&D is conducted efficiently and effectively.

**Labor Input and Human Capital**

From 2000 to 2009, the annual contribution of labor to economic growth averaged 1.04%p, down from 2.11%p between 1987 and 1996 (Table 1.10). Most of this slowdown can be attributed to the $\Delta -1.7\%$ growth rate of the labor force, or economically active popula-
tion, over the past decade (Figure 1.17). During this period, the average population growth of those aged 15-64 dipped to 0.57% from 1.67% between 1987 and 1996 (Figure 1.16). Also, labor’s portion of real GDP growth (labor/GDP growth) over the past decade fell to 23.7% from 24.3% for the prior 10 year period.

This indicates that the Korea economy has become less labor-intensive. As population growth wanes, the slowdown in labor is expected to continue for many years to come (Figure 1.16).

The annual contribution of human capital or quality of labor to economic growth averaged 0.57%p from 2000 to 2009, lower than 0.94%p for the 10 years from 1987 to 1996 (Table 1.10). However, the quality of labor, measured in terms of average years of schooling, has improved over time, albeit at a diminishing rate (Figure 1.17).

The recent economic slowdown precipitated by the global financial crisis led to not only an increase in the average years of schooling to 11.5 years from 9.7 years from 1987 to 1996 (Figure 1.18) but also a decrease in youth employment (ages 15-29).

Youth employment growth continued to decrease, while employment of those aged 30~59 has been on the rise and employment of those aged 60 and over has continued to increase.

These structural unemployment issues therefore remain a lurking threat to the Korean economy’s potential growth (Figure 1.18).

Physical Capital

Slow physical capital growth is the major factor behind the long-run slowdown in potential economic growth. In recent years, its slowdown has been much more pronounced than that of either labor inputs or human capital (Figure 1.14).
From 2000 to 2009, the average annual contribution of physical capital to economic growth was 2.04% p, 1.58% p off the 3.62% p attained in the 1987 to 1996 period (Table 1.10). Furthermore, equipment investment growth has fallen off significantly in the recent period, which may hinder future capital accumulation. It decreased 9.1% in 2009.

In fact, from a long-run perspective, a slowdown in the rate of capital accumulation usually occurs in a developing country that is coming off several decades of rapid growth. In Korea’s case, the capital-output ratio has been rising steadily, implying that many previous investment opportunities have been drying up (Figure 1.19).

B. Inflation

1. Oil and Import Prices

Crude oil Prices

Crude oil prices (including WTI, Brent and Dubai) increased substantially during the fourth quarter of 2010, mainly due to not only increasing oil demand from emerging market countries and Europe but also speculative buying. Oil prices moved from $80 a barrel in the third quarter to above $90, the highest level since 2008.

An exceptionally cold winter in Europe has helped stimulate oil demand. In the third quarter, oil demand in Europe was 15.5 million barrels a day, jumping from 14.8 million barrels a day during the second quarter of 2010. Consequently, global oil demand was 88.6 million barrels a day in the third quarter, versus 87.0 million barrels a day during the second quarter. Oil demand in the third quarter pushed oil prices higher into the fourth quarter.
Moreover, global funding has also led to higher crude prices. For example, in the fourth quarter 2010, net purchases of non-commercial oil was 1.87 million contracts, compared to 0.52 million contracts in the same period of 2009 (Figure 1.21).

On the other hand, as demand rose, oil supply also increased. However, with several accidents, the oil supply has not increased enough to satisfy the recent high demand. World oil supply in the third quarter 2010 was only 87.4 million barrels a day. Therefore, oil prices continued to increase, affected by a tight supply and strong demand. West Texas Intermediate crude (WTI) oil prices rose over $91 a barrel from a shutdown of the Alaska oil pipeline due to the effects of freezing temperatures. Brent oil prices also rose to $97 a barrel as two Norwegian oil fields had to close due to a gas leak.

Lastly, the price of Dubai oil, which makes up 80% of Korea’s oil imports, increased to $94 a barrel.

Import Prices

Won-denominated import prices increased 9.7% y.o.y. in the fourth quarter 2010, higher than the 7.1% y.o.y. in the third quarter 2010. The prices in raw materials, including crude oil, rose 16.2% y.o.y., and mainly explain this high growth rate.

During the period, agricultural products’ prices increased 23.7% y.o.y., forest products’ prices increased 47.0% y.o.y. and mineral fuels’ prices increased 10.8% y.o.y. However, the prices of capital goods decreased 2.0% while those of consumer goods rose just 1.6% in the same period.

Meanwhile, dollar-denominated import prices rose 13.1% y.o.y. in October and December of 2010. Like the preceding, a hike in raw materials’ prices was the main factor. Also, dollar-denominated import prices of intermediate materials increased 11.6% y.o.y. Those of capital and consumer goods increased 1.1% and 4.8% y.o.y., respectively, during the same period.
These large gaps between won-denominated import prices and dollar-denominated import prices were attributable to the fact that the y.o.y. change in the won/dollar exchange rate decreased 3.1%, averaging 1,132 in the fourth quarter of 2010, compared to 1,168 over the same period in 2009.

Similarly, while export prices denominated in dollars rose 5.7% in the fourth quarter, those denominated in won increased only 2.4% y.o.y.

2. Domestic Inflation

Through October and December, consumer and producer price growth increased slightly, led by farm products. The PPI increased more sharply than the CPI. Therefore, it is expected that the CPI will rise more steeply because producer prices typically have a lagged effect on consumer prices.

Producer Prices

In the fourth quarter 2010, producer prices climbed 5.0% y.o.y., 1.4%p higher than the third quarter. Notably, the prices of agricultural, forest & marine products increased 23.7% y.o.y. in the quarter after rising 11.7% y.o.y. in the third quarter of 2010. Also, the prices of industrial products rose by 5.3% y.o.y. in the fourth quarter, compared to 3.9% in the second quarter of 2010.

However, service prices rose just 1.8% y.o.y. Even though the prices in professional, scientific & technical services (which include architectural design, engineering, and fees for CPAs and tax accountants) increased 5.5% and those for financial services, including brokerage fees and premiums, rose 4.1%, other service prices were stable. For example, telecommunications service prices decreased for a fifth consecutive quarters and the price of leasing & renting and advertising decreased 1.3%, 2.2% y.o.y., respectively, in the fourth quarter.

In December, PPI growth was up 5.3%, which is the...
fastest pace since December 2008. This is mainly because the costs for fresh vegetables jumped due to bad weather. Prices for agricultural, forest and marine products jumped 21.1% y.o.y. in December, with fresh fruit prices up 82.9% y.o.y. in the month. Furthermore, industrial products’ prices, including products ranging from textiles to oil, plastics and computers, climbed 6.0% y.o.y., the highest since December 2008.

**Consumer Prices**

In the fourth quarter of 2010, the Consumer Price Index (CPI) rose 3.6% y.o.y.. Although this figure is in the BOK’s target range (between 2.0% and 4.0%), it is the highest growth rate since the first quarter of 2009. The CPI for living necessities increased 4.1% in the fourth quarter, reflecting higher prices for groceries.

As explained in the production price section, consumer prices in the agriculture, forestry and fishing sector also increased 19.2% in the fourth quarter as the prices of fresh vegetables and fruits increased. Meanwhile, prices for industrial products increased 2.8% y.o.y. in the fourth quarter, up 0.3%p over the third quarter of 2010.

Core CPI growth, which excludes oil and food costs, remained stable, moved up just 1.9% in the fourth quarter 2010, 0.2%p higher than the previous quarter’s.

**Real Wages**

In the third quarter 2010, real wages for all industries increased 3.9% (y.o.y.) on average, higher than the 3.6% (y.o.y.) of the second quarter 2010. Especially, real wages in construction increased 1.4% the first positive growth in nine quarters. Also, real wages for manufacturing increased 5.4% y.o.y. and the wholesale & retail sector increased 3.6% in the third quarter 2010. However, real wages for the food & lodging sector continued to decrease by 4.0% for the fourth consecutive quarter. Real wages in the financial sector also decreased 3.4% y.o.y. in the third quarter 2010.
C. Macroeconomic Outlook for 2011

1. Global Economy and Balance of Payments

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The global economy should continue its moderate recovery in 2011. However, low consumer confidence and reduced incomes are holding consumption down in many economies. The global recovery remains fragile, due to downside risks like high unemployment, much higher public debt problems in the eurozone and so on. The major advanced and emerging economies are expected to see positive growth but slightly lower than 2010. There have already been some signs of weakness in the recovery, with concerns about sovereign debt sustainability in some countries, high unemployment in the euro area and tensions in foreign exchange markets. Consequently, some institutions, such as the IMF, have revised their 2011 forecasts slightly downward.

The US economy is expected to slowly expand 2.2% in 2011, though fueled mainly by government stimulus efforts. US consumer confidence index attitudes slipped to 52.5 in December from 54.3 in November. In addition, the Jobs Hard to Get Index of the sentiment survey rose to 46.8% in December from 46.3% in November. Therefore, the US economy’s recovery may be pausing from a slowdown in domestic demand and in developed countries economies.

The IMF forecasts 9.6% growth for the Chinese economy, driven by domestic demand. As the effects of large-scale economic support policies took hold, retail sales growth increased to 18.6% and 18.7% in October and November, respectively. The Business Climate Overall Index, which has been strong, continued its improvement by rising to 138.0 in the fourth quarter from 132.9 in the first quarter of 2010. Moreover, the industrial production growth rate increased continuously to 13.3% in November from 13.1% in October.

Table I.13 Economic Outlook for Emerging Countries

(Unit: %)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerging and Developing Countries</td>
<td>7.1</td>
<td>6.4</td>
</tr>
<tr>
<td>Developing Asia</td>
<td>9.4</td>
<td>8.4</td>
</tr>
<tr>
<td>ASEAN-5</td>
<td>6.6</td>
<td>5.4</td>
</tr>
<tr>
<td>Western Hemisphere</td>
<td>5.7</td>
<td>4.0</td>
</tr>
<tr>
<td>Middle East</td>
<td>4.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Central and Eastern Europe</td>
<td>3.7</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: IMF (Oct. 2010).

Table I.14 Balance of Payments Forecast

(Unit: 100 mil. USD)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st half</td>
<td>2nd half</td>
</tr>
<tr>
<td>Current Account</td>
<td>297</td>
<td>86</td>
</tr>
<tr>
<td>Goods</td>
<td>518</td>
<td>219</td>
</tr>
<tr>
<td>Service Income - Current Transfers</td>
<td>△222</td>
<td>△133</td>
</tr>
<tr>
<td>Exports (f.o.b.)</td>
<td>4,586</td>
<td>2,418</td>
</tr>
<tr>
<td>(Growth, %)</td>
<td>(26.2)</td>
<td>(9.2)</td>
</tr>
<tr>
<td>Imports (c.i.f.)</td>
<td>4,192</td>
<td>2,272</td>
</tr>
<tr>
<td>(Growth, %)</td>
<td>(29.8)</td>
<td>(11.4)</td>
</tr>
<tr>
<td>Won/Dollar Exchange Rate</td>
<td>1,156</td>
<td>1,080</td>
</tr>
</tbody>
</table>

Notes: 1) Figures in parentheses represent percent changes from the previous year.
2) Period average.
Japanese’s economic growth is expected to slow to 1.5% in 2011 from 3.1% in 2010. A worsening labor market will dampen consumer spending, with the unemployment rate expected to rise to 5.4% in 2010 according to the Cabinet Office’s forecasts. Moreover, the Japanese economy will be affected by a slowdown in overseas economies and fluctuations in exchange rates in 2011.

The eurozone economy is forecast to grow at a 1.5% pace in 2011, as signs of recovery have not yet appeared in earnest. Although export growth has been strong and financial conditions have improved partially, labor market conditions have continued to deteriorate.

In emerging markets, activity is expected to be relatively vigorous, largely driven by buoyant internal demand. In particular, developing Asian economies are expected to recover and post roughly 8.4% growth in 2011, driven by exports and domestic demand.

In Korea, the balance of payments is expected to register a current account surplus of 20.0 billion USD in 2011, smaller than the 29.7 billion USD figure from the previous year. The anticipated reduction stems from expectations of a faster recovery of imports and travel abroad than exports in 2011. Export and import growth are expected to increase 8.6% and 11.1%, respectively, for the year.

### 2. Economic Growth

The underlying upward trend of the Korean economy appears to have been maintained, even in the presence of external risk. Domestic demand such as consumption and investment has continuously gone up. Exports have sustained their buoyancy and consumption has steadily increased. Labor market conditions have also...
shown improvement, led by the private sector. On the production side, manufacturing and services increased. On the expenditure side, facilities investment and exports of goods grew, although construction investment shrank by 2.3%.

The domestic economy is expected to continue on its upward track. In the global economy, emerging markets have sustained their strong performance, while the major advanced countries have largely continued their moderate recovery trend.

The Korean economy is likely to continue to recover, helped by favorable exports and increasing consumption and facilities investment. Considering the risk factors in domestic and overseas economies, however, there still remains uncertainty. The possibility cannot be ruled out that heightened economic volatility in major countries, as well as instability in international financial markets due to government debt problems in some European countries, may act as a risk factor for the global economy. Although the global economy appears to be recovering at a modest pace, uncertainty may grow if the pace of recovery becomes increasingly varied across countries and if national policy responses become more inward-looking. Amid current circumstances, there is a growing tendency for countries to turn to policies that are self-serving, creating the potential for a ‘currency war’; Japan and certain emerging markets have announced government intervention into the foreign exchange market and strengthened regulations on capital flows.

There are also several domestic risk factors. First, household debt reached its historically highest levels this year. Although low interest rates lightened the burden on households, once the Bank of Korea starts to hike the policy rate, this burden will rise sharply. This may have a severe adverse effect on consumption. Moreover, sluggishness in the housing market could affect the broader Korea economy at any time. Considering the external and internal environments discussed above, the Korean economy is likely to improve, but with the presence of downside risks, there is still a high
The Cyclical Indicator of Coincident Composite Index (CCI), a barometer of current economic conditions, had been increasing steadily since March 2009 before it reversed course from August 2010. The Composite Leading Index (CLI), which projects future economic conditions, has been decreasing for the second half of last year due to base effects since February 2010 (Figure 1.27). This implies that the domestic economy has already entered into a recovery phase and that the intensity of economic recovery will weaken in the first half of this year.

Gross Domestic Product

The Korean economy in 2011 is anticipated to continue to remain on a robust recovery path due to improving global and domestic conditions.

We forecast GDP growth of 4.4% y.o.y. for 2011 due to an expansion in both domestic demand and export growth. Growth is forecast to be 3.9% and 4.8% y.o.y. in the first and second half of 2011, respectively (Table 1.15). Exports and facilities investment are expected to show robust growth, bolstered by a sustained recovery in the global economy. Private consumption is anticipated to experience solid growth led by increased household buying power. Further, according to a government press release, 67% of 2011 estimated expenditures, or 177.6 trillion won, will be spent in the first half.

Significant uncertainties, however, do appear to exist. The run-up in global raw materials prices, including oil prices, and the bubble effects of the fiscal policy stimulus measures may serve as downside risk factors. In addition, uncertainties over changes in policy direction in major countries and a recurrence of financial instability in some European countries are likely to hinder global recovery.
Fixed Investment

We expect facilities investment to be 6.6% in 2011, with the rapid growth led by rising global demand, improvement in corporate earnings and a continued fall in the won/dollar exchange rate. This growth is, however, expected to be at risk if investor confidence wavers from the external and internal economic instability in global raw materials prices, including oil prices.

Construction investment is forecast to increase at an annualized rate of 0.7%, or 1.3% (0.2% y.o.y.) in the first and second half of 2011, respectively. Even though contribution investment has continued to be subdued, it is anticipated to show sustained growth, centering around SOC investment, in 2011.

3. Inflation

Inflation (as measured by changes in the CPI) in 2011 is forecast to be 3.2%, 0.3%p higher than 2010. In the first half of 2011, inflation is expected to be in the mid-3% range.

This jump is expected to be driven by the increase of oil and raw material prices and agriculture and forestry prices. In addition, demand-pull inflationary pressure with the continued recovery of the gross economy is expected to stay high. However, with the decreasing trend of the won/dollar exchange rate, overall inflationary pressure will be weakened moving into the second half of 2011.

<table>
<thead>
<tr>
<th>Table I.16 Inflation Forecasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Unit: %, y.o.y.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st half</td>
<td>2nd half</td>
</tr>
<tr>
<td>CPI</td>
<td>2.9</td>
<td>3.4</td>
</tr>
<tr>
<td>PPI</td>
<td>3.8</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Notes: Figures are 2011 forecasts.
In 2011, the Bank of Korea is expected to tighten its monetary policy in order to suppress increasing inflationary expectations. Treasury bond (3yr) yields are expected to be 3.8%, or 0.1%p higher than 2010. Continuous current account surplus, foreign portfolio investment inflows and the ongoing monetary easing policy by the Fed will strengthen the won and we expect an average of 1,060, down from the 1,156 figure of 2010. The equity market is expected to continue its upward trend, fueled by growth in the domestic economy and abundant global liquidity. Growth opportunities and profitability will show small improvement within the banking sector, with concern over the soundness of SME and household loans serving as downside risk factors. Profitability of securities companies is expected to rise as they diversify their income sources while total assets and premium income of both the life and non-life insurance industry in FY2011 are forecast to trend upward as the economy recovers and the financial environment improves.

A. Asset Prices

1. Recent Trends

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Interest Rates

In the fourth quarter of 2010, money market rates mostly increased following a change in monetary policy by the Bank of Korea. Meanwhile, long-term market interest rates, which decreased through November, rebounded, in response chiefly to the high inflation rates.

The MPC (Monetary Policy Committee) of the Bank of Korea decided to raise the base rate twice, from 2.25% to 2.50% on November 16, 2010 and then from 2.50% to 2.75% on January 13, 2010. This was to respond to expectations of continued upward inflationary pressure associated with the continued upswing in activity and the run-up in international raw material prices and domestic food prices.

Since the base rate increased, CD rates (91 days) have gone up to 2.98%, from 2.66%. CP rates (91 days) also increased to 3.14% from 2.79%.
On the other hand, before the base rate increased, Treasury bond yields (3yr) decreased, affected by supply-demand factors including declines in the volume of Treasury bonds issued and outstanding.

The supply of Treasury bonds decreased as the planned amount for 2010 was mostly issued. Consequently, on December 8, yields (3-yr) fell to 2.89%, their lowest ever. However, they later rose significantly from increasing inflation and a rise in US Treasury bond rates.

Foreign investors, who net purchased bonds to the tune of 5.4 trillion won between October and November, sold domestic bonds (net) amount of 5.3 trillion won in December, influenced by the year-end closing of the books, the resumption of taxation on foreign bond investment and a decline in arbitrage incentives.

After the base rate increased in January, the long term interest rate also increased. Treasury bond yields (3-yr) recorded 3.64% in January 13, 2011, which 0.34%p higher than the average yield in the fourth quarter of 2010.

This trend did not match major countries’ treasury bond rates. While treasury bond yields in Korea trended downward in the fourth quarter and rebounded since the end of year, bond yields of major countries including the US, Germany, the UK and Japan continued to increase in the fourth quarter as expectations of economic growth increased. Especially, those of the US increased steeply, mainly due to the second round of quantitative easing (QE2). Recently, major countries’ bond yields have been faltering, affected by factors like economic concerns and increasing supply.

Corporate bond yields moved in sync with treasury bond yields. After corporate bond yields (AA-, 3yr) decreased to 4.00% in December, they increased to 4.46% as of January 13, 2011. Consequently, the credit spreads on corporate bonds sustained the level of 80bps~85bps. Bank bond rates (AA-, 3yr) also decreased to 4.31% in December, but rebounded to over 4.7% in January.
Exchange Rates

Sungwook Park (swpark@kif.re.kr)

During the fourth quarter of 2010, won/dollar exchange rate volatility increased. While the US dollar’s global weakness put downward pressure on the won/dollar rate, geopolitical risks on the Korean peninsula, fiscal woes in European countries, and risks of tightened regulations on capital flows put a brake on the rise of the won’s value. Consequently, the won/dollar rate stood at 1134.8 by the end of December, not far from the 1130.4 mark it was at on October 1.

The euro declined 2.4% to 1.3290 USD by the end of December, down from 1.3620 USD on October 1. This was due to the successful Spanish bond sale, abating worries over the eurozone’s fiscal woes, and the increasing likelihood of additional quantitative easing by the Fed to cope with a weak US economic recovery.

The yen/dollar appreciated from 83.53 on October 1 to 81.52 on December 31, driven by investors’ flight to safer assets, etc. On November 1, with the yen/dollar exchange rate falling to a 15 year record low of below 80 yen, the Japanese government intervened in the foreign exchange market, temporarily slowing but failing to reverse the trend of appreciation in the yen.

Stock Prices

Hyungjoon (Ray) Lim (hjlim@kif.re.kr)

The Korea Composite Index (KOSPI) gained 178 points in the fourth quarter of 2010, managing to climb above the 2,000 point level by December 14. For the year as a whole, we witnessed a steady bull market in Korean equities, with the KOSPI ending at 2,051, up more than 21.9% from the 2009 figure of 1,683. Chronologically, the KOSPI reached 1,700 in January only to fall back to the 1,500’s the next month due to the European fiscal crisis. Later on, both economic recovery and massive purchases by foreign investors drove
the market upward, albeit with minor setbacks in May and June.

The gains in 2010 were buoyed by three factors: economic recovery in Korea, robust corporate earnings that consistently beat expectations, and huge buying by foreign investors. Capital inflows accelerated from a surge in global liquidity as the Fed, ECB, and BOJ held policy rates near zero.

Foreign investors purchased a net 9,225 billion won in equities in the fourth quarter of 2010, continuing the 6,629 billion won in net buying in the previous quarter. Foreign investors net purchased 10,579, 14,321, 5,531, 5,930, and -404 billion won in equities in the five preceding quarters. On the other hand, as retail investors kept redeeming their investments in mutual funds, ITCs continued their trend of net selling of equities. In four quarters of 2010, they net sold -2,551, -4,110, -5,607, and -6,363 billion won. Retail investors also net sold equities amounting to -2,078 billion won in the third quarter.

KOSPI and KOSDAQ stock issuance in the first two months of the fourth quarter amounted to 603 billion won (monthly average) (Table II.2). Since companies tend to issue stocks in the last month of each quarter, it is too early to tell whether issuance is in decline. Corporate financing, on the other hand, totaled 10,406 billion won, meaning that, as in the previous quarter, companies relied on debt more than before.

2. Outlook for 2011

Interest Rates

Kyoobok Lee (leekb@kif.re.kr)

Since inflationary pressures are expected to persist as favorable economic conditions continued and international commodity prices including crude oil rise, the base rate of the Bank of Korea is expected to increase additionally in 2011.

<table>
<thead>
<tr>
<th>4/4</th>
<th>1/4</th>
<th>2/4</th>
<th>3/4</th>
<th>4/4 (Oct~Nov)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Financing (A)</td>
<td>9,445</td>
<td>9,145</td>
<td>11,552</td>
<td>10,320</td>
</tr>
<tr>
<td>Corporate Securities Offerings (B)</td>
<td>933</td>
<td>922</td>
<td>725</td>
<td>708</td>
</tr>
<tr>
<td>• Initial Public Offerings</td>
<td>239</td>
<td>687</td>
<td>213</td>
<td>317</td>
</tr>
<tr>
<td>• Rights Offerings</td>
<td>694</td>
<td>235</td>
<td>512</td>
<td>391</td>
</tr>
<tr>
<td>B/A</td>
<td>9.9</td>
<td>10.1</td>
<td>6.3</td>
<td>6.9</td>
</tr>
</tbody>
</table>

Note: 1) Total volume of direct financing (bonds and stocks).
2) Offerings on KRX and KOSDAQ.
Source: FSS.
Therefore, market rates are expected to trend higher during 2011. However, the increase in market rates should be limited, since such rates factor in corporate expectations of the BOK’s future strict monetary policy and from high demand from financial institutions.

Therefore, Treasury bond (3yr) yields are expected to be 3.8%, only 0.1%p higher than 2010. Corporate bond (AA- and 3yr) yields are expected to be 4.7%, similar to 2010 levels.

**Exchange Rate**

*Sungwook Park (swpark@kif.re.kr)*

In 2011, the won/dollar exchange rate is expected to average 1,060, down from the 1,156 figure of 2010, driven by a sustained current account surplus in Korea, foreign portfolio investment inflows and the ongoing monetary easing policies of the Fed. However, this downward trend will be gradual due to the increase of imports from the rising prices of raw materials.

**Stock Prices**

*Hyungjoon (Ray) Lim (hjlim@kif.re.kr)*

In 2011, Korea’s equity market is expected to continue its upward trend, with upside risks dominating downside ones.

The upside risks mainly hinge on two things. First, the domestic economy should see steady positive growth, with business cycle indicators such as production in the mining, manufacturing, and service industries, consumption, and plant and equipment investment continuing their upward trends. Second, global demand is also expected to be robust, especially from growth in emerging markets. Third, global liquidity will remain loose as central banks in the US, Europe, and Japan will find it quite difficult - and probably unwise- to hike interest rates. In such conditions, it is unlikely that the
equity positions of foreign investors would be suddenly unwound.

Downside risks also lurk, however. Should the labor and housing market in developed countries become further depressed or should the possible fallout in European sovereign debt market unfold, the KOSPI could face considerable downward adjustments. Still, we regard the case where upside risks materialize as our baseline scenario.

**B. Money and Credit**

Kyoobok Lee (leekb@kif.re.kr)

In October and November, the money supply expanded further, but at a slower pace than in the third quarter. The average growth rate of M2, which is called broad money, fell to 7.5% y.o.y., its lowest since 2006.

**Monetary Aggregates**

In October and November, the reserve base (average) increased 11.7% y.o.y., lower than the 13.9% figure in the third quarter. This was mainly because the growth of the foreign sector’s reserve base has slowed down as the growth in foreign exchange reserves has shrunk. In November, the y.o.y. change in the amount of foreign exchange reserves was just $19.3 billion, versus $39.9 billion in September and $72.0 billion in January.

On the other hand, a reduction in both financial companies and government reserve bases was continued. But, a reduction in government reserve base shrank through October and November.

As liquidity growth has slowed, the outstanding of MSBs (monetary stabilization bonds), which is used as a measure for the BOK to control market liquidity, has decreased. In fact, it totaled 164.1 trillion won at the
end of November, 0.4 trillion won less than the end of September 2010. Moreover, while a monthly average of 19.1 trillion won in MSBs was issued in the third quarter of 2010, the same figure was 11.1 trillion won in October and November.

M2 growth in October and November was 7.5% (y.o.y.), lower than the 8.6% of the third quarter 2010. This was because the money supply from overseas slowed as the current account surplus narrowed and the capital & financial account deficit continued. Domestically, in October and November, the average outstanding of beneficial certificates decreased 14.3% y.o.y., or 23.7 trillion won, after a 17.9% decrease in the third quarter of 2010. Also, that of CDs decreased 57.4%, or 57.1 trillion won during the periods between October and November of 2010. Meanwhile, short-term savings deposits’ average outstanding increased 23.2%, or 147.6 trillion won y.o.y., leading M2 growth in October and November. CMA and short-term money in trust increased 5.3 trillion won and 5.5 trillion won in October and November, respectively.

The growth of Lf (liquidity aggregates of financial institutions, previously M3) also continued to decrease, falling to 7.3% in October and November of 2010. It was 8.2% in the third quarter 2010. This was mainly because of the decrease in M2’s growth.

Business and Household Credit

Total depository banks’ corporate lending at the end of the fourth quarter 2010 was 517 trillion won, which was made up of 430 trillion won of small- and medium-sized enterprise (SME) loans and 87 trillion won of large enterprise (LE) loans.

In the fourth quarter, total depository banks’ corporate lending decreased 6.8 trillion won owing to companies’ management of their debt ratios at year-end in December. Specifically, LE loans increased 0.08 trillion won during the period of the fourth quarter 2010, but those decreased 3.7 trillion won in December 2010. Mean-

<table>
<thead>
<tr>
<th>Table II.3 Q.o.Q Changes in Bank Loans</th>
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<tbody>
<tr>
<td>(Unit: tril. won)</td>
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<tr>
<td>Corporate Loans</td>
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<tr>
<td>(LEs)</td>
</tr>
<tr>
<td>(SMEs)</td>
</tr>
<tr>
<td>Household Loans</td>
</tr>
<tr>
<td>(Mortgage*)</td>
</tr>
</tbody>
</table>

Note: 1) Includes mortgage loans.
2) Monthly data is over the previous month.
Source: BOK.
while, SME loans decreased 6.9 trillion won in the fourth quarter 2010 following several consecutive months of decline. The huge decrease in SME loans was mainly due to the large-scale resolution of non-performing loans in December.

Meanwhile, in the fourth quarter, household lending increased 8.9 trillion won more than the 3.7 trillion won of the third quarter, as mortgage loans increased 7.7 trillion won, or more than double the figure for the third quarter 2010. While the housing price stagnated, mortgage loans continued to increase affected by sustained growth in group mortgages, increased individual mortgages in line with increased housing transactions, low lending rates and efforts to increase lending by some banks.

Corporate direct financing increased 4.6 trillion won in the fourth quarter of 2010, more than the 2.1 trillion won of the third quarter. Specifically, corporate bond issuance (public offering) increased 5.1 trillion won through October and November, driven by investment demand owing to the relatively high yields and by issuance demand in line with the sustained upward trend of the economy and the low cost of raising funds. However, in December, it decreased 0.2 trillion won from favorable corporate financing conditions from the stock market, the decreased purchase demand from institutional investors heading into the year-end and an increase in the volume of bonds maturing. Also, in December, CP, which increased in October and November with increasing demand for working funds and funds for M&A, showed a large net redemption due to decreased purchases by MMFs and year-end factors. Meanwhile, financing through the stock market continued to increase, particularly through a paid-in capital increase, thanks to the bullish stock market.

Beneficiary certificates at investment trust management companies (ITMCs) declined sharply except for new-type deposits. Deposits in stock-type investment funds decreased 6.2 trillion won in the fourth quarter. Also bond-type deposits reversed to negative growth in December as bond yields rose.
As bond yields declined, individual investors deposited money in bond-type funds. Consequently, bond-type deposits and bond-equity-type deposits increased 2.7 trillion won and 0.9 trillion won in the third quarter. Meanwhile, new-type deposits increased 3.0 trillion won.

**Outlook for 2011**

In 2011, corporate and household bank lending is expected to continue to rise as the recovery of the Korean economy progresses further. However, its growth will be limited by banks’ strict risk management and by a rise in the base rate. Banks are expected to continue to tighten credit risk management, meaning SMEs may find difficulty obtaining bank loans.

Meanwhile, as upward movements in housing prices have emerged in Seoul and its surrounding areas, household lending will be expected to show solid growth through 2011.

**C. Financial Industries**

1. **Banking Industry**

Hyoungsik Noh (hsnoh@kif.re.kr)

**Asset Growth**

Korean banks’ asset came to 1,881 trillion won in the third quarter of 2010, up 0.2% from the previous quarter thanks to enhanced risk management, despite continued economic recovery. This slowdown in asset growth can be ascribed to resolutions of substandard or below loans amid ongoing corporate restructuring centered on small- and medium-sized enterprises (SMEs) and tighter risk management of real estate PF loans. Cash and due from banks in the banking account even decreased by 4.5 trillion won, a drop of 5.1%. Securities in the same account...
increased by a mere 0.8%, adding up to slowed asset growth.

Total loans by Korean banks were 945.5 trillion won, a 1.0% increase from the end of the second quarter. Corporate loans increased by 1.1% driven by bank loans to large enterprises that hit a record high 87.3 trillion won, increasing by 5.0% from the previous quarter. In contrast loans to small and medium enterprises stayed sluggish thanks to sales/write-offs of delinquent loans and conservative lending standards. Household loans went up slightly in the third quarter by 0.9% to 421.6 trillion won. Other loans, including those via overdraft accounts, climbed a modest 0.1 trillion won. Whereas mortgage loans showed a slow but steady increase of 3.6 trillion won. The slowdown in mortgage loan growth is attributable to sustained weakness in the housing market and slow growth in group mortgages in regard to newly occupied apartments.

**Profitability**

In the third quarter of 2010, the net income of domestic banks increased to 2.7 trillion won, a huge jump over the previous quarter’s figure of 1.2 trillion won. This was largely due to a considerable fall in bad debt expenses for corporate restructuring, from 5.6 trillion won to 3.4 trillion won, despite slight decreases in both interest and non-interest income. Nonetheless, the level of bad debt expenses remained high due to increased provisions for bad debts centered on real estate PF loans after credit risk evaluations.

Net interest income decreased slightly to 9.1 trillion won, a 1.9% drop over the previous quarter. This was driven by a temporary suspension of receivables in the process of corporate restructuring that started around the end of the second quarter. Also in the third quarter of 2010, non-interest income fell to 2.1 trillion won, down 4.5%. While service fees and commissions dropped by 0.2 trillion won, securities-related income steeply rose to 1.7 trillion won, up 0.5 trillion won or 41.7% from the previous quarter. Buoyed by the strong
stock market, banks enjoyed substantial securities-related income from sales of securities and stakes, including those swapped into equity from companies' debts.

The net interest margin of domestic banks from January through September 2010 declined to 2.3%, despite the Bank of Korea (BOK) raising its base rate in July by 0.25%p. Compared to the same period of 2009, the figure 2.3% is rather high, reflecting a rise in market interest rates and net income spreads between loans and deposits.

Soundness and Capital Adequacy

In the third quarter of 2010, the NPL ratio climbed to 2.32%, rising for its third straight quarter after bottoming out at 1.24% in the fourth quarter of 2009. The large increase resulted from a subdued real estate market, a drive for corporate restructuring, and early recognition of latent bad debts in real estate PF loans following a stricter and more conservative asset classification.

In the meantime, the coverage ratio, a measure of domestic banks’ ability to absorb loan losses, deteriorated dramatically to 94.1%. This is the first time it has fallen below 100% since the last quarter of 2004. The BIS capital ratio of domestic banks at the end of the third quarter of 2010 was 14.62%. Total equity increased by 1.2 trillion won in the third quarter, whereas risk-weighted assets decreased by 16.2 trillion won, which resulted in the 0.33%p gain in the ratio from the previous quarter. The tier 1 ratio for the same period was up 0.42%p as well, hitting a historical high of 11.75%.

Outlook

Growth opportunities for Korean banks will slightly improve in 2011. An increase in loan demand from the robust economic recovery, leveling down of bad debt expenses, and the planned reorganization of the indus-
try’s competitive structure will offer a good environment for growth. Sustained weakness in home buying amid a sluggish real estate market may also affect loan growth. Total loan growth will be modest in 2011. Corporate loan growth will be driven by large enterprises’ business investment in line with global economic recovery. However, growth in household loans will be limited by expected increases of the BOK base rate, normalization of debt-to-income ratios, and enhanced surveillance of household debt levels.

In 2011, Korean banks’ profitability should see room for improvement given continued economic recovery, higher BOK base rates, and the normalization of bad debt expenses. The spinning off of card divisions from banks and the latent deterioration of SME loans - including real estate PF loans- may hamper profitability. Interest income will be boosted by rising rates, but this will be mitigated by credit losses. Non-interest income is expected to stay at last year’s levels. Growth in services such as investment advisory and trust business will bolster fee income growth, though this growth will be constrained by beefed up financial consumer protection.

The asset soundness of Korean banks in 2011 is expected to deteriorate slightly, but not lead to great losses. The possibility of losses on household loans is still a concern since debt service capacity may worsen due to sustained weakness in the housing market and rising rates. The polarization in performance between LEs and SMEs may also push the latter’s margins to unsustainable levels. However, since a good portion of latent bad debt has been recognized early, Korean banks should be able to keep asset soundness under control.

Korean banks will be able to adjust comfortably to the new global regulatory framework thanks to steady shoring up of capital adequacy since the global financial crisis. Nonetheless, both the quantity and quality of capital should continue to be reinforced in 2011 to

Financial Markets and Industries

Figure II.15 Total Assets & Card Assets at Credit Card Companies

Figure II.16 Net Income & Amortization of Credit Losses at Credit Card Companies

Table II.7 Financial Indicators of Credit Card Companies

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3Q</td>
<td>4Q</td>
</tr>
<tr>
<td>Adjusted capital ratio</td>
<td>29.7</td>
<td>29.1</td>
</tr>
<tr>
<td>Delinquency ratio</td>
<td>2.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Substandard &amp; below loans ratio</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>ROA</td>
<td>3.8</td>
<td>4.3</td>
</tr>
<tr>
<td>ROE</td>
<td>14.7</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Source: FSS.
guard against a possible deterioration in asset soundness and facilitate the phasing in of new regulatory standards over the coming years.

2. Non-Banking Financial Institutions

Soonho Lee (soonholee@kif.re.kr)

Credit Card Companies

During the third quarter of 2010, the total assets of credit card companies increased 5.4% to 50.9 trillion won, up from 48.3 trillion won in the previous quarter (Figure 2.15). Card assets, which comprise the largest portion of total assets, increased by 8.4% to 32.3 trillion won q.o.q. from increased credit card loans and receivables on credit card lump sum sales. More notably, the outstanding balance of loans & factoring increased from 0.8 trillion won to 1.0 trillion won from 25.0%. Meanwhile, securities and lease & installment assets stayed flat at 8.1 trillion won and 2.8 trillion won, respectively. A decrease in short term financial instruments and tangible assets led to a fall in current & fixed assets of 1.4% to 6.8 trillion won from 6.9 trillion won.

Total net income in the third quarter of 2010 soared 43.9%, or to 528.7 billion won from 367.3 billion won q.o.q. (Figure 2.16). This increase was due to increased merchant fees and revenues on credit card loans. Shinhan Card recorded net profits of 213.1 billion won as the most profitable credit card company, though this was down 19.1% from 263.4 billion won q.o.q. Competitor Samsung Card registered profits of 131.1 billion won from 116.0 billion won q.o.q. Because of initial marketing expenses, the net income of Hana Card, divided from Hanabank, realized losses of 23.3 billion.

There was a decrease in the average adjusted capital ratio, which increased from the previous quarter’s 30.2% to 30.0% (Table 2.7). Meanwhile, the combined delinquency ratio of credit card companies kept
the same level at 1.8%. The substandard & below loans ratio stood at 1.4%, 0.1% lower than in the previous quarter. Credit card companies’ ROA and ROE remained at similar levels of 3.8% and 13.4%, respectively.

With pressure to lower merchant fees anticipated, credit card companies will need to better exploit and uncover niche markets in order to drive profitability. Increased card usage, however, should bring down the delinquency ratio.

Credit Finance Companies Other than Credit Card Companies

In spite of the delay in domestic consumption expenditures recovery in the third quarter of 2010, total assets of credit finance companies increased by 3.3% to 63.4 trillion won from 61.3 trillion won in the preceding quarter (Table II.8). The total assets of leasing companies and installment financing companies grew 4.3% to 24.4 trillion won and 2.7% to 34.5 trillion won, respectively. The total assets of venture capital companies increased by 4.7% to 4.5 trillion won due to growth of cash & cash equivalents and securities. Total durables installment assets in credit finance companies increased by 7.0% to 7.1 trillion won (Figure II.17). Despite delayed economic recovery, an increase of new car purchases was the main factor of the durables installment assets growth. The significant increase in the buying of foreign cars boosted growth of operating lease assets, which were up 1.3% to 7.3 trillion won (Figure II.17). Owing to seasonal trends such as the real estate off-season, house installment assets declined slightly by 1.6% to 0.9 trillion won.

The net income of credit finance companies was 209.9 billion won, a q.o.q. decrease of 1.7% from 213.5 billion won (Table II.9). The better net income of installment financing companies occurred due to reduced operating expenses. The total net income of venture capital companies went up 24.8 billion won from a deficit of 61.7 billion won. This was thanks to increased

Table II.9 Financial Indicators of Credit Finance Companies (Except Credit Card Companies)

(Unit: bil. won, %)

<table>
<thead>
<tr>
<th></th>
<th>2009 3Q</th>
<th>2009 4Q</th>
<th>2010 1Q</th>
<th>2010 2Q</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net income</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lease</td>
<td>50.7</td>
<td>-99.8</td>
<td>91.0</td>
<td>-12.9</td>
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<tr>
<td>Installment</td>
<td>82.7</td>
<td>213.6</td>
<td>184.2</td>
<td>198.0</td>
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<tr>
<td>Venture capital</td>
<td>11.8</td>
<td>92.4</td>
<td>61.7</td>
<td>24.8</td>
</tr>
<tr>
<td>Total</td>
<td>145.2</td>
<td>206.2</td>
<td>213.5</td>
<td>209.9</td>
</tr>
<tr>
<td><strong>ROA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease</td>
<td>1.3</td>
<td>1.7</td>
<td>1.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Installment</td>
<td>1.7</td>
<td>1.9</td>
<td>2.0</td>
<td>2.1</td>
</tr>
<tr>
<td>Venture capital</td>
<td>3.0</td>
<td>3.0</td>
<td>3.1</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Loan loss reserve ratio</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Lease</td>
<td>106.3</td>
<td>108.3</td>
<td>82.5</td>
<td>74.7</td>
</tr>
<tr>
<td>Installment</td>
<td>120.7</td>
<td>104.1</td>
<td>107.1</td>
<td>99.9</td>
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<tr>
<td>Venture capital</td>
<td>58.6</td>
<td>69.1</td>
<td>62.0</td>
<td>52.9</td>
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<tr>
<td><strong>Sub-standard &amp; below loans ratio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease</td>
<td>3.4</td>
<td>3.2</td>
<td>4.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Installment</td>
<td>2.3</td>
<td>2.8</td>
<td>2.7</td>
<td>2.9</td>
</tr>
<tr>
<td>Venture capital</td>
<td>4.5</td>
<td>4.2</td>
<td>4.2</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Adjusted capital ratio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease</td>
<td>17.3</td>
<td>17.9</td>
<td>17.2</td>
<td>16.6</td>
</tr>
<tr>
<td>Installment</td>
<td>15.8</td>
<td>15.5</td>
<td>15.8</td>
<td>16.3</td>
</tr>
<tr>
<td>Venture capital</td>
<td>34.9</td>
<td>31.0</td>
<td>34.2</td>
<td>35.0</td>
</tr>
</tbody>
</table>

Note: Net income is calculated quarterly. Source: FSS.
Revenue from venture financing. The net income of leasing companies, however, was negative 12.9 billion won. Except installment financing companies, ROA decreased. Meanwhile, most credit finance companies saw a deterioration in loan soundness in the quarter. The loan loss reserve ratio and substandard & below loans ratio of credit finance companies both deteriorated. Meanwhile, the capital adequacy ratio of installment financing and venture capital companies improved slightly.

With the expansion of banks into the auto finance area, the profitability of credit finance companies will fall. This highlights the need for new product development. Furthermore, loan soundness will be critical given the risk of new insolvent loans.

**Mutual Credits (MCs)**

This category includes agricultural cooperatives (ACs), fisheries cooperatives (FICs), forestry cooperatives (FOCs) and credit unions (CUs). During the third quarter of 2010, the total assets of mutual credit institutions (MCs) increased slightly by 1.9% q.o.q. to stand at 300.1 trillion won (Table II.10). Total deposits rose by 1.8% to 246.6 trillion won from 242.2 trillion won. Because of the increased tax-free savings limits, the upward trend in deposits continued. Total credits rose about 1.9% from 178.0 trillion won to 181.3 trillion won. Although deposits increased, the ratio of credits to deposits remained at the same level over the third quarter of 2010.

For this quarter most mutual credit institutions registered positive net income (Table II.11), driven by investment revenue from securities such as corporate bonds and overseas investment funds. Also, the low financing costs from the expansion of tax-free savings raised operating income. The total combined net income of MCs was 628.8 billion won in the third quarter of 2010. CUs, ACs, FICs and FOCs registered net income of 112.3 billion won, 437.4 billion won, 15.8 billion won, and 9.3 billion won, respectively.
Most MCs’ ROAs declined slightly. The ROA of ACs, FICs, and FOCs was 1.0%, 0.6%, and 1.1%, respectively, while CUs kept the same level of 0.9%. MCs faced deteriorating loan soundness, compared with the previous quarter. The delinquency ratio of ACs, FICs and FOCs went up 0.1%p to 3.8%, 0.1%p to 6.7%, and 0.3%p to 7.7% respectively. In spite of writing off year-end bad debts, the substandard & below loans ratios of MCs worsened considerably. In all areas, MCs’s loan loss reserve ratio declined, while the net capital ratio improved slightly.

MCs’ total assets and deposits improved in relative terms. To prepare for the risk of deteriorating loan soundness, however, MCs will need to increase their loan-loss reserve ratios and manage their delinquency ratios, meaning they will have to restructure their insolvent loans.

3. Securities Industry

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Assets

The assets of securities companies increased 8.9% to 207 trillion won during the third quarter of 2010, up from 190 trillion won in the same quarter last year (Figure II.18). This was attributable to the increase in marketable securities, especially in bond holdings, which were up 11.6 trillion won. There was also an increase in broker loans and call loans of 2.0 trillion won, while cash and deposits decreased by 0.6 trillion won. Total stockholders’ equity increased 6.7% to 36.1 trillion won from 33.8 trillion won over the same period mainly due to the increase of retained earnings by 1.2 trillion won.

Profitability

During the third quarter, securities companies’ profits increased 5.0% over the same period last year to 957
billion won (Figure II.19). Profits from securities trading drove total profits up, although brokerage commissions went down due to the decreased trading volumes over the same period. In addition, concerns regarding the European sovereign debt crisis and negative views on developed countries’ economic recovery prospects drove stock price volatility.

Meanwhile, the ratio of brokerage commissions to total commissions fell from 71.7% in the third quarter of 2009 to 65.6% in the same quarter of 2010.

Brokerage commissions were the main income source of securities companies, but securities companies tried to diversify their income sources recently. Especially, income from selling asset management products, such as wrap accounts, has been growing.

**Capital Adequacy**

The net capital ratio (net capital over total risk, an indicator of the capital adequacy of securities companies) fell 24.4%p from 558% at the end of the third quarter of 2009 to 534% at the same period of 2010 (Figure II.20). The expansion of bond holdings raised total risk due to the higher exposure to interest rate risk. Although net operating capital went up 7.2% from 26.4 trillion won as of September 2009 to 28.3 trillion won as of September 2010, total risk also increased 12.1% from 4.7 trillion won to 5.3 trillion won over the same period.

**Outlook**

In the first quarter of 2011, the assets of securities companies are projected to increase modestly. The stock market is expected to rise due to the abundant liquidity from low interest rates. Securities companies are expected to be active in stock trading. The asset management market is likely to expand because many investors are finding appropriate investment vehicles hard. In addition, the retirement pension market will
expand since new retirement insurance and money in trusts for retirement pensions will be prohibited from 2011.

Profitability is expected to rise as securities companies diversify their income sources to asset management and futures trading.

Capital adequacy is likely to decrease moderately. The higher profits will push up net operating capital, but total risk is also expected to rise. Since securities companies are tending to enlarge their risk exposure after the calming of global financial crisis, their net capital ratio is expected to deteriorate. However, the net capital ratio will be well above the FSC’s recommended level of 150%.

4. Insurance Industry

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Life Insurance

At the end of September 2010, life insurance industry assets totaled 397.6 trillion won, a 4.2% increase over the previous quarter. Premium income totaled 19,236 billion won, up 7.2% y.o.y. Total assets are estimated to have increased by 8.9% to 422,665 billion won (Table II.13) in FY2010. Premium income is estimated to have risen 4.5% over the previous year to 80,420 billion won (Table II.13). The growth of premium income is mainly due to an increase of endowment insurance and variable life insurance coinciding with economic recovery and a steady stock market rally. Total claims paid in FY2010 are estimated to amount to 47,215 billion won, which would be a 0.3% decrease from the previous year.

The total assets and premium income of the life insurance industry in FY2011 are forecast to trend upward over the previous year. Variable life insurance should rise steadily from robust equity markets and a healthy business environment. In addition, sales through the

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<thead>
<tr>
<th>Table II.13 Life Insurance Industry Indicators</th>
<th>(Units: bil. won, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2006</td>
<td>FY2007</td>
</tr>
<tr>
<td>Total Assets</td>
<td>273,131</td>
</tr>
<tr>
<td>Premium Income</td>
<td>66,455</td>
</tr>
<tr>
<td>Claims Paid</td>
<td>35,144</td>
</tr>
</tbody>
</table>

Notes: 1) Figures in brackets represent percentage changes from the previous year.
2) KIF estimate.
Sources: FSS, Korea Life Insurance Association (KLIA), KIF.

Figure II.21 Business Performance of the Life Insurance Industry

Note: 1) FY2010 are KIF estimates.
Source: FSS, Korea Life Insurance Association (KLIA), KIF.
GA (General Agency) and bancassurance channels appear to have driven life insurance profits over the previous year. Meanwhile, with the low interest rate trend, it is expected that endowment insurance would occur mainly from significant demand for saving-related insurance products. Pure endowment insurance sales are likely to continue to see growth by virtue of steadily increasing demand for elderly-life products as the country’s population grows older.

On the investment side, it is likely that the stock market rally will continue and interest rates will increase as the economy recovers. With the favorable environment, it is expected that investment returns will improve, as should interest income over the previous year. However, there are several issues that life insurers will have to solve in the investment environment such as maturity mismatches, high interest on defined benefit plans sold several years ago, and the development of long-term stable investment products.

Concerning the market structure of the life insurance industry, small & medium-sized life insurers increased their share 1.5%p y.o.y., to hold a 25.6% of the market thanks to increased sales through bancassurance channels and a diversification of sales channels. Meanwhile, the market share of the top three life insurers and foreign life insurers decreased by 1.3%p and 0.2%p, respectively, over the same period last year. The top three are trying to enhance employee efficiency and expertise, while foreign life insurers are also trying to boost their market share by way of aggressive marketing and investment.

As an indicator of the financial soundness of life insurers, the average solvency margin ratio as of FY2010 was around 271.1% (Figure Ⅱ.23). It is required that the domestic life insurers will try to improve financial soundness as the FSS, Financial Supervisory Service adopt more stringent solvency margin standards, known as the RBC (Risk Based Capital) system in FY2011. On the other hand, the life insurers are expected to pursue more efficient and stabler management to guard against any rise in their delinquency ratios.
Non-Life Insurance

Non-life insurance industry assets at the end of September 2010 totaled 94.4 trillion won, a 4.6% increase over the previous quarter. Written premiums totaled 12,101 billion won, up 16.3% y.o.y. The total assets of non-life insurers are estimated to have increased by 12.9% to 97,337 billion won (Table II.14). Premiums written are estimated to have risen 17.3% over the previous year to 49,438 billion won (Table II.14). Total claims paid in FY2010 are estimated to have amounted to 5,127 billion won, which would be a 13.7% decrease from the previous year.

The total assets and premium income of the non-life insurance industry in FY2011 are forecast to trend upward over the previous year as the economy recovers and the investment environment improves. Especially, long-term non-life insurance sales are likely to continue their strong growth by virtue of steadily increasing demand for retirement-related insurance products, and the introduction of elderly life products. Automobile insurance sales are likely to continue to see growth owing to economic recovery and an increase in the sales of high-price cars. However, there seem to coexist negative factors such as the difficulty of raising the automobile insurance premium rate and heated price competition among non-life insurers.

On the investment business side, non-life insurers, like life insurers, are expected to see improved returns from the better environment. Stable asset management is expected for long-term non-life insurance, which should bring about steady cash flow based on the continued inflow in premium income from long-term non-life insurance. Furthermore, an expected rise in the currently low interest rates may facilitate higher returns for interest-bearing assets and reinvesting bonds.

As of the end of September 2010, the market shares of small & medium-sized non-life insurers were down 0.4%p y.o.y. (to 20.9%) while those of the top five non-life insurers and foreign non-life insurers were up 0.6%p y.o.y. (to 76.6%) and down 0.2%p y.o.y. (to...
2.6%), respectively. In particular, the increase in the market share of small & medium-sized non-life insurers was mainly due to growing online automobile insurance sales and the diversification of sales channels. Meanwhile, the decrease in the market share of foreign insurers was mainly due to their business being limited to specific insurance products.

The financial soundness of non-life insurers is forecast to be better from the previous year thanks to the introduction of the RBC and an effective supervisory system like that of life insurers. However, domestic insurers, especially small- and medium-sized ones, may need to expand their solvency margin ratios and asset soundness to prepare for a change in the financial market environment in the future.

### Issues for 2011

The business environment of the insurance industry is expected to be favorable overall in FY2011 thanks to deregulation and reinforced supervision. First of all, earnings should be boosted by economic recovery and an upturn in the financial markets. Demand is expected to rise for new products such as health-related and post retirement-related insurance products as the country grows older and the number of nuclear-family households increase. On the other hand, insurers will offer products for smartphones as the smart phone market seems likely to accelerate.

In the institutional environment, if proposed revisions to the Depositor Protection Act is enforced, it is expected that variable insurance sales will grow as a result of better stability. As retirement insurance and trusts were valid until the end of 2010, competition for retirement-related products is expected to become fiercer. Also, the retirement pension market is expected to expand as the maximum cap of the income tax deduction benefit increases from three million won to four million won. On the other hand, insurers should be prepared to meet changes in the new solvency margin system, which is the RBC system.
If we look at the supervisory aspect of the management environment, there will also be continuous efforts to better protect insurance consumers through the disclosure of work expenses and risk premiums. Illegal activities such as false advertisements and the selling of insurance products by people without legal certificates will be intensely uncovered. Also, insurance fraud should be decreased by such means as closer cooperation between public and private sectors and various reforms within the system.

With major insurance products saturated, life insurers must develop into emerging areas such as overseas markets, pension products, health related products, and IT convergence products. Especially, insurers should develop products related to green growth considering the global trend of strengthening environmental regulation.

Both industry and government initiatives will be crucial in order to secure consumer trust, which is emerging as a major issue. Low credibility among consumers can hinder industry development. Most of all, improving systems and preventing illegal sales and payments will be necessary. Further, firms must strive for transparency through greater disclosure and need to strengthen their educating of consumers. Finally, they will be expected to improve credibility and their image through pursuing social responsibility such as consideration of environmental protection, and supporting the weak and vulnerable.

One of the most critical business issues for Korean insurers is the need to reinforce risk management. Insurers will have to expand and reconstruct their risk management systems with the implementation of RBC system. Further, insurers need to improve their risk management system and increase staff for the setting up of IFRS (International Financial Reporting Standards). On the investment side, they must practice more careful risk management considering the volatility in financial markets.
A. Korean Banks’ Job Field HRM Systems for Developing Financial Professionals

Hyoungsik Noh (hsnoh@kif.re.kr)

1. Background

The financial industry functions as a future growth driver and as an intermediary for the real sector. As a knowledge-based industry, practitioners’ knowledge and skills have to be quite specialized to fulfill the intrinsic function of resolving information asymmetries in the financial markets. This makes securing a solid base of financial professionals a key task.

Banks, as a sound intermediary for the real sector and a cross-seller of various financial products, need to retain a diversity of financial professionals with high-level screening and advisory capabilities.

One common way of securing professionals has been job field HRM (human resources management). Job field HRM is believed to be able to raise competitiveness and productivity by promoting a better organizational structure and more efficient operations through managing similar job areas together. Attracting and retaining talent requires both hiring and managing personnel by job field, and offering an incentive structure by presenting a career path and differentiated compensation scales. Incentive structures such as differentiated compensation are at the heart of HRM for highly skilled professionals.

2. Job Field HRM Systems of Korean Banks and their Problems

The job field is the biggest unit, describing several types of job families that are divided according to tasks.
For banks, for example, the job field of corporate banking would include the job families of corporate product development and corporate sales and marketing. Kookmin Bank and Woori Bank use the term job field, while Shinhan Bank uses career field, and Hana Bank uses job type.

Korean banks began to instill job field HRM since before the 1997 currency crisis, with the introduction of detailed programs based in commercial banks. In 1995, a framework began to take root, as a ‘New HR System’ was introduced, centered on Korea Exchange Bank (KEB), that focused on jobs based on skills and aptitude, as well as merit/performance-linked compensation schemes. In 2002, Woori Bank organized similar work tasks into four job fields (specialized sales group, general business group, specialized management group, general management group), as banks began to flesh out job field HRM systems.

However, banks have found difficulty in implementing job field HRM systems from the hiring stage on. Even among banks that initiated hiring by job field, some have reverted to group hiring and training to retain employees. This is because both the new hire lacks understanding of the job field, and because the bank does not have a perfect awareness of the hire’s skill set at the hiring stage. Rotational placement is recognized as to some extent part of the nature of the banking industry and unavoidable in terms of cultivating high quality managers. Given that much expertise is gained on site, rotations have pros and cons, and initial rotation programs delay the chances for building experience in the assigned job field.

Professionals are generally hired as specialized contract employees. Woori Bank, Kookmin Bank, and Shinhan Bank, etc. frequently hire professionals as specialized contract employees in fields such as IB, risk management and financial engineering. The external hiring market needed by professionals to further their careers is still stuck in the early stages, so the supply and demand of talent is still handled inefficiently, and banks also compete with credit rating agencies, con-

<table>
<thead>
<tr>
<th>Job Field</th>
<th>Kookmin Bank</th>
<th>Shinhan Bank</th>
<th>Woori Bank</th>
<th>Hana Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale Services</td>
<td>Corporate banking</td>
<td>Corporate sales</td>
<td>Corporate</td>
<td>Corporate Banking</td>
</tr>
<tr>
<td>- Corporate finance review and credit analysis</td>
<td>- Foreign exchange</td>
<td>- Corporate product development</td>
<td>- Corporate</td>
<td></td>
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<tr>
<td>- Corporate sales and marketing</td>
<td>- Corporate sales</td>
<td>- Corporate sales support</td>
<td>- Foreign exchange</td>
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<td>- Corporate business planning</td>
<td>- Corporate marketing</td>
<td>- Foreign exchange services</td>
<td>- Corporate</td>
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<tr>
<td>- Securities brokerage business and marketing</td>
<td>- Corporate product planning</td>
<td>- Corporate restructuring</td>
<td>- Investment</td>
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<td>- e-business</td>
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<td>- International sales support</td>
<td>development</td>
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Table 3.2: Job Fields/Families of the Big 4 Korean Banks

<table>
<thead>
<tr>
<th>Examples</th>
<th>Wholesale services</th>
<th>Corporate Services</th>
<th>Corporate Banking</th>
<th>Corporate</th>
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<td>- Corporate banking</td>
<td>- Corporate sales</td>
<td>- Corporate</td>
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<td>- Foreign exchange</td>
<td>- Corporate sales support</td>
<td>- Corporate</td>
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<td>- Corporate marketing</td>
<td>- Foreign exchange services</td>
<td>- Corporate</td>
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<td></td>
<td>- Corporate product planning</td>
<td>- Corporate restructuring</td>
<td>- Investment</td>
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<td></td>
<td></td>
<td>- International sales support</td>
<td>development</td>
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<td></td>
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<td>- Overseas sales support</td>
<td>Derivatives</td>
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<td></td>
<td></td>
<td>- Branch support</td>
<td>products</td>
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<td>- Internal asset mgmt.</td>
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<td>- Trust business</td>
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<td>- FX management</td>
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<td>- RM</td>
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<td>- International financing</td>
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<td>- Floor</td>
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<td>- Marketing</td>
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<td></td>
<td>- Clerk</td>
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</tbody>
</table>
sulting firms, and the FSS. Since HR and planning authority is centralized, it is hard for business line heads to exercise discretion in hiring professionals externally. At present, the fit of hires recommended by business line heads is judged by HR departments or agreed to jointly. Since departments are constrained by the central management’s budget controls, it’s impossible to directly hire and provide sufficient and timely pay and other incentives to talented personnel. Opportunities for promotion above branch head level are concentrated among general managers, making it hard to offer a compelling career vision for professionals.

For credit officers, who may be categorized into a job field, in a detailed comparison, their compensation levels are at the higher end globally, so professional pay scales are not differentiated as much as the absolute levels. In a job field system that roughly separates general from specialized employees, team-based performance pay does function to a certain extent as an incentive system for professionals. When further classifying professional employees, however, team performance pay is not sufficient by itself to serve as motivation.

Banks do an inadequate job both of forecasting core hiring needs based on their long-term vision and strategy and of putting together systematic internal development plans. Surveyed banks are, however, internally developing professionals through training centers at the holding company level, operating a standby HR system, and conducting training programs within the bank.

In terms of training infrastructure, graduate schools and training institutes do not provide programs that measure up to market demands. Top universities’ finance MBA programs do exist, but are limited by the MBA characteristics of fostering general managers. The Korea Banking Institute provides further education programs for practitioners, yet does not offer intensive training. In these circumstances, there is inadequate supply of specialized training programs able to elevate expertise through job task training, so each bank has to do so itself. Large banks operate their own training programs, but smaller banks are lacking in resources to
operate such programs.

Banks do offer performance pay systems by team and individual employee, but since the latter may be hard to evaluate, it is not conducted across all job fields.

3. Possible Improvements and Conclusions

Establishing job field HRM systems will require checking whether the following conditions are being met: Hiring is done by job field, and mapping is done according to job profile and skill set. Career development is well supported, such as through in-depth, targeted training and management training. Incentive systems, such as offering an internal fast track, differentiated pay scales, and opportunities for making career choices, are in place.

Currently, since the external hiring market is not well established, banks need to fulfill one of the career goals of professionals of improving their position through promotion. To this end it is worthwhile to consider widening the door to professionals becoming executives or employing a new executive program for professionals to go beyond branch head level.

Currently, internal development is focused on credit officers or relationship managers, but expanding this and getting infusions of outside talent are necessary.

Each bank’s training programs should be turned into modules, and excepting those modules that have particular value for an individual bank’s unique characteristics or have know-how that cannot be shared, they should be turned into a joint program.

Compensation schemes must be carried out in line with the intent of job field HRM. Grading pay by evaluating capabilities and performance, the current performance pay that is mostly team-based should be converted to the one that sufficiently features individual performance pay. Along with monetary rewards, repu-
tional and non-monetary rewards that professionals may easily feel are lacking must also be considered.

Since HRM can take on the flavor of a bank’s management philosophy, consistent supervisory policy implementation is a struggle, so model cases of fostering professionals need to be studied and disseminated.

B. The Dollar Carry-Trade in the International Financial Markets and its Implications

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Yoonsok Lee (yslee@kif.re.kr)

The carry-trade may be defined as leveraged trading that takes cross-currency positions using interest rate differentials amid conditions of low exchange rate volatility. Low interest rates in the US and other advanced economies and rapid recovery in emerging economies following the global financial crisis created an environment conducive to carry-trading. This paper shall look at recent trends in and the outlook for the carry-trade to provide policy implications regarding capital flows.

1. The Emergence of the Carry-Trade

As the global financial crisis calmed thanks to aggressive responses by the US and other major economies, global financial market uncertainty eased and the appetite for risk increased. The VIX index, which shows the degree of investor unease, and the TED spread that serves as a risk indicator for bond and credit markets, have been stabilizing downward since 2009. With risk aversion easing and the flight to quality phenomenon largely going away, the Emerging Market Bond Index (EMBI+) that gauges the degree of emerging market risk also has been stabilizing downward.
Furthermore, from 2009, global foreign exchange markets stabilized, and countries’ implied volatility diminished markedly, suggesting that the risk factors involved in the carry-trade are fading away.

Following the US subprime crisis, the Federal Reserve lowered policy rates nine times from September 2007, while the euro zone and Japan also adopted low interest rate policies. This has widened the interest gap with emerging market economies. Policy rates in the US, the euro zone, and Japan are at unprecedented low levels of 0.25%, 1.0%, and 0.1%, respectively. Conversely, emerging market rates, such as in Brazil and Indonesia, have gone down relatively modestly, widening the interest rate gap with advanced economies to over 5%p. International financial market stability and the interest rate gap have combined to form a favorable environment for the carry-trade.

2. The Dollar Carry-Trade

In the past, the yen was the primary funding currency in the carry-trade, but with the low interest rates in the US, the dollar has predominated since 2009. As the Federal Reserve lowered the federal funds rate and conducted quantitative easing policies by buying up government bonds, dollar liquidity swelled. From September 2009, the dollar LIBOR rate dipped below that of the yen (in early October, the 3 month dollar LIBOR rate was 0.28% versus 0.34% for the yen), which expanded the dollar’s role as the funding currency.

The carry-to-risk (CTR) ratio indicates the level of attractiveness of the dollar carry-trade. The CRT ratio is split into the interest rate gap between the borrowed and invested currencies and the future exchange rate volatility, with the higher the value indicating higher attractiveness of the carry-trade.

It can be confirmed that the carry-trade targeting Australia and emerging markets, which boast rapid economic growth and higher interest rates, has been growing recently. For the Australian or New Zealand dollar,
the CRT ratio has been rising since 2009. Beyond this, the Brazilian real, Indonesian rupiah and other emerging market currencies have seen the same phenomenon beginning in 2009. The negative correlations between the CRT ratio and the dollar exchange rate of the invested currencies indicate the inflows of overseas capital into the target countries.

Meanwhile, US banks’ overseas lending had been growing through 2007 before diminishing, in 2008 from the global financial crisis. This turned to a dramatic decline in the first half of 2009 before again returning to growth. Net lending growth went from $8.3 billion in 2007 to $2.8 billion in 2008. During the first half of 2009, lending growth dropped a full $2.5 billion, but rose $4.6 billion in the second half, and soared $10.2 billion in the first quarter of 2010.

Thus, one can find indirect evidence of the dollar carry-trade from the increase in US banks’ overseas lending since the second half of 2009.

Funding through short-term and long-term bond issuance in international financial markets is healthy in the US. In the US, the issuance market has been robust, centered on long-term bonds, with total issuance steadily rising. US bond issuance outstanding rose 12.1% from $729.7 billion at the end of 2008 to $6.77 trillion at the end of March 2010. Thus, beyond bank lending, bond issuance also indirectly supports the fact that the dollar serves as a funding currency for the carry-trade.

The CRT ratio for the Korean won has consistently been rising since early 2009, encouraging won-targeted trades. The global carry-trade using low rate dollars as funding is believed to have gotten off the ground in Korea from 2009. Korea’s policy rate of 2.0% is higher than the US Federal funds rate of 0.25%. Korea’s country risk and the liquidity risk in international financial markets eased from 2009, so net purchases of domestic bonds by foreigners persisted. Foreign bond investment inflows were just $7.73 billion in 2008, but rose to $23.72 billion in 2009 and $10.47 billion in the first
half of 2010, and it is assumed that a portion of this capital owes to the carry-trade.

3. Dollar Carry-Trade Outlook & Implications

Since 2009, it is estimated that large-scale dollar carry-trades have been conducted in the international financial markets though from the middle of 2010, though this somewhat moderated from global destabilizing factors, such as the sovereign debt crises in southern Europe. Owing to the debt crises in southern Europe, however, the low interest rate regime that has propped up the dollar carry-trade looks set to continue for the time being.

The possibility does exist that dollar carry-trade funds will be unwound depending on how Europe’s debt crises turn out. The EU’s stress tests of European banks found just 7 of 91 banks to have failed the test, and although the stress test results were favorable, European countries’ fiscal austerity measures to address their excessive sovereign debt problems will inevitably have a contractionary effect on the economy, and this continues to be a destabilizing factor for the global financial markets.

In the longer term, the dollar carry-trade may not continue to grow as the US moves away from its low interest rate policies. The yen carry-trade is driven by Japan’s low interest rates during its over 10 year-long recession. As the US recovers from the global financial crisis, its low interest rates are projected not to last, bringing down the dollar carry-trade with it.

Yet even if the dollar carry-trade does not last into the long-term, multiple currencies feature low rates, so the carry-trade is expected to persist using such countries for the funding currency. Yen, euro, Swiss franc, and pound-denominated funds are being traded at sub-1% rates. As the euro weakens from the fiscal crises in southern Europe, the funding currency for carry-trades could switch from the dollar to the euro.
Excessive inflows of carry-trade funds bring about currency appreciation and monetary volume increases, so exchange rate policies need to factor in such potential side effects. The growth of the dollar carry-trade is highly likely to further push down the dollar and push up target countries’ currencies, cutting into such countries’ current account surpluses. Carry-trade fund inflows may also limit the effectiveness of monetary policy by applying downward pressure on market rates.

Funding flows from the dollar carry-trade do improve target countries’ foreign currency liquidity, but as the potential for sudden capital flight down the road also exists, such flows are highly likely to act as a financial destabilizing factor. If carry-trade funds rapidly flow out, this will send market and exchange rates soaring and destabilize target country economies, particularly for emerging markets.

Since carry-trade positions take much longer to build than to unwind, this capital flight must be guarded against. More stringent monitoring of changes in global market conditions and capital movements, and greater international coordination are needed to guard against the potential for sudden outflows.

C. FX Financing and the Interconnectedness of Financial Markets

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1. Introduction

The recent global financial crisis has highlighted the critical role of financial markets in the propagation of adverse shocks. Together with the rest of the world, the Korean economy was hit hard in mid-September 2008 following the bankruptcy of Lehman Brothers. Korea experienced massive capital outflows and serious difficulties in refinancing foreign currency denominated...
Several reasons are put forward for why the Korean financial system has been so vulnerable to capital outflows and rollover risk on foreign debt. First, the high proportion of short-term foreign debt is usually discussed. Over the past decade, the proportion of short-term foreign debt sharply increased. In particular, foreign bank branches’ external debt went up dramatically in 2006 and 2007, and their share of all banking sector external debt soared from 45% in 2005 to 59% in 2007. (Table III.4) Yet domestic banks have faced even more severe shortages in the foreign currency liquidity. Thus, the high proportion of short-term foreign debt alone is not satisfactory in explaining Korea’s exceptionally vulnerable situation.

Second, the interconnectedness of local banks, foreign branches and other financial markets associated with this external debt has been offered as a new notable characteristic not prevalent in the late 1990’s IMF crisis. It is plausible that this interconnectedness amplified the external debt problem, as external debt, FX swaps, foreign branches’ domestic bond investment, export bill purchases, and hedging of FX forward contracts all generally rose before the recent crisis.

This article looks at this second culprit by attempting to describe how foreign external funding and domestic financial markets are intertwined with respect to capital flows.

2. Foreign Currency Financing and FX Swaps

A domestic Korean bank can raise foreign currency funds in two ways: borrowing directly in the foreign currency money markets or borrowing domestic currency and converting the proceeds into foreign currency through an FX swap (foreign exchange swap). When a Korean bank raises U.S. dollars via an FX swap, it exchanges Korean won for dollars at the foreign exchange spot rate while agreeing to exchange in
the reverse direction on the maturity date at the forward rate. Since Korean banks’ counterparties in FX swaps are typically foreign bank branches, they are interconnected.

Figure 3.2 exhibits how foreign bank branches and Korean banks are interconnected through FX swaps. It shows the position changes of foreign bank branches (left panel) and Korean banks (right panel) in three steps. In each step, the left rectangle represents a transaction at time $t$ and the right rectangle represents a transaction at $t+s$, the date of maturity of borrowing or FX swap. The rectangle above the horizontal axis denotes capital inflows while a rectangle below the axis denotes capital outflows. Currency units of transactions are marked inside the rectangles.

The first step, or top, of the left panel shows that foreign bank branches borrow in U.S. dollars (inflows) and repay the principal and interest in the future (outflows). Likewise, the first step of the right panel exhibits Korean banks’ financing (for instance, deposits) and repayment in Korean won. In the second step (middle of the panels), foreign bank branches (Korean banks) convert U.S. dollars (Korean won) into Korean won (U.S. dollars) via an FX swap for a short-term contract. Similarly, foreign bank branches and Korean banks can enter into currency swap agreements for a long-term contract. Foreign bank branches (Korean banks) end up with Korean won denominated funds (U.S. dollar denominated funds), as depicted in the third step (bottom of the each panel). The third steps without the first and the second steps indicate cases where the foreign bank branches directly raise funds in Korean won and where Korean banks directly borrow money in U.S. dollars.

Finally, foreign bank branches invest the proceeds in Korean won-denominated domestic bonds or in interest rate swaps, while Korean banks use the funds to extend loans to importers and for factoring for exporters etc.

This article mentioned that external debt, FX swaps, foreign branches’ domestic bond investment, export
bill purchases, and hedging of FX forward contracts all generally rose before the recent crisis. This synchronization of market movements is explained by the financing mechanism and capital flows in Figure III.9.

3. Impact of Foreign Capital Outflows on the Domestic Financial System

An FX swap can be viewed as a simple lending and borrowing transaction between financial institutions, with the only difference being that there are currencies involved. That is, an FX swap is equivalent to a transaction in which a foreign bank branch lends foreign currency to Korean banks, while borrowing Korean won from Korean banks. During the crisis, foreign banks in advanced countries hit by an adverse liquidity shock reduced cross-border lending and also reduced funding to foreign branches to bolster head office balance sheets. The retreat of foreign banks’ lending led to a severe dislocation from the FX swap market and caused funding difficulties for Korean banks. Therefore, when liquidity conditions tightened in foreign countries, Korean banks suffered from foreign currency liquidity problems, not only in direct borrowings but also in indirect funding through FX swaps.

Moreover, the decrease in FX swaps brought about a decline in foreign branch investment in the Korean bond market and early termination of interest rate swaps through the shrinking of their won operations.

Figure III.10 illustrates the two channels through which external shocks were transmitted to Korean banks. Indeed, as Cetorelli and Goldberg (2010) point out, international banking linkages are viewed as having spread the profound difficulties from the financial crisis that began in advanced counties to emerging economies, including Korea1).

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4. Concluding Remarks

The extent of international financial integration became painfully evident to Korea during the recent global crisis, with the insecurity of international financial markets spreading foreign currency funding pressure to the domestic banking system. High short-term external debt, which had built up from banks’ excessive short-term borrowings, facilitated the immediate and the powerful transmission of external shocks into the domestic economy and raised concerns over another potential currency crisis in Korea.

To reduce the vulnerability of the foreign exchange market to external shocks, the Korean government adopted a key measure in June 2010 to directly regulate the total size of FX swap transactions by imposing a limit on forward positions according to bank capital. This new regulation is expected to decrease the level of risk exposure in the banking system, but may have serious adverse effects on trade financing and some FX hedging transactions.