INTERNATIONAL MONETARY FUND

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# REPUBLIC OF KOREA

## 2012 ARTICLE IV CONSULTATION

September 2012

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2012 Article IV consultation with the Republic of Korea, the following documents have been released and are included in this package:

- **Staff Report** for the 2012 Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on June 12, 2012, with the officials of the Republic of Korea on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on July 30, 2012. The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.
- **Staff Statement** of August 27, 2012
- **Public Information Notice** (PIN) summarizing the views of the Executive Board as expressed during its August 27, 2012 discussion of the staff report that concluded the Article IV consultation.

The policy of publication of staff reports and other documents allows for the deletion of market-sensitive information.

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INTERNATIONAL MONETARY FUND

# REPUBLIC OF KOREA

## STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION

July 30, 2012

## KEY ISSUES

**Near-term outlook.** The Korean economy is slowing in the face of strong global headwinds. It is projected to bottom out during the course of 2012, regaining momentum towards the end of the year, in line with the global recovery. The main short-term risk to the outlook is a further intensification of the euro area crisis and its spillover. Parliamentary elections took place in April and the presidential election is scheduled for December, making 2012 a year of political transition.

**Managing risks to growth while preserving macroeconomic soundness**. The near-term challenge is to guard against the risks to growth from persistent weaknesses in the global economy. Fiscal policy should continue to support growth within the constraints of the current budget. Following an extended pause, the Bank of Korea has recently eased monetary policy in view of the weaker-than-expected economic outlook. Looking ahead, the economy is expected to slowly strengthen in the second half of 2012 and monetary policy normalization should resume in 2013 once signs emerge that the negative output gap is closing. In the event of a significant downside scenario, the economy has sufficient policy space to respond, especially on the fiscal side.

**Safeguarding financial stability.** The external vulnerability of the Korean financial system has diminished considerably since 2008, reflecting higher foreign reserves relative to short-term debt, lower reliance on external funding for the banks, and a reduction in foreign currency maturity mismatches. Despite this progress, potential vulnerabilities remain as Korea has one of the largest and most open capital markets and is exposed to volatile capital flows and foreign currency funding risks.

**Enhancing inclusiveness and sustainability.** Social spending to ameliorate income inequality should be gradually raised, accompanied by strengthened revenue performance to maintain the overall fiscal consolidation path. Labor market and service sector reforms should continue to address income inequality and boost growth potential.

Approved By
**Markus Rodlauer and Vivek Arora**

Discussions took place in Seoul during May 30–June 12, 2012. The staff team comprised Messrs. Khor (head), Rumbaugh, Ree, Elekdag and Mmes. Jain-Chandra (all APD) and Iorgova (MCM). Mr. Lee (OED) participated in key policy meetings.

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## APPENDIXES

# INTRODUCTION

1. **Korea's rapid recovery in 2010 has stalled in the face of strong headwinds from the global economy.** In the near term, the government's main challenge is to contain the fallout of the euro area crisis. Korea's impressive growth record in the past has in large part been engendered by its openness to global trade and international finance. However, this close integration has also meant that it is vulnerable to external shocks during periods of sharply slowing global growth and elevated financial stress. In response, the authorities have made concerted efforts to boost the resilience of the financial system and external vulnerabilities have been greatly reduced since 2008.

2. **The macroeconomic policy mix encompasses an accommodative monetary policy and a broadly neutral fiscal stance**. The government is committed to medium-term fiscal consolidation to create policy space to deal with challenges from an aging population and tail risk events. Fiscal spending was front-loaded in 2012 to support the economy, while maintaining the overall consolidation path. Notwithstanding a decline in headline inflation, inflationary expectations continue to be elevated and monetary policy remains accommodative, particularly with the recent cut in the policy rate. The exchange rate is moderately weaker than warranted by fundamentals. However, this reflects, in part, the risk premium that investors attach to the Korean won in the current environment of heightened uncertainty in international financial markets. Since the last Article IV consultation, the exchange rate has moved flexibly in response to market conditions.

3. **Over the medium term, the policy priorities include boosting potential growth and ameliorating income inequality.** Policies that lead to higher participation rates will be needed to enhance labor inputs in the face of rapid aging to boost the economy's productive capacity. As the economy matures further and the sources of growth shift to domestic demand, sustaining growth will also necessitate measures to boost service sector productivity. This should also pave the way for more inclusive growth.

# THE ECONOMIC CONTEXT

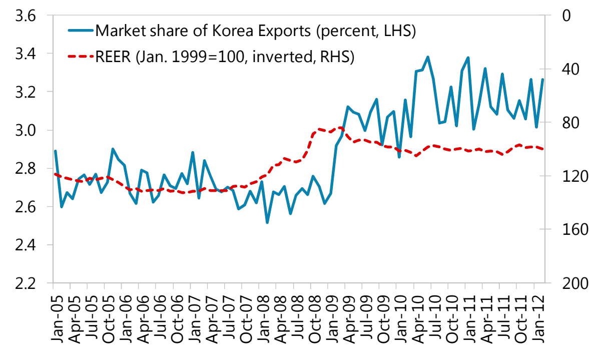
## A. Slowing Growth Amid Heightened Global Uncertainty

4. **After a strong rebound in 2010, growth has moderated since 2011 in line with global economic developments.** A housing supply overhang and negative base effects from the strong expansion of fixed investment in 2010 served to drag down overall growth in 2011 to 3.6 percent from 6.3 percent in 2010. High household indebtedness and weak wage growth also weighed on private consumption. As the euro area crisis intensified in August–September 2011, growth momentum stalled in Korea. Growth rebounded in the first quarter of 2012 on a sequential basis due to stronger-than-anticipated investment in the information technology sector and the front-loading of the budget. However, this pickup has proved to be short-lived as weaknesses in the global economy have fed into a widespread slowing of growth momentum. As a result, exports and fixed investment have weakened sharply in the second quarter of 2012.

**5. Slowing growth and moderating commodity prices have led to a deceleration in inflationary pressure.** Inflation had remained elevated around 4 percent in 2011, about 1 percent above the Bank of Korea's (BOK) central inflation target, reflecting high commodity prices and other transitory supply-side shocks as well as demand-side pressures from the earlier expansion. More recently, in line with the slowing activity and retreating commodity prices, headline inflation has decelerated to 2.2 percent in June 2012, aided by the introduction of government subsidies for child care services.

**6. Korea's export sector is globally competitive and diversifying into new markets.** Exports grew by around 25 percent in 2010–11, reflecting strong branding efforts by Korean firms, sustained investment in research and development (R&D), and a relatively favourable exchange rate. However, in line with the global slowdown, exports have also recently slowed. The Free Trade Agreements (FTAs) with the European Union and United States,[1] which promote a high degree of trade liberalization and include the comprehensive liberalization of services and investment, should result in further enhanced two-way trade going forward.

**Korea's Share in Global Export Markets**




Sources: IMF, *Direction of Trade*, and Information Notice System.

**7. Reflecting swings in global risk aversion, capital flows into Korea have been highly volatile.** Following the August–September 2011 spike in risk aversion, Korea witnessed a surge in capital outflows of around US$15 billion (including outflows from European banks) in the third quarter. The authorities intervened to cushion the impact, leading to a decline of reserves by US$8 billion; however, the exchange rate still depreciated by about 10 percent. Resurgent risk appetite in the first quarter of 2012 led to a strong resumption of portfolio equity and fixed income inflows, which however reversed in the second quarter with the intensification of the euro area crisis.

**8. Banking system soundness indicators remain strong.** Domestic banks are well capitalized, with an average capital adequacy ratio of 14 percent at end-2011. Moreover, domestic banks have markedly enhanced their foreign currency liquidity positions since the global financial crisis (GFC). Their foreign currency liquidity ratio[2] at end-April 2012 stood at 108 percent, above the guidance ratio of 85 percent. Also, the recently imposed regulatory ceiling on loan-to-deposit ratios (of 100 percent) has been met by all domestic commercial banks. As a result, the growth of bank lending to the household sector has been subdued in 2012. However, lending to households from

[1] The FTA with the European Union came into effect in July 2011, and the FTA with the United States came into effect in March 2012.

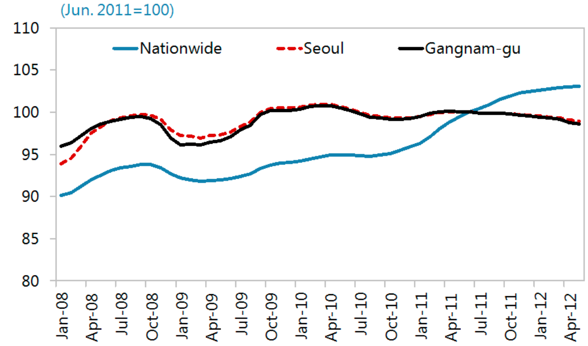
[2] The liquidity ratio is defined as the ratio of liquid foreign exchange (FX) assets with remaining maturities of three months or less to liquid FX liabilities with remaining maturities of three months or less.

non-bank financial institutions (NBFIs) has remained brisk. Preparations for Basel III are proceeding smoothly, and related rules and regulations are expected to be ready by end-2012.

**9. Housing prices have peaked in Seoul but are rising in the rest of Korea.** Following a protracted period of rising prices, housing prices in Seoul have remained weak due to a still large, albeit declining, inventory of unsold homes and limited expectation of price appreciation. The steady rise in housing prices outside Seoul (which have moderated recently) has been supported by contracting supply, a rapid increase in rents, and a rise in demand supported by strong non-bank lending. In response to the weakness in the Seoul housing market, the authorities have relaxed regulations in May 2012, including by raising loan-to-value (LTV) and debt-to-income (DTI) ratios applied to some high-house price districts.

Apartment Prices Index

(Jun. 2011=100)




Source: CEIC Data Company Ltd.

## B. Outlook and Risks—Managing External Downside Risks

***Staff's Views***

**10. Growth is expected to slowly recover in the latter part of 2012, with the negative output gap closing in 2013.** Staff's baseline projections suggest that the economy will bottom out in the second quarter of 2012 and slowly strengthen during the second half of 2012, with a small negative output gap projected for the year. Growth is expected to pick up more strongly in 2013 in line with the projected trajectory of global recovery, closing the output gap. On the domestic demand side, fixed investment is expected to recover in line with exports, as it is largely geared towards the tradable sector. At the same time, private consumption, supported by stronger wage growth and moderating oil prices, should gradually return to trend growth after being held back by the high level of household debt. Real GDP growth is projected at 3 percent in 2012 and around 4 percent in 2013.

**11. Inflation, which has moderated recently, will likely pick up as the economy strengthens in 2013.** Staff estimates suggest that in the absence of recent administrative measures, such as subsidies for child care, headline inflation would be higher by about ½ percentage point. With the dissipation of the favorable base effects underpinning the recent decline, inflation is projected to rise to around 2.8 percent, slightly below the BOK's central inflation target, by the end of 2012. Some inflation risks remain, as reflected in elevated inflationary expectations (3.7 percent in June) and the possibility of an upward adjustment in utility tariffs.

**12. Risks to the near-term outlook are tilted sharply to the downside primarily due to the fragilities in the global economy.** The most immediate risk is still that delayed or insufficient policy action will further escalate the euro area crisis. As noted in the June 2012 *World Economic Outlook*

*Update*, the situation in the euro area will likely remain precarious until all policy action needed for a resolution of the crisis has been taken. While the direct exposure to Europe is not high, if weaknesses in Europe spill over to the United States and China, the impact on Korea can be substantial. Although oil prices have recently declined along with global weakness, an oil price increase stemming from geopolitical concerns in the Middle East cannot be ruled out. Given that China is Korea's largest trading partner, a more substantial slowing of China's growth would have a considerable impact. The *2012 Spillover Report* estimates that a 1 percentage point reduction in investment growth in China would lead to a 0.6 percentage point decline in Korea's growth. Another tail risk arises from the longstanding uncertainty associated with North Korea (see the Risk Assessment Matrix).

13. **Over the medium term, GDP growth is projected at 4 percent, below the pre-crisis average (of around 5 percent).** This moderation reflects mainly rapid aging and declining working age population growth. The authorities are pursuing the rebalancing of the sources of growth toward domestic demand to ensure more sustainable and inclusive growth. This could lead to weaker potential growth as productivity in the non-tradable sector tends to be lower. Boosting service sector productivity will need sustained structural reforms, the gains from which will take time to materialize.

***The Authorities' Views***

14. **The authorities broadly agreed with the staff's assessment of the near-term outlook.** They also expected the economy to remain weak for most of the year due to elevated global uncertainties, and foresaw a gradual strengthening of the economy only in the latter part of the year. They expected the economy to grow at a moderate pace, led by domestic demand, with private consumption underpinned by continued job growth, wage increases, and lower oil prices. Investment is expected to maintain its relatively strong growth, despite weak exports, led by forward-looking, globally competitive, and cash-rich companies, which are positioning to garner market share. However, in view of a worsening global outlook, the Ministry of Strategy and Finance (MOSF) revised down its growth forecast in June to 3.3 percent for 2012 and 4.3 percent in 2013. More recently, with weaker-than-expected growth in the second quarter, in July, the BOK revised down its growth forecast to 3 percent in 2012 and 3.8 percent in 2013.

15. **The authorities also expressed concerns about the elevated downside risks**. In line with staff views, they considered the most pressing downside risk to be a further intensification of the euro area crisis. They argued that this could have a serious impact on Korea; in addition to the direct trade exposure to Europe, the indirect exposure via sizeable Chinese exports to the European Union rendered Korea vulnerable. They also viewed a possible increase in oil prices following from an escalation of geopolitical tensions as another risk.

# MANAGING THE RISKS TO GROWTH WHILE PRESERVING MACROECONOMIC SOUNDNESS

*The near-term challenge is to manage the risks to growth in an uncertain external environment. While continuing to pursue medium-term consolidation objectives, fiscal policy should support growth within the confines of the current budget. Monetary policy is accommodative and normalization should resume once the economy strengthens. The exchange rate should remain flexible with intervention limited to smoothing excessive volatility.*

## Background

**16. The current macro policy mix combines an accommodative monetary policy and a broadly neutral fiscal stance.** Somewhat weaker economic growth is likely to limit the ability to exceed the revenue forecast in the 2012 budget, as typically occurs. Therefore, the overall balance (excluding social security funds) is expected to record a deficit of about 0.9 percent of GDP, compared with the 2011 outturn of a 1.1 percent deficit. After putting the policy rate on hold for a year, the BOK reduced it by 25 bps in July 2012, in response to the weakening economic outlook, lower inflation, and elevated global uncertainty. Hence, monetary policy continues to be accommodative. During the global financial crisis, international reserves declined sharply and were subsequently rebuilt during 2009–11. Since the 2011 Article IV consultation, the exchange rate has moved freely and the real effective rate (REER) is estimated to be moderately undervalued (see Box 1).

### *Staff's Views*

**17. For fiscal policy, the near-term challenge is to support growth while maintaining medium-term efforts to create fiscal space.** Staff views the 2012 budget targets as appropriate under the baseline scenario and supports the government's commitment to medium-term consolidation. The government's effort to resist pressures for populist spending in the current political cycle is welcome and helps avoid introducing spending programs that could prove difficult to unwind and risk compromising consolidation plans going forward. Reflecting global weakness, the authorities responded by front-loading 60 percent of the spending to the first half of the year, even though this would imply a slight fiscal drag in the second half as they had expected the economy to strengthen by then. However, given that the economy is likely to remain weak for longer than anticipated, ensuring that the budget is fully implemented would be appropriate (in contrast to the typical experience of underspending by 3–5 percent). Staff also recognized that there was scope to provide some additional support through the temporary and cautious use of

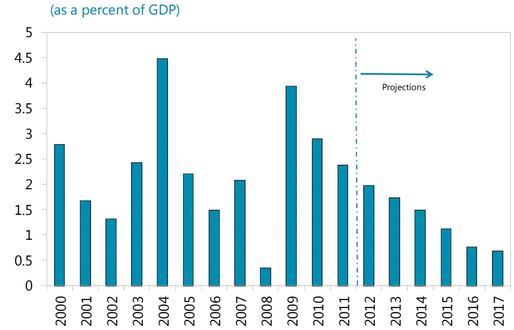
## Box 1. External Sector Assessment[1]

*Staff assesses that the current account position is stronger than implied by medium-term fundamentals and appropriate policies (including in partner countries). Also, the Korean won is estimated to be moderately undervalued. This assessment is based on various empirical methodologies and broader considerations, which are outlined below.*

**Consultative Group on Exchange Rate Assessment (CGER)**: The CGER methodologies suggest that the exchange rate is moderately undervalued using an average of the three methodologies. These estimates are broadly in line with those suggested by the CGER during the 2011 Article IV consultation.

**External Balance Assessment (EBA)**: The EBA is a new methodology that is being developed in the context of the Pilot External Sector Report, to build on the base of the CGER with some enhancements.[2] It comprises three methods, based on its corresponding CGER predecessor. The real exchange rate method finds moderate undervaluation. The successor to the macrobalances approach is based on a current account (CA) regression that produces CA gaps, which include the sum of the estimated contributions of policy gaps and the regression residual. The estimates suggest that the CA is some 1 percent of GDP above that suggested by fundamentals and appropriate policies, reflecting in part the need for fiscal adjustment in major advanced economies and limited social protection in Korea.

**Korea: Current Account Balance**
(as a percent of GDP)



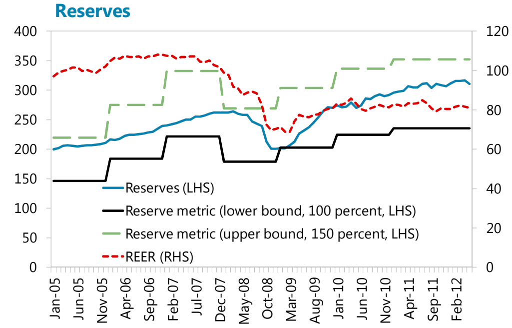

Sources: CEIC Data Company Ltd.; IMF staff estimates.

***Other considerations***:

**Behavior of the real exchange rate**: The REER remains around 7 percent below its historical average and about 20 percent below the average level during 2005–08, a period of slower reserve accumulation. The REER has appreciated by around 13 percent since the fall of 2008, when it came under strong depreciation pressure.

**Behavior of the current account**: The current account has been on a downward path in recent years and is in moderate surplus (2.4 percent of GDP in 2011). It is projected to continue to narrow as domestic demand growth is projected to increase over the medium term.

**Korea - Real Effective Exchange Rate and Reserves**




Sources: CEIC Data Company Ltd.; and IMF staff estimates.

**International reserves and their adequacy**: While the BOK has intervened after the global financial crisis, the resulting reserve accumulation was to rebuild reserves back to the pre-crisis trend. Current reserve levels remain in line with standard adequacy indicators. Using the most widely used metric for emerging market economies, reserves are 160 percent of short-term debt. The Fund's composite reserve metric is constructed to reflect four possible drains on the balance of payments during periods of exchange market pressure, namely, short-term debt outflow, broad money loss, decline in exports, and other portfolio liabilities outflows. Korea's FX reserves are around 130 percent of this combined metric, within the range of 100–150 percent, which is considered adequate. In light of this, there is no need for further reserve accumulation beyond what would be needed to keep pace with rising foreign liabilities over time.

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[1]Prepared by Sonali Jain-Chandra.

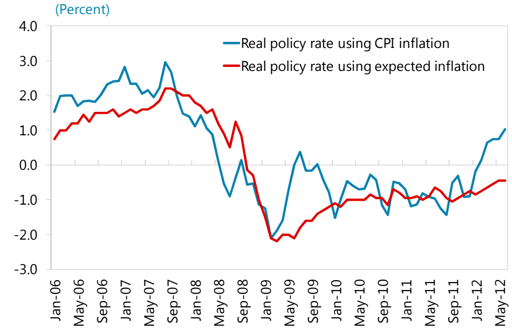
[2]The estimates of exchange rate and current account assessments are based on staff's analysis in the Pilot External Sector Report and are thus preliminary.

government-managed funds in selected areas. This should help reduce any near-term fiscal drag in 2012, while still preserving consolidation objectives.[3]

**18. There is a need to improve the monitoring of state-owned enterprises (SOEs) to guard against the risk of contingent liabilities.** Aggregate debt of the seven largest SOEs increased to W 313 trillion (25 percent of GDP) at end-2011 from W 276 trillion (24 percent of GDP) a year before, with the Korea Land & Housing Corporation accounting for about 40 percent of the debt. The bulk of SOE debt is held by profitable and well-capitalized enterprises, and is used for the acquisition of fixed assets for investment purposes, rather than financing of current operations. It thus appears to raise limited concerns on debt sustainability so far, although given the large size of the debt, the authorities should monitor SOE finances closely. Moreover, administrative intervention in public utility pricing is worsening the finances of some SOEs, distorting efficiency and hampering their operations on a commercial basis. Preparing a comprehensive statement of fiscal risks to be included with budget documents (in line with recommendations of the 2001 fiscal ROSC) would improve the monitoring of contingent fiscal liabilities.

**19. On the monetary policy side, rate hikes should resume when the economy strengthens and the negative output gap starts to close.** Notwithstanding the recent decline in headline inflation, the monetary stance is still accommodative, as the policy rate remains below its historical average in real terms and inflation expectations continue to be elevated. The recent cut in the policy rate has eased the monetary stance further and hence, normalizing policy in a timely manner would also help rebuild policy space and enhance credibility. Under the staff's baseline, a gradual normalization of the policy rate starting in the first half of 2013 would lead to inflation stabilizing at around 3 percent, in line with the current inflation target, at the end of the year.

**Real Policy Rate**
(Percent)




Sources: CEIC Data Company Ltd.; and IMF staff estimates.

**20. In the event of a significant downside scenario, Korea has scope to respond, especially on the fiscal side.** If the global economy were to deteriorate substantially with knock-on effects on the domestic economy, more support would be warranted from the fiscal side, given the ample fiscal space. In this scenario, support would have to go beyond automatic stabilizers and likely

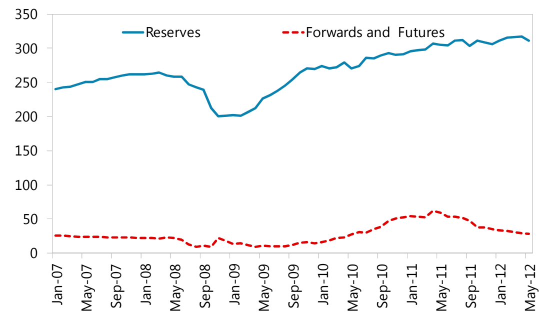
[3] In addition to the budget, Korea's national fiscal framework also comprises government-managed funds which are set up by law to serve specific public objectives. Their revenues are sourced from government contributions and private cost sharing, and their financial management framework is more flexible. Information on the managed funds is presented to parliament along with the budget documents. These funds are classified into four broad groups: Social Security Funds, Account Funds, Financial Funds (including SME credit guarantees), and Project Funds. Temporary fiscal stimulus is typically implemented by increasing spending through Financial or Project Funds. These funds were also used to provide temporary support in 2009.

involve higher-than-budgeted discretionary spending, similar to what was done effectively in 2009.[4] On the monetary policy side, in such a downside scenario, the BOK has room to cut rates further as it did in 2008–09.

**21. International reserves are in line with the Fund's standard indicative metrics.** Using the Fund's reserve adequacy metric, reserves are at 130 percent of the benchmark level, within the 100-150 range deemed adequate. Including the forward positions provides some additional comfort. Also, the authorities have augmented the reserves buffer by securing bilateral swap lines with Japan and China. Therefore, there is no need for further reserve accumulation beyond what would be needed to keep pace with rising foreign liabilities over time. In the event of an escalation in the euro area crisis, if financial contagion were severe enough to cause Korean banks to face difficulties in obtaining wholesale funding or to trigger large capital outflows, the authorities should stand ready to use their reserves to provide liquidity and maintain orderly market conditions.

**22. The exchange rate is estimated to be moderately undervalued (see Box 1).** In part, this could reflect the risk premium that investors attached to the Korean won in the current environment of heightened uncertainty in financial markets, given its past susceptibility to volatility spikes. Since the 2011 Article IV Consultation, when staff underscored the need for greater two-way flexibility, the exchange rate has moved flexibly in response to market conditions. Beyond the near term, as risk appetite recovers and capital inflows resume, and policy gaps (entailing faster fiscal consolidation in the rest of the world and increased social spending in Korea) start to close, the exchange rate is likely to be subject to appreciating pressure. In view of the overall competitiveness of the export sector and the already comfortable level of reserves, the exchange rate should continue to move flexibly in accordance with market conditions, with intervention limited to smoothing excessive volatility.

**Korea: Reserves and Forward Position**
(In billions of U.S. dollars)



Source: CEIC Data Company Ltd.

### *The Authorities' Views*

**23. The authorities concurred with staff that the current conjuncture calls for moderate adjustment of macroeconomic policy rather than deploying a strong countercyclical response.**

- On *fiscal policy*, they expressed a strong commitment to their fiscal consolidation objectives, including the achievement of overall budget balance (excluding the Social Security Fund) in 2013. They recently announced that budgeted expenditures will be more fully executed

[4] Korea's fiscal management framework limits the use of supplementary budgets only to cases satisfying criteria stipulated by law, mainly comprising natural disasters and political or economic emergencies (which include large scale unemployment and/or economic recession).

compared to previous years given growth headwinds. To further support the economy in the second half of 2012, they have adopted a stimulus package of 0.3 percentage point consisting of increased spending by government-managed funds (W 2.3 trillion) and public investment through SOEs and public–private partnerships (W 1.7 trillion).

- On *monetary policy*, the BOK cut the policy rate by 25 basis points in July 2012 after pausing for a year. The easing of policy is based on the assessment that economic weakness and a negative output gap is expected to persist for a considerable period. The recent decline in inflation and a benign inflation outlook, along with the boost to household incomes from lower debt service burdens, were also important considerations.

**24. While agreeing with the overall assessment of the current account and the exchange rate, the authorities underscored that the exchange rate is freely determined in the market, with intervention limited to smoothing operations to counter any large fluctuations**. They pointed out that the Korean won has appreciated 3 percent this year against the U.S. dollar, but noted that the exchange rate had been under downward pressure because of high global risk aversion. On reserves, they emphasized that recent changes in reserves were the result of interest income from investments or valuation effects, with intervention limited to smoothing operations. With regard to the forward positions, the authorities argued that they should not be included in foreign reserves as they comprise mostly swaps that were used to provide foreign currency liquidity to the domestic banks during the global financial crisis to alleviate the funding squeeze. They noted that the BOK had been unwinding the swaps as they matured, and that they are not liquid assets that can be called upon during a crisis. While welcoming the staff's efforts to improve the analytical framework for external sector assessment, they viewed the EBA as a work-in-progress, which has inherited some of the limitations of the CGER (e.g., large margins of error and omission of key country-specific factors) while adding additional complications (e.g., endogeneity of policy variables and difficulties in calibrating policy norms).

**25. The authorities shared staff concerns regarding SOEs, and are increasing efforts to improve their oversight and governance.** Comprehensive data on the financial position of SOEs are reported on the MOSF website. Moreover, preliminary feasibility studies will be required for all large projects undertaken by SOEs, and the 41 largest SOEs will be required to submit five-year financial plans to parliament beginning in 2012. The authorities believe that these initiatives will further strengthen the monitoring of SOE finances.

# SAFEGUARDING FINANCIAL STABILITY

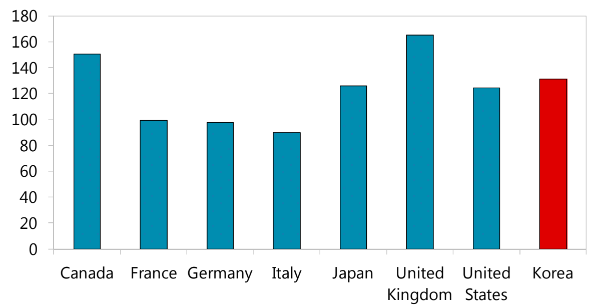
*A stronger external position, combined with the use of macroprudential measures, has helped to increase the resilience of the financial system to external shocks. As a result, external vulnerability is markedly lower than it was during 2008. However, policy makers should remain vigilant as banks are still dependent on external wholesale funding and the equity and bond markets are highly exposed to volatile capital flows. In addition, there are domestic financial concerns, namely the high level of household indebtedness and the rapid increase in lending by nonbanks, which warrant close monitoring.*

## Background

**26. Korean banks' large external short-term debt and dependence on wholesale funding were key vulnerabilities prior to the global financial crisis.** In the aftermath of the crisis, claims by Bank for International Settlements (BIS) reporting banks on Korea fell by more than US$70 billion. This constituted a sudden stop as banks were unable to rollover their short-term debt, prompting the BOK to provide about US$65 billion of reserves to cushion the liquidity squeeze on banks and the economy. Even so, the Korean won fell by 32 percent, from the pre-crisis peak to trough, while stock prices declined by 35 percent. The liquidity squeeze led to a slowdown in credit growth with adverse effects on the economy.[5] To address these vulnerabilities and to boost the financial sector's resilience to shocks, the authorities have strengthened their foreign reserves position and put in place an array of macroprudential measures (see Box 2).

**27. The high level of household indebtedness and the rising share of lending by non-bank financial institutions (NBFIs) remain of serious concern.** The household debt-to-disposable income ratio is high at 135 percent at end-2011, larger than in most OECD countries. Measures aimed at limiting household borrowing—including caps on LTV and DTI ratios—have led to a slowdown of household lending by banks. However, household lending by the less regulated non-bank sector has continued to expand at a rapid pace, with their share in household credit rising by roughly 5 percentage points since 2008, to 29 percent as of April 2012. Moreover, the growth in household lending is increasingly being driven by low-income borrowers with weaker credit scores. In addition, a large share of mortgage loans has floating rate and/or bullet structures, exacerbating potential interest rate and rollover risks.

**Household Debt to Disposable Income**
(in percent, as of 2010)




Sources: Canada: Statistics Canada; France: INSEE; Germany: Deutsche Bundesbank, Federal Statistical Office (Destatis); Italy: Banca d'Italia; Japan: Economic Planning Agency; United Kingdom: Office for National Statistics; United States: Federal Reserve; and Korea: CEIC Data Company Ltd.

[5] Strong policy actions in the aftermath of the global financial crisis to maintain credit supply avoided an outright credit crunch. Specifically, the authorities put in place support measures to ensure credit flow to SMEs, including expansion of the credit guarantee schemes for SMEs, automatic rollovers of guarantees expiring in 2009, and increased guarantee coverage per loan.

## Box 2. Macroprudential Policies[1]

***Initial conditions***

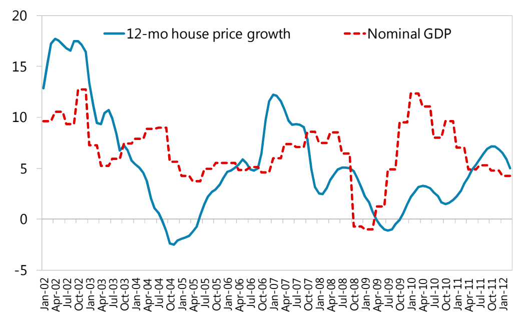
**The onset of the global financial crisis (GFC) revealed three key areas of financial risks in Korea that the authorities have sought to address via macroprudential measures.** Firstly, Korean banks are vulnerable to FX funding risk. Prior to the GFC, domestic banks had grown increasingly dependent on short-term FX funding, both directly through external borrowing and indirectly through FX swaps with foreign bank branches. This dependence was driven in part by robust demand for hedging via FX forwards by the export sector—mostly ship-building companies—and by asset management companies, accounting for FX maturity mismatches on banks' books and high FX liquidity risks. Secondly, household debt is very high by OECD standards at 69 percent of GDP and 135 percent of disposable income as of end-March 2012. Third, Korea has one of the largest and most open capital markets and is highly vulnerable to capital flow volatility from "risk on-risk off" dynamics in global markets.

***The measures***

**The Korean authorities have introduced a broad mix of macroprudential measures in an effort to curb these risks to financial stability**.

- To curb excessive borrowing by households and limit housing price volatility, the authorities have followed a policy of periodic relaxation and tightening of loan-to-value (LTV) and debt-to-income (DTI) limits on bank mortgage lending. Since their inception in September 2002 and August 2005, LTVs and DTIs have been tightened six and five times respectively, and loosened three times, most recently in May 2012.
- To reduce banks' reliance on wholesale funding, other measures include a maximum loan-to-deposit ratio of 100 percent for domestic banks, expected to be enforced by end-2013.
- To curb capital flow volatility and vulnerabilities related to potential capital flow reversals, the authorities have also re-introduced a withholding tax on foreign purchases of treasury and monetary stabilization bonds in January 2011 (in line with the tax on domestic residents), and a macroprudential stability levy on banks' non-deposit FX liabilities in August 2011.[2] The macroprudential stability levy is meant to curb excessive dependence on non-core FX funding by subjecting banks' shorter-term (based on contract maturity) non-deposit liabilities to higher charges.[3] It allows for a countercyclical macroprudential response, granting regulators discretion in adjusting the levy and imposing a surcharge of up to 50 basis points at times of high capital inflows.

**Housing Prices and GDP Growth**
(In percent, yoy growth)



Source: CEIC Data Company Ltd.

[1]Prepared by Silvia Iorgova.
[2]The reinstated tax includes a 14 percent withholding tax, coupled with a 20 percent capital gains tax.
[3]The levy is set in the range of 2 to 20 basis points, based on the remaining maturity of non-core liabilities. Shorter-term non-core liabilities are subject to higher charges, with adjustments to the levy during periods of high capital inflows. In case of an acceleration of the net capital inflows, the authorities have discretion to impose a surcharge of up to 50 basis points based on the scale of the inflows. The overall levy cannot exceed 100 basis points, and the surcharge cannot be extended for more than six months.

## Box 2. Macroprudential Policies (Continued)

- To rein in the level of foreign currency lending, macroprudential measures introduced in July 2011 prohibit financial companies from obtaining kimchi bonds—foreign currency-denominated bonds issued in the local market—if the issuer intends to swap the proceeds into won. In addition, a measure introduced in September 2011 (to take effect at the beginning of 2012) would expand the taxation of interest income on kimchi bonds from domestic banks to foreign bank branches.

***Effectiveness***

**The adopted measures have been reasonably effective in curbing banks' reliance on short-term FX funding.** Banks' external funding profiles have improved considerably, particularly for foreign bank branches for which the short-term portion of total external debt declined steadily from more than 80 percent of total funding during the GFC peak to roughly 60 percent at end-2011. Overall, foreign banks no longer play a pivotal role in providing short-term FX funding to domestic banks. Their share in aggregate short-term FX funding decreased to 52 percent at end-2011 from 64 percent in 2009. More broadly, rollover risks for domestic banks have contracted as residual maturities of their external debt have increased. Now domestic banks meet comfortably the regulatory requirement of matching long-term FX lending with long-term FX borrowing, with the ratio of borrowing to lending at 162 percent as of end-March 2012.[4] However, as the residual maturities of FX borrowings shorten, Korean banks may be subject to certain liquidity risks, raising the need for close monitoring. For example, the ratio of long-term FX borrowing (with residual maturity of over one year) to FX lending was down to 82 percent as of end- 2011 from 87 percent at end-2010.

**The use of DTI and LTV ratios as tools for curbing excessive household leverage and housing price volatility have had mixed results.** Both measures have been loosened and tightened periodically in the current cycle and appear to have helped dampen housing price volatility. However, household debt has continued to climb, and reached 135 percent of disposable income at end-2011 up from 122 percent at end-2007, driven mostly by rapidly expanding non-bank credit. While the growth of bank credit to households declined to less than 5 percent per year as of end-2011, non-bank credit has continued to expand briskly at 13 percent per year as of end-February 2012 well above GDP growth. Staff has previously cautioned against the tendency to use macroprudential policies to support housing prices when somewhat greater reliance on market-induced price corrections would help prevent excessive leverage.

**The measures adopted to curb capital flow volatility also had a somewhat positive impact.** The coefficient of variation of debt inflows has declined from roughly 2.5 percent in the 15 months before the introduction of a withholding tax to 1 percent in the 15 months afterwards.[5] However, the effectiveness of this regulation may have been limited by the extensive use of double taxation treaties. A more detailed assessment of the effectiveness of these measures would require a longer time horizon, and will be carried out under the upcoming FSAP.

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[4]The ratio of long-term borrowing to long-term lending is a measure of liquidity risk as it measures the ability of banks to cover less liquid longer-term loans with debt that is not subject to high rollover risks. "Long-term" refers to maturity of over one year.
[5]The coefficient of variation is measured as the ratio of the standard deviation to average flows in a given time period.

**28. The authorities have moved to decisively contain the problem in the Mutual Saving Bank (MSB) sector by restructuring insolvent MSBs.** In particular, the authorities closed down 20 MSBs in 2011–12. However, the remaining MSBs are still exposed to the risk of defaults on project financing loans to the real estate sector (the delinquency rate was around 20 percent at the end of the first quarter of 2012). These defaults have led to the persistent deterioration of MSB balance sheets and prompted the need for higher loan-loss provisions. However, MSBs account for only 2 percent of financial system assets.

***Staff's Views***

**29. The external vulnerability of the Korean financial system has diminished considerably since 2008 due to the concerted efforts of the authorities.** This reflects a reduction in banks' short-term debt, the diversification of the foreign investor base in the government bond market to include regional central banks, the adoption of macroprudential measures designed to curb banks' reliance on short-term and non-core FX funding, the strengthening of the banks' foreign currency liquidity positions, and the buildup of higher foreign reserves. In particular, the banking system's exposure to FX liquidity risks has decreased sharply since 2008. Because of these changes, Korea's exchange rate volatility, which tended to surge during past crises, has become less sensitive to global risk factors.[6] The reduced funding risk is also reflected in cross currency swap spreads which have remained relatively low and stable despite the recent increase in global risk aversion.

**Indicators of External Vulnerability**

| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Gross official reserves (US$ billion) | 262.1 | 201.1 | 269.9 | 291.5 | 304.2 |
| Reserves to total short-term external debt (percent) 1/ | 136.9 | 111.7 | 146.2 | 162.6 | 165.9 |
| Short-term foreign liabilities of the financial sector (US$ billion) | 134.0 | 110.4 | 115.7 | 102.1 | 100.6 |
| Banks' capital adequacy ratio 2/ | 12.3 | 12.3 | 14.4 | 14.6 | 14.0 |
| Total loan to deposit ratio 3/ | 119.1 | 120.5 | 111.0 | 105.7 | 105.0 |

1/ Short-term debt measured on a residual maturity basis.
2/ Includes commercial and specialized banks.
3/ Commercial banks only; including foreign currency loans and deposits.

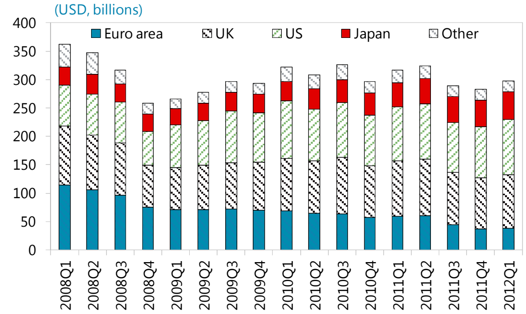
**30. Despite this progress, Korea is subject to substantial capital flow volatility given the large size and openness of its capital markets.** Even though the banking system vulnerabilities have diminished since 2008, it is important to remain vigilant as Korea's exposure to foreign banks on the funding side is among the highest in Asia (see Box 3). Looking ahead, the possibility of rollover difficulties resulting from an intensification of the euro area crisis cannot be ruled out. A potential deterioration of conditions in parent banks' jurisdictions may create funding difficulties in foreign bank branches, which will need to be monitored closely.

[6] Staff estimates suggest that the sensitivity of exchange rate volatility to changes in the VIX is estimated to have declined by more than half since the global financial crisis.

## Box 3. The Impact of European Bank Deleveraging[1]

**Korean liabilities to foreign banks are sizeable, in absolute terms and compared with other countries in the region.** The consolidated claims of foreign banks on Korea were around US$300 billion at end-March 2012, of which claims of euro area banks on Korea were only around US$38 billion, while claims of United States and United Kingdom banks stood at around US$95 billion each. These claims include both cross-border lending and credit extended by the local subsidiaries and branches of foreign banks. Compared with other countries in the region, Korea still relies heavily on foreign banks, along with Australia, Malaysia, and Taiwan Province of China. The Korean banking sector is reliant on wholesale funding, including from abroad, as around 25 percent of foreign claims outstanding is vis-à-vis the banks. Foreign credit is also extended directly to the Korean non-bank private sector to the tune of US$160 billion.

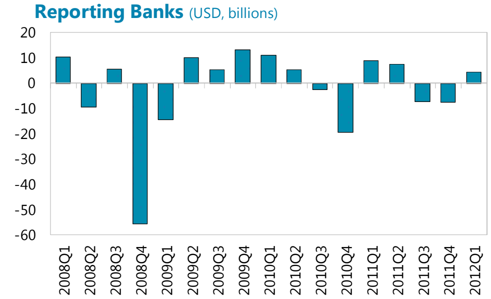
**Korea: Stock of Consolidated Foreign Claims to Euro Area, UK, U.S., and Japan Banks**
(USD, billions)




Sources: Bank for International Settlements (BIS); and IMF staff calculations.

**During the 2008 global financial crisis, the large exposures resulted in the Korean banking system facing a severe shock to external funding.** Cross border claims on Korea fell by more than US$70 billion between 2008 Q2 and Q1 2009. This figure exceeds US$85 billion once local claims by foreign banks are factored in. This constituted a "sudden stop" as banks were unable to rollover their short-term debt, putting severe stress on the FX market, which was also transmitted to the equity market. Moreover, the bulk of this retrenchment was attributable to deleveraging by European banks, despite the fact that Europe was not the epicenter of the 2008 crisis. This demonstrates that when there is a large enough global shock, the retrenchment can be indiscriminate regardless of the source country. The intensification of the euro area crisis in August 2011 has led to further pullback by European banks, with claims on Korea falling by around 15 percent and 7 percent in the third and fourth quarter of 2011, respectively. The retrenchment was the sharpest by French banks, which reduced claims by half, followed by Italian and Spanish banks (though the amounts outstanding are much smaller than for French banks). This episode of deleveraging was not limited to European banks as non-European banks, including U.S. banks, also retrenched. However, other Asian banks, in particular Japanese banks, stepped in to fill the gap and increased their market share. The European Central Bank's Long Term Refinancing Operations (LTRO) led to a temporary easing in funding strains and resulted in foreign banks (including European banks) re-leveraging in the first quarter of 2012.

**Korea: Quarterly Change in Exchange Rate Adjusted Locational Cross Border Claims of BIS Reporting Banks** (USD, billions)




Source: Bank for International Settlements (BIS).

**Even barring a global financial shock, some deleveraging is likely to take place.** Some deleveraging is structural in nature and is likely under the baseline as European banks strive to meet EBA capital requirements. Indeed, the April 2012 *Global Financial Stability Report* estimates that European banks could pare back their balance sheets by an additional 2 trillion euros, or 7 percent of total assets, by the end of 2013.

**Korea now appears better prepared to handle such shocks relative to 2008**, as a result of the higher reserves buffer and improved FX liquidity management. Also, macroprudential measures appear to have preemptively moderated the short-term debt of banks. However, Korea remains vulnerable to contagion from an escalation of the euro area crisis, as the outstanding claims of European (including United Kingdom) banks vis-à-vis Korea still remain sizeable. Furthermore, a worsening of the crisis and the accompanying deleveraging is unlikely to be confined to European banks and will likely spillover to other global banks as a result of financial market stress.

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[1]Prepared by Sonali Jain-Chandra.

**31. The still high exposure of Korean banks to FX funding continues to be a key external vulnerability.** Accordingly, the authorities have taken steps to mitigate risks arising from banks' FX funding profiles, including the conduct of monthly stress tests on the foreign currency liquidity positions of domestic banks and regular reviews of maturity mismatches. The authorities need to be mindful of the liquidity risks deriving from the shortening in residual maturities of domestic banks' foreign currency debt over time. For example, at end-2011, the ratio of long-term FX borrowing (with residual maturity of over one year) to FX lending at domestic banks declined to 82 percent from over 87 percent at end-2010.

**32. On balance, macroprudential measures appear to have yielded positive results.** These measures have curbed banks' external funding vulnerabilities by limiting their short-term external debt and reducing foreign currency maturity mismatches. However, they appear to have been less effective in containing overall capital flow volatility. Given that many of these measures have been in place for only a short period of time, a more thorough analysis of their effectiveness will be undertaken during the upcoming Financial Sector Assessment Program (FSAP).

**33. The establishment of a formal institutional set-up for the design and implementation of macroprudential policies would help ensure consistency of the measures and close loopholes.** Further strengthening the macroprudential organizational framework could enhance existing coordination among responsible regulatory agencies—including the MOSF, the BOK, the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). It would clarify of roles and accountability for policy responses. This organizational issue is expected to be reviewed more comprehensively in the context of the forthcoming FSAP.

**34. High household debt remains a source of vulnerability despite relatively stable housing prices, favorable net asset positions, and low loan-to-value ratios.** The overall financial position of households remains strong, with net financial assets accounting for roughly 100 percent of GDP. However, the level of household debt remains very high, in part due to the authorities' housing market policies which had engendered expectations of steady nominal house price appreciation. Moreover, a severe downturn in the economy or a sharp increase in interest rates, while not likely, could raise the household delinquency rate significantly and impair banks' balance sheets. Overall, household debt remains exposed to interest rate and rollover risks, given the still high share of floating rate and bullet structures for mortgage loans. Moreover, the rapid expansion of lending to households by the NBFIs warrants close monitoring, particularly given their significant size. The authorities are gradually tightening asset classification and provisioning requirements for NBFIs to curb their lending to households and secure a soft landing for household debt, while being mindful of their weak provisioning capacity. The mutual savings banks, while not systemically important given their small size, are still experiencing weaknesses in their balance sheets and need to be closely monitored.

***The Authorities' Views***

**35. The authorities expressed confidence that FX liquidity risks are contained.** They emphasized that banks' short-term FX liquidity positions are sound, monitored on a daily basis, and have improved considerably since the GFC. In particular, the banks have sufficient foreign currency liquidity to withstand a shutdown of the funding market for three months. The authorities noted that, even though banks have sufficient capital buffers, they have imposed a regulatory limit on the ratio of long-term FX borrowing to long-term FX assets to prevent the potential risk of maturity mismatches in banks' foreign currency balance sheets. They also indicated that the residual maturities of bank liabilities are already taken into account in the stress testing of domestic banks.

**36. The authorities emphasized that they had established an institutional framework for management of foreign currency liquidity risks.** They noted that the Foreign Exchange Market Stabilization Committee, established at the vice-ministerial level by the MOSF, BOK, FSC, and FSS in 2010, meets regularly to exchange information, analyze and discuss developments in financial markets, and agree on and coordinate policy responses.

**37. The authorities concurred with the need for a soft landing of household debt**. They indicated that the current level of household debt is high by international standards and needs to be curbed. They emphasized that they were strengthening micro-finance-based safety nets to provide protection for low-income borrowers before tightening enforcement of prudential regulations on NBFIs. In addition, they are encouraging banks to shift the structure of new housing loans to fixed interest rate installment payments in order to mitigate the interest rate and rollover risk.[7] Overall, the authorities expressed a cautious view that a soft landing was in sight.

**38. The authorities view the process of restructuring of the MSBs as completed.** They suggested that most remaining MSBs are basically sound, with capital adequacy ratios exceeding 10 percent and that outstanding issues should be viewed as a social—rather than a financial stability—problem, given that these institutions largely served low-income customers.

# ENHANCING INCLUSIVENESS AND SUSTAINABILITY

*Korea faces two closely related challenges going forward. The first is to sustain economic growth against the backdrop of a rapidly aging population, and the second is to reduce income inequality. In this context, increased and well-designed social spending can foster more sustainable and inclusive growth, but it needs to be consistent with the envisaged medium-term fiscal consolidation plan. In particular, social spending should be raised gradually, and supported by strengthened revenue performance over the medium term.*

[7] The government's strategy for the soft landing of household debt includes incentives to shift to a fixed rate installment loan structure by using tax incentives and supporting the securitization of such products. Banks have been guided to increase the share of such loans to 30 percent by 2016. The strategy also envisages a gradual but substantial strengthening of the asset classification and provisioning standards for NBFIs to equalize the regulatory standards of banks and non-banks over time.

## Background

**39. Going forward, Korea faces the challenge of a rapidly aging population.** While currently one of the youngest countries in the Organization for Economic Co-operation and Development (OECD), Korea is projected to shift rapidly to the second oldest by mid-century, given its low fertility rate and gains in longevity. According to the OECD, the working age population is projected to peak in 2016 and then decline by a quarter by 2050. Although pressures will not show in the near term, age-related spending will begin to appear in the medium term and accelerate from 2020 with the rapid aging of the population.

**40. Another challenge confronting Korea is addressing income inequality and economic polarization.** Despite stabilizing in recent years, during 2002–09, income inequality rose to the average OECD level, in part reflecting labor market dualism between regular and non-regular workers. The cost of employment protection for regular workers is a key factor why companies have been shifting most new jobs to non-regular workers. As a result, the share of non-regular workers is significantly higher than the OECD average, and they are paid about 40 percent less, although some of this difference can be attributed to factors such as gender, education or experience. Low labor productivity in the service sector also reinforces income inequality and acts as a drag on potential growth.

### *Staff's Views*

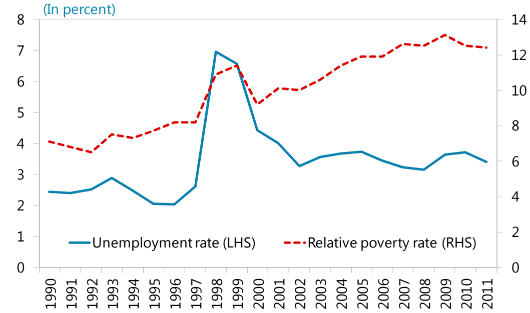
**41. Social spending remains below desired levels and should be raised gradually over time while preserving medium-term fiscal consolidation objectives.** Compared with other OECD countries, Korea has the second-lowest level of public social spending. Even after controlling for Korea's lower income level, currently younger population, and low unemployment rate, staff estimates point to a gap of about 3½ percent of GDP between Korea and OECD peers (see Box 4).

**42. A sustainable increase in social spending requires greater attention to a longer-term fiscal framework, which is under development.** Korea's public debt-to-GDP ratio is currently very favorable. However, the rapid pace of population aging, the trajectory of current public entitlements, and the relatively low tax revenue-to-GDP ratio (reflecting both narrow bases and low rates) imply that efforts will be needed to maintain long-term fiscal sustainability. Potential contingency costs of reunification further limit the long-term fiscal space. Meeting all of these objectives will likely require strengthening revenue performance over the medium term, mainly by reducing tax expenditures and broadening the tax base. If that is not sufficient, it may be necessary to increase tax rates in

## Box 4. Social Spending and Inclusive Growth[1]

**Looking ahead, Korea faces two intertwined fundamental challenges:** sustaining economic growth in the face of the most rapid population ageing in the OECD area, and ameliorating the effects of income inequality. Regarding the former, according to the OECD (2012), Korea's estimated potential growth decreased from 7 percent in 1995 to 4 percent in 2010. The latter challenge relates to the fact that, despite Korea's relatively high real GDP growth rates, income inequality had been trending upward over the last decade, indicating deteriorating socio-economic conditions. More recently, however, there are indications of some improvement in these trends. Moreover, after spiking in the late 1990s, the unemployment rate in Korea has come back down, and remains at a low level, in contrast to many other advanced economies. Nevertheless, the slowdown in economic growth, the relatively high share of lower paid non-regular workers, and holes in the social safety net (especially for the elderly), among other factors, have resulted in political pressure to increase social spending.

Korea: Unemployment and Relative Poverty Rates
(In percent)



Source: OECD.

**Social spending can foster more sustainable and inclusive growth in Korea.** In most general terms, social spending is related to a broad range of social welfare programs pertaining to healthcare, education, and social safety nets. Specific social spending policies can nurture growth in several dimensions. For example, given low investment in pre-primary care in Korea, expanding early childhood education and childcare programs would not only lay the foundation for future productivity gains, but would also encourage greater female labor market participation. In addition, expanded vocational training would enhance the skill sets of non-regular workers (predominantly in the lower-productivity services sector) and facilitate their transition to regular status. Lower worker turnover, combined with increased firm-based training would raise productivity over the medium term. Therefore, a combination of targeted social spending policies would not only reduce income inequality and improve the welfare of lower-income groups, it would also boost potential growth over the longer term by raising productivity and labor force participation rates (especially by females).

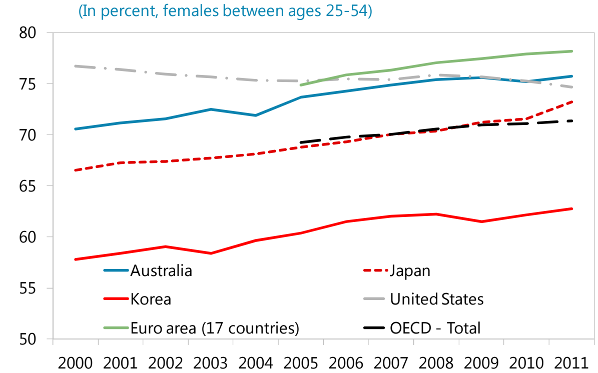
**Increases in social spending would need to fit within the confines of the envisaged fiscal consolidation plan, and will require strengthened revenue performance over the medium term.** Despite tripling its share of GDP since 1990 to 7.6 percent in 2007, social spending in Korea is still low relative to the OECD average of 19 percent, implying a sizeable gap. However, among OECD economies, Korea has one of the lowest unemployment rates, below-average per capita income, and *currently* has a younger population. When these characteristics are taken into consideration, regression analysis suggests that the social spending gap between Korea and its OECD peers narrows to about 3.5 percent of GDP. Nonetheless, the medium-term fiscal consolidation plans will limit available resources to fund major expansions in social spending programs. While there may be room for expenditure reallocation, increased social spending will likely need to be accompanied by broadening the tax base and improving revenue collection over the medium term.

[1]Prepared by Selim Elekdag.

some areas. There may also be some scope for expenditure reprioritization. In this light, there is a need to integrate long-term issues more systematically into the fiscal policy framework.

**Female Labor Force Participation Rates**

(In percent, females between ages 25-54)




Source: OECD.

**43. Labor market reform should continue to be given priority to boost potential growth and ameliorate income inequality**. To support potential growth in the face of declining labor inputs resulting from the impending decline in the working age population, higher participation rates of women, the youth and the elderly will be needed. The participation rate for women, which is lower than the OECD average, should be boosted by reforms that focus on enhancing labor market flexibility and creating a more enabling environment. As part of the authorities' commitments under the G20 Mutual Assessment Process (MAP), legislation was revised in 2011 to allow parents with young children to request shorter working hours and a bill was introduced to promote the employment of part-time workers and encourage flextime. Reforms to address the duality in the labor market between regular and non-regular workers, which partly contributes to income inequality, should also be continued. Reducing labor market duality would entail relaxing employment protection for regular workers, to reduce the incentives for firms to hire non-regular workers. The government announced initiatives to strengthen the social safety net (for example, by subsidizing SME contributions to social insurance systems to encourage greater coverage of non-regular workers) and improve employment conditions for non-regular workers.

**44. Efforts towards continued reform in the service sector are also key to lifting potential growth.** To enhance service sector productivity, efforts could continue to focus on: (i) enhancing competition in the legal, accounting, education and health sectors by lowering the barriers to entry; (ii) continuing the restructuring of SMEs, most of which are in the services sector; (iii) expanding industry training programs for workers and self-employed; (iv) providing R&D and other services to the SMEs; and (v) leveling the playing field between the tradable and non-tradable sectors (which is still biased towards the former) in terms of tax incentives and other supporting policies. Deregulation measures being implemented under the FTAs with the European Union and the United States should also lead to increased competition and thereby help support service sector productivity.

### *The Authorities' Views*

**45. The authorities agreed that social spending should be increased gradually over the medium term in line with the rising demand for social services.** Indeed, the 2012 budget envisages a 20 percent nominal increase in social welfare spending. They stated that social welfare programs should be well targeted and tailored to the differentiated needs of the recipients, and designed to incentivize work (for example, by focusing on the expansion of the earned-income tax credits). The Direction for the Preparation of the 2013 Budget, which was recently approved, also maintains workfare and sustainable growth as core themes.

**46. The authorities also concurred with the need to enhance revenues over the medium term to finance increased social spending.** They stressed that their priority was to increase revenues by continuing to broaden the tax base, building on the revenue agencies' track record of capturing more of the informal economy. They expected a government plan on tax reform to be published in August, which would aim to further increase the coverage of the informal economy and rationalize tax exemptions.

**47. The authorities have been closely tracking their medium-term fiscal plans.** The government's National Fiscal Management Plan for 2011–15 also lays out several areas to increase revenues. Moreover, plans for a longer-term fiscal framework covering the years up to 2060 are underway.

# STAFF APPRAISAL

**48. The Korean economy is slowing in line with global economic developments.** Reflecting weakness in global economic prospects, the economy is expected to continue experiencing moderate growth with a small negative output gap projected to remain for the rest of 2012. Staff projects GDP growth for 2012 at 3 percent and around 4 percent for 2013 in line with the expected recovery in the global economy. Declining growth, moderating commodity prices, and government subsidies have led to falling inflation, with headline inflation projected at slightly below 3 percent, the BOK's inflation target.

**49. The current macro policy mix combines an accommodative monetary policy and a broadly neutral fiscal stance.** Staff supports the government's intention to consolidate the fiscal position to restore policy space and prepare for the challenges of the future. The front-loading of budget spending in 2012 to support the weak economy in the first half of the year was an appropriate response to global developments. In addition, the government's determination to resist populist spending in this dual election year is also welcome, avoiding spending programs that could compromise consolidation plans going forward. In response to weaker-than-expected growth in the second half of the year, plans to ensure that the budget is more fully implemented are welcome. While government-managed funds can provide some additional support, their use should be limited and temporary with a view to maintaining fiscal transparency. Monetary policy continues to be accommodative, particularly with the recent cut in the policy rate, but a normalization of policy will be needed in 2013 if the economy strengthens. For now, maintaining the currently accommodative monetary policy stance is appropriate given global weakness and heightened uncertainties.

**50. Near-term risks to the baseline are sharply tilted to the downside, with the main risk being a further intensification of the euro area crisis.** In the event of the materialization of a severe downside scenario, Korea has sufficient policy space to respond, especially on the fiscal side. In such a scenario, consideration should be given for additional discretionary spending beyond the current approved budget. If financial contagion were so severe as to cause difficulties for Korean banks in obtaining wholesale funding or to trigger large capital outflows, the authorities should stand ready to use their ample foreign reserves to provide FX liquidity and maintain orderly market conditions.

**51. The external vulnerability of the Korean financial system has diminished considerably since 2008 due to the concerted efforts of the authorities.** A series of macroprudential measures have been adopted, and external buffers have also been strengthened, in the form of higher foreign reserves and bilateral swap lines. Another welcome development is the diversification of the foreign investor base in the government bond market to include regional central banks.

**52. Despite this progress, Korea is subject to capital flow volatility and therefore needs to remain vigilant.** A key external vulnerability in the past was the high exposure of Korean banks to rollover risk from their dependence on wholesale funding. A potential intensification of the euro area crisis could lead to funding difficulties. Therefore, the conduct of monthly stress tests on the foreign currency liquidity positions of domestic banks to ensure that they have sufficient funding for three months is an important exercise. Moreover, the vulnerability of foreign bank branches resulting from their reliance on parent funding will need to be monitored closely. In this context, staff welcomes the establishment of the inter-agency Foreign Exchange Market Stabilization Committee and its efforts in monitoring and responding to market developments.

**53. On the domestic side, the high level of household debt and rapid expansion of non-bank credit to vulnerable households are key concerns.** It is important that the authorities follow through with the plan for a "soft landing" of household debt, including by strengthening of asset classification and provisioning rules for NBFIs, and increasing the share of fixed-rate installment mortgages. The weaknesses in the mutual savings banks have been alleviated by the authorities' move to restructure the insolvent MSBs. However, there are weaknesses remaining in the balance sheets that warrant close monitoring.

**54. International reserves have increased to a comfortable level and the exchange rate is estimated to be moderately undervalued.** Reserves are in line with reserve adequacy indicators, and the authorities have augmented the external buffer by securing bilateral swap lines. Therefore, there is no need for further reserve accumulation beyond what would be needed to keep pace with rising external liabilities over time. Given the strong competitiveness of its export sector, the exchange rate should continue to move flexibly, with intervention limited to smoothing excessive volatility.

**55. Staff supports the authorities' long-established and continued commitment to fiscal prudence**. This provides a good starting point for addressing a number of fiscal challenges in the future including a need for higher social spending, as well as the large medium- to long-term budgetary implications of an aging population (including pension liabilities). Staff welcomes the authorities' plan to raise social spending over time, and recommends that this be carried out while maintaining the overall fiscal consolidation path. While there may be scope for expenditure reprioritization in some areas, this will likely require strengthening revenue performance over the medium term, mainly by base broadening, although adjusting tax rates in some areas may be necessary. A sustainable increase in social spending and rapid population aging requires greater attention to a longer-term fiscal framework, which is under development. The rising debt levels of SOEs warrant careful monitoring, and efforts should be made to increase their commercial orientation, including by refraining from administrative intervention in public utility pricing.

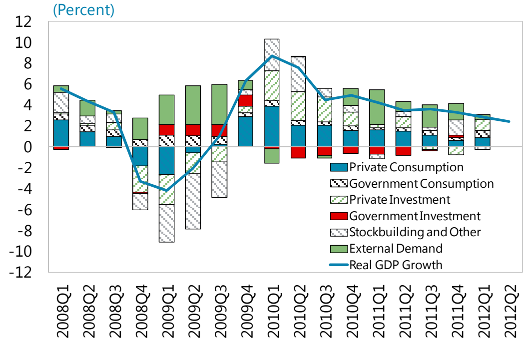
**56. Labor market reform and enhancing service sector productivity should continue to be given priority to boost potential growth and ameliorate income inequality.** Staff welcomes steps in this direction and encourages greater efforts to secure more sustainable and inclusive growth. Higher participation rates will support potential growth, and reforms that focus on enhancing labor market flexibility and creating a more enabling environment for female participation will also help. Boosting service sector productivity will require a multi-pronged approach, focusing on enhancing competition by deregulation, continuing with SME restructuring and moving towards a more level playing field for the tradable and non-tradable sectors.

**57. It is recommended that the next Article IV Consultation takes place on the standard 12-month cycle.**

## Figure 1. The Real Economy

*GDP growth moderated in 2011 and the first half of 2012, in line with the slowing global economy.*

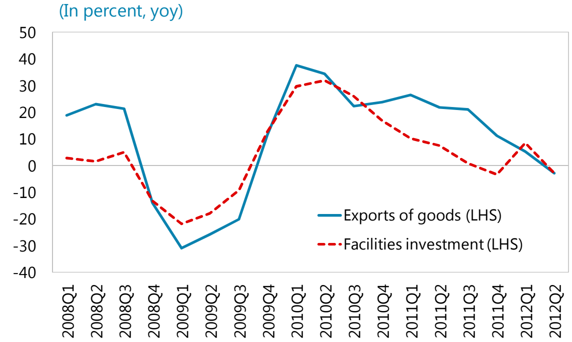
### Contributions to GDP Growth
(Percent)




Sources: CEIC Data Company Ltd; and IMF Staff Estimates.

*Investment has declined, in tandem with exports.*

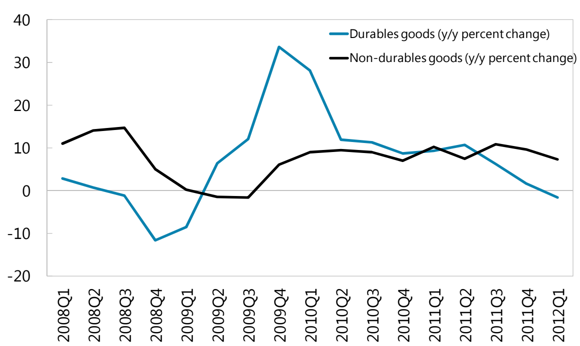
### Exports and Facilities Investment
(In percent, yoy)




Source: CEIC Data Company Ltd.

*On the domestic demand front, retails sales have softened...*

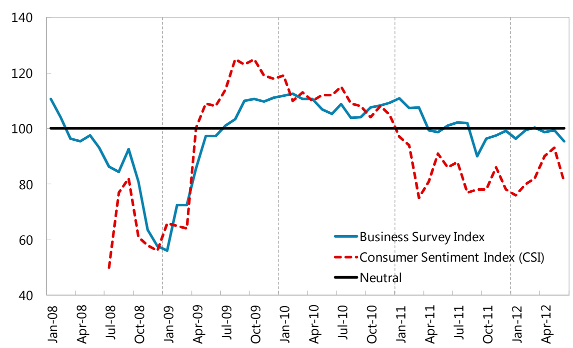
### Retail Sales




Source: CEIC Data Company Ltd.

*and forward looking indicators suggest weak momentum.*

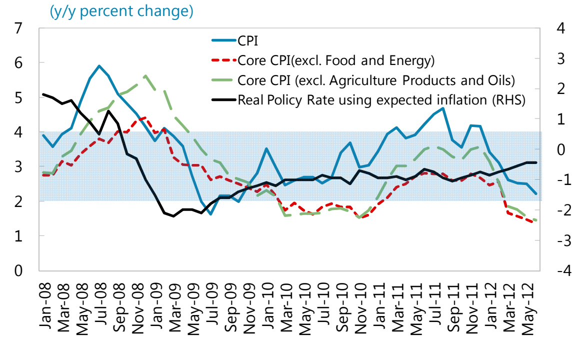
### Expectations of Future Economic Situations




Source: CEIC Data Company Ltd.

*Inflation fell, leading to higher real policy rates but...*

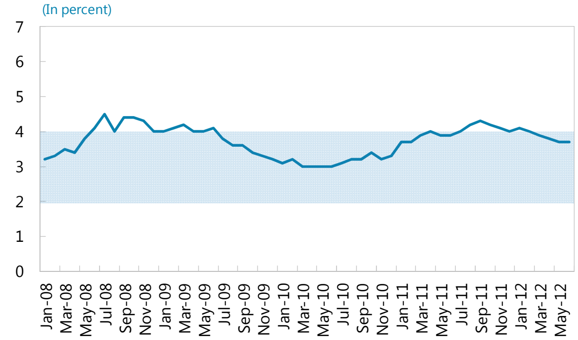
### Inflation
(y/y percent change)




Source: CEIC Data Company Ltd.

*...inflation expectations remain elevated.*

### Expected Inflation (12-month Ahead)
(In percent)

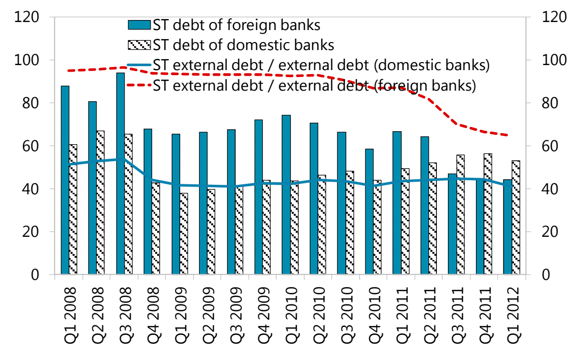


Sources: CEIC Data Company Ltd; and Bloomberg LP.

## Figure 2. The Banking System

*Banks have become less reliant on short-term external funding...*

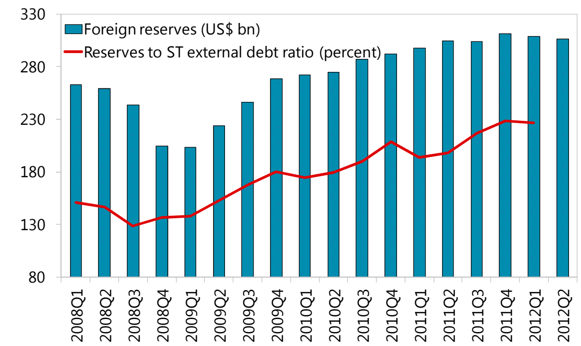
**Banks' External Short-term Funding**
(In billions of U.S. dollars and percent)




Source: IMF staff computations based on Bank of Korea.

*...and the FX reserve buffer is much larger.*

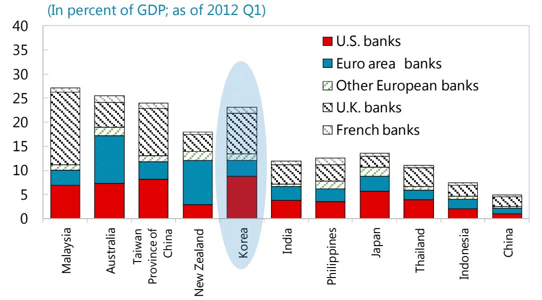
**Reserve Cover**




Sources: CEIC Data Company Ltd; and IMF staff estimates.

*Although the funding exposure to European banks is substantial...*

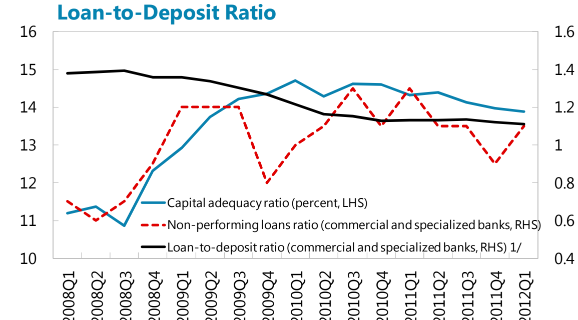
**Consolidated Foreign Claims of European and U.S. Banks on Selected Asian Economies 1/**
(In percent of GDP; as of 2012 Q1)




Sources: Bank for International Settlements (BIS); CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations. 1/ Claims are on immediate borrower basis. Uses sum of quarterly GDP in U.S. dollar between 2011:Q2and 2012:Q1 in the denominator.

*... banking sector soundness indicators remain strong, with both LTD and NPL ratios on a declining trend.*

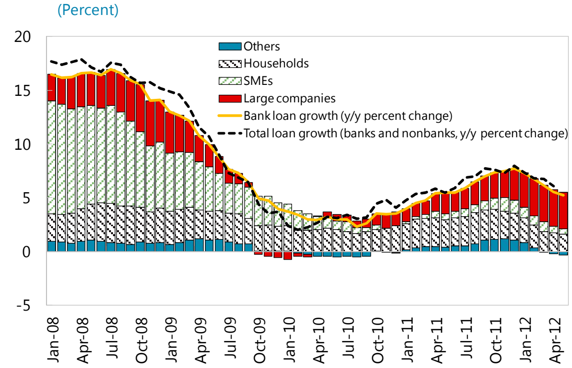
**Capital Adequacy, Non-performing Loans, and Loan-to-Deposit Ratio**




Sources: CEIC Data Company Ltd; and FSS.
1/ Specialized banks are not subject to loan-to-deposit limit.

*Bank loan growth, especially to SMEs, moderated;...*

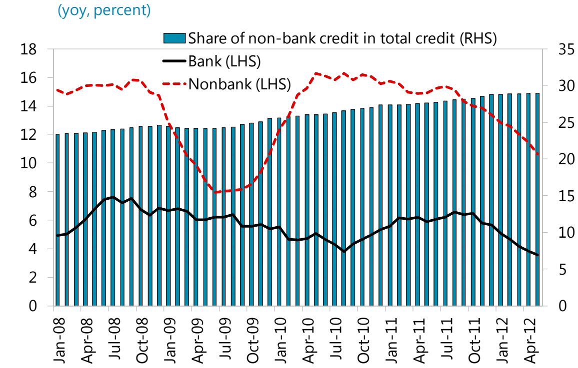
**Contribution to Bank Loan Growth**
(Percent)




Source: CEIC Data Company Ltd.

*however, the growth of credit to households from nonbanks has been robust, despite recent slowdown.*

**Banking and Non-Banking Credit to Households**
(yoy, percent)

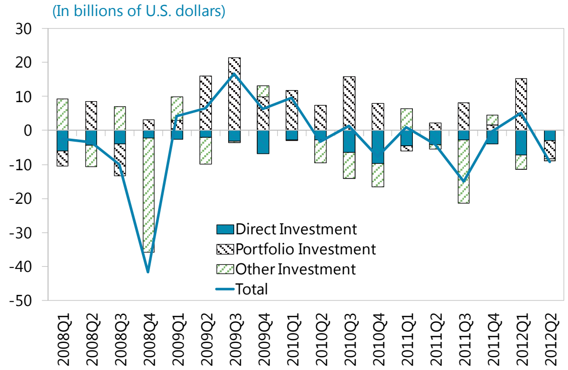



Source: CEIC Data Company Ltd.

## Figure 3. Financial Markets

*Capital outflows led to funding pressures in 2011Q3 but the pressures eased in early 2012.*

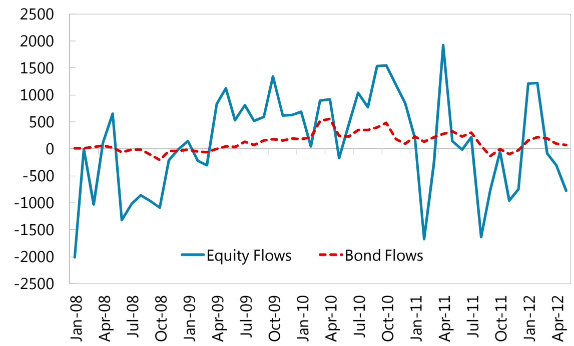
**Net Capital Flows**
(In billions of U.S. dollars)




Sources: CEIC Data Company Ltd.; Bank of Korea; and IMF staff calculations.

*However, portfolio flows have reversed in 2012Q2, in line with worsening risk sentiment…*

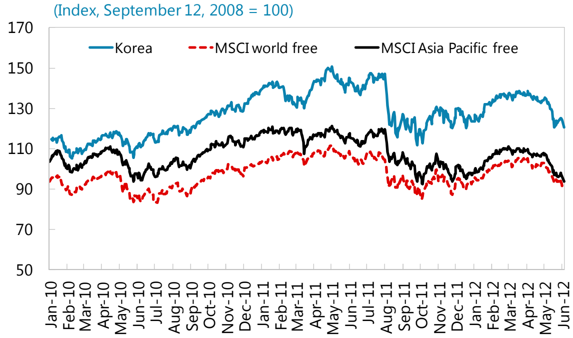
**Monthly Capital Flows**
(In millions of U.S. dollars)




Sources: Haver Analytics; and IMF staff estimates.

*…causing declining stock prices.*

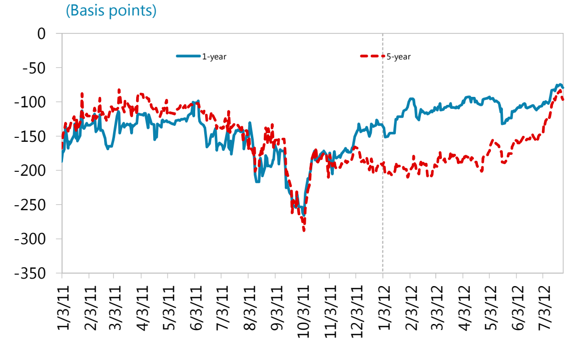
**Stock Market Developments**
(Index, September 12, 2008 = 100)




Source: Bloomberg LP.

*Despite this, pressures related to dollar funding did not emerge, reflecting lower external funding vulnerabilities.*

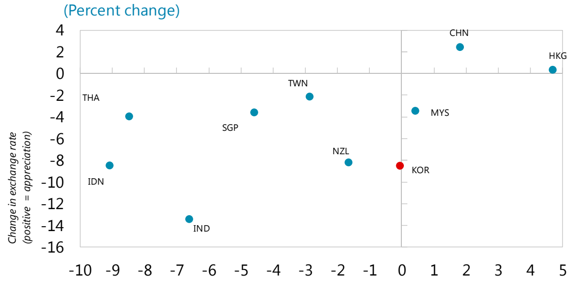
**Cross Currency Swap Spreads**
(Basis points)




Source: Bloomberg LP.

*The won has faced sharp depreciating pressure since July 2011 for the most part…*

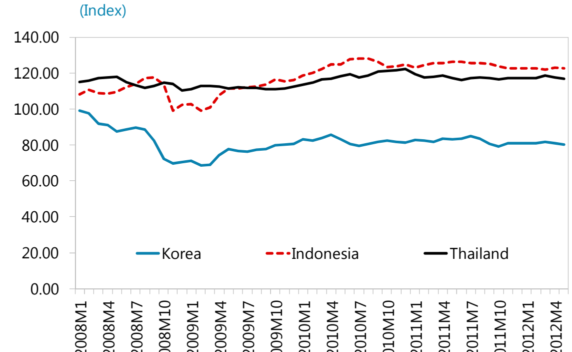
**Changes in FX Reserves versus Exchange Rate Movements against U.S. Dollar**
(Percent change)




Source: IMF APD Core Database; and IMF staff estimates.
Note: Percentage changes between July 2011 and May 2012, except for China, which has March as the latest data.

*…leading to a slight weakening of the REER.*

**Real Effective Exchange Rate**
(Index)




Source: IMF APD Core Database.

## Table 1. Korea: Selected Economic Indicators, 2008–13

Nominal GDP (2011): $1,116 billion
Main exports (percent of total, 2011): Vessel (10), Petroleum products(9), Semi-conductor (9), Automobile (7), LCD device (5)
GDP per capita (2011): $21,728
Central government debt (2011): 32.6 percent of GDP

| | | | | | Projections | |
|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| **Real GDP (percent change)** | 2.3 | 0.3 | 6.3 | 3.6 | 3.0 | 3.9 |
| Total domestic demand | 1.4 | -2.7 | 6.2 | 2.0 | 2.4 | 3.1 |
| Final domestic demand | 0.8 | 0.6 | 4.5 | 1.3 | 2.6 | 3.1 |
| Consumption | 2.0 | 1.2 | 4.1 | 2.2 | 2.5 | 2.9 |
| Gross fixed investment | -1.9 | -1.0 | 5.8 | -1.1 | 3.1 | 3.6 |
| Net foreign balance 1/ | 1.1 | 2.8 | 0.1 | 1.9 | 1.0 | 1.2 |
| **Nominal GDP (in trillions of won)** | 1,026.5 | 1,065.0 | 1,173.3 | 1,237.1 | 1,318.4 | 1,411.8 |
| **Saving and investment (in percent of GDP)** | | | | | | |
| Gross national saving | 31.6 | 30.2 | 32.4 | 31.8 | 31.2 | 31.3 |
| Gross domestic investment | 31.2 | 26.3 | 29.5 | 29.5 | 29.2 | 29.6 |
| Current account balance | 0.3 | 3.9 | 2.9 | 2.4 | 2.0 | 1.7 |
| **Prices (percent change)** | | | | | | |
| CPI inflation (end of period) | 4.1 | 2.8 | 3.0 | 4.2 | 2.8 | 3.1 |
| CPI inflation (average) | 4.7 | 2.8 | 2.9 | 4.0 | 2.8 | 3.2 |
| Core inflation (average) | 4.3 | 3.6 | 1.8 | 3.2 | 2.2 | 3.0 |
| Real effective exchange rate | -19.9 | -12.5 | 11.4 | 0.6 | ... | ... |
| **Trade (percent change)** | | | | | | |
| Export volume | 6.8 | 0.1 | 16.2 | 11.6 | 5.6 | 10.0 |
| Import volume | 0.9 | -2.2 | 16.8 | 5.5 | 4.0 | 10.9 |
| Terms of trade | -14.4 | 10.8 | -0.9 | -8.2 | -2.2 | 0.1 |
| **Consolidated central government (in percent of GDP)** | | | | | | |
| Revenue | 24.0 | 23.0 | 22.7 | 23.4 | 23.5 | 23.5 |
| Expenditure | 22.4 | 23.0 | 21.0 | 21.6 | 21.5 | 20.8 |
| Net lending (+) / borrowing (-) | 1.6 | 0.0 | 1.7 | 1.8 | 2.0 | 2.7 |
| Overall balance | 1.5 | -1.7 | 1.4 | 1.5 | 1.6 | 2.4 |
| Excluding Social Security Funds | -1.1 | -4.1 | -1.1 | -1.1 | -0.9 | 0.0 |
| **Money and credit (end of period)** | | | | | | |
| Overnight call rate 2/ | 2.9 | 2.0 | 2.5 | 3.3 | 3.0 | ... |
| Three-year AA- corporate bond yield 2/ | 7.7 | 5.5 | 4.3 | 4.2 | 3.4 | ... |
| M3 growth 3/ | 9.1 | 9.4 | 5.9 | 6.6 | 8.3 | ... |
| **Balance of payments (in billions of U.S. dollars)** | | | | | | |
| Exports, f.o.b. | 434.7 | 358.2 | 461.4 | 552.6 | 577.9 | 633.8 |
| Imports, f.o.b. | 429.5 | 320.3 | 421.4 | 521.6 | 549.1 | 606.1 |
| Oil imports | 85.9 | 50.8 | 68.7 | 100.8 | 101.0 | 96.3 |
| Current account balance | 3.2 | 32.8 | 29.4 | 26.5 | 22.5 | 21.0 |
| Gross international reserves (end of period) | 201.1 | 269.9 | 291.5 | 304.2 | 319.2 | 334.3 |
| In percent of short-term debt (residual maturity) | 111.7 | 146.2 | 162.6 | 165.9 | 167.4 | 168.2 |
| **External debt (in billions of U.S. dollars)** | | | | | | |
| Total external debt (end of period) | 317.4 | 345.7 | 359.4 | 398.4 | 419.4 | 440.3 |
| Total external debt (in percent of GDP) | 34.0 | 41.5 | 35.4 | 35.7 | 36.7 | 36.4 |
| Debt service ratio 4/ | 7.9 | 7.8 | 6.8 | 6.4 | 7.4 | 7.3 |
| Real effective exchange rate (level) 5/ | 85.7 | 75.8 | 82.1 | 82.2 | 80.9 | ... |

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Contribution to GDP growth.
2/ Data for 2012 are as of July 26, 2012.
3/ Data for 2012 are as of May.
4/ Debt service on medium- and long-term debt in percent of exports of goods and services.
5/ Data for 2012 are as of May.

## Table 2. Korea: Balance of Payments, 2008–14

(In billions of U.S. dollars, unless otherwise indicated)

| | 2008 | 2009 | 2010 | 2011 | Projections 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|
| **Current account balance** | 3.2 | 32.8 | 29.4 | 26.5 | 22.5 | 21.0 | 19.3 |
| Trade balance | 5.2 | 37.9 | 40.1 | 31.0 | 28.8 | 27.7 | 26.0 |
| Exports | 434.7 | 358.2 | 461.4 | 552.6 | 577.9 | 633.8 | 698.4 |
| (growth rate, in percent) | 11.6 | -17.6 | 28.8 | 19.7 | 4.6 | 9.7 | 10.2 |
| Imports | 429.5 | 320.3 | 421.4 | 521.6 | 549.1 | 606.1 | 672.4 |
| (growth rate, in percent) | 21.9 | -25.4 | 31.5 | 23.8 | 5.3 | 10.4 | 10.9 |
| Services | -5.7 | -6.6 | -8.6 | -4.4 | -3.0 | -3.9 | -3.9 |
| Income | 4.4 | 2.3 | 1.0 | 2.5 | 0.6 | 0.9 | 1.0 |
| Current transfers | -0.7 | -0.7 | -3.1 | -2.5 | -3.9 | -3.8 | -3.7 |
| **Financial and capital account balance** | -57.6 | 34.0 | -0.5 | -18.1 | -7.6 | -5.8 | -5.6 |
| Financial account | -57.7 | 33.7 | -0.3 | -18.2 | -8.1 | -6.3 | -6.1 |
| Portfolio investment, net 1/ | -17.2 | 46.6 | 43.3 | 8.6 | 7.8 | 9.8 | 9.8 |
| Direct investment, net | -16.9 | -14.9 | -22.2 | -15.7 | -17.0 | -17.0 | -17.0 |
| Inflows | 3.3 | 2.2 | 1.1 | 4.7 | 3.0 | 3.0 | 3.0 |
| Outflows | -20.3 | -17.2 | -23.3 | -20.4 | -20.0 | -20.0 | -20.0 |
| Other investment, assets | -13.7 | 1.7 | -16.0 | -23.6 | -10.0 | -10.0 | -10.0 |
| Other investment, liabilities | -9.9 | 0.4 | -5.4 | 12.5 | 11.1 | 10.8 | 11.0 |
| Capital account | 0.1 | 0.3 | -0.2 | 0.2 | 0.5 | 0.5 | 0.5 |
| **Net errors and omissions** | -2.0 | 1.9 | -1.9 | 5.5 | 0.0 | 0.0 | 0.0 |
| **Overall balance** | -56.4 | 68.7 | 27.0 | 13.9 | 14.9 | 15.1 | 13.7 |
| **Financing** | 56.4 | -68.7 | -27.0 | -13.9 | -14.9 | -15.1 | -13.7 |
| Change in reserves (increase -) | 56.4 | -68.7 | -27.0 | -13.9 | -14.9 | -15.1 | -13.7 |
| **Memorandum items:** | | | | | | | |
| Current account balance (in percent of GDP) | 0.3 | 3.9 | 2.9 | 2.4 | 2.0 | 1.7 | 1.5 |
| Trade balance (in percent of GDP) | 0.6 | 4.5 | 4.0 | 2.8 | 2.5 | 2.3 | 2.0 |
| Gross reserves minus gold | 201.1 | 269.9 | 291.5 | 304.2 | 319.2 | 334.3 | 348.0 |
| (in months of imports of goods and services) | 4.6 | 8.1 | 6.8 | 5.9 | 5.9 | 5.7 | 5.3 |
| External debt | 317.4 | 345.7 | 359.4 | 398.4 | 419.4 | 440.3 | 461.3 |
| (in percent of GDP) | 34.0 | 41.5 | 35.4 | 35.7 | 36.7 | 36.4 | 35.5 |
| Short-term external debt (inc. trade credits) | 149.9 | 149.2 | 139.8 | 136.1 | 140.5 | 145.7 | 152.7 |
| Nominal GDP (U.S. dollars) | 933.0 | 833.9 | 1014.5 | 1116.3 | ... | ... | ... |

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Includes financial derivatives, net.

**Table 3.1. Korea: Statement of Central Government Operations, 2008–14**

| | 2008 | 2009 | 2010 | 2011 | Projections 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|
| | | | (In trillions of won) | | | | |
| **Revenue** | 246.6 | 245.5 | 265.8 | 289.8 | 309.3 | 332.0 | 356.0 |
| Tax revenue | 167.3 | 164.5 | 177.7 | 192.4 | 205.5 | 220.9 | 237.0 |
| Social contributions | 39.0 | 40.2 | 42.8 | 46.2 | 49.2 | 52.7 | 56.4 |
| *Of which:* Social security contributions | 32.9 | 33.9 | 35.6 | 38.9 | 41.4 | 44.4 | 47.5 |
| Other revenue | 40.3 | 40.7 | 45.2 | 51.2 | 54.6 | 58.4 | 62.6 |
| **Expenditure** | 229.8 | 245.3 | 246.4 | 267.2 | 283.5 | 293.7 | 313.7 |
| Expense | 211.4 | 232.7 | 233.1 | 253.9 | 265.5 | 275.0 | 293.8 |
| Net acquisition of nonfinancial assets | 18.4 | 12.6 | 13.2 | 13.3 | 18.0 | 18.6 | 19.9 |
| **Net lending (+) / borrowing (-)** | 16.8 | 0.2 | 19.4 | 22.5 | 25.8 | 38.4 | 42.4 |
| Less: Policy lending | 1.0 | 17.8 | 2.7 | 3.9 | 4.5 | 4.5 | 4.5 |
| **Overall balance** | 15.8 | -17.6 | 16.7 | 18.6 | 21.3 | 33.9 | 37.9 |
| Less: Social Security Fund balance | 27.5 | 25.7 | 29.7 | 32.1 | 33.1 | 34.4 | 36.3 |
| **Overall balance excluding Social Security Funds** | -11.7 | -43.3 | -13.0 | -13.5 | -11.8 | -0.5 | 1.6 |
| **Net acquisition of financial assets** | 58.3 | 57.4 | 35.5 | 35.1 | 35.1 | 35.1 | 35.1 |
| Domestic | 57.4 | 56.4 | 34.6 | 34.3 | 34.3 | 34.3 | 34.3 |
| Currency and deposits | -15.1 | -0.3 | 3.3 | 0.7 | 0.7 | 0.7 | 0.7 |
| Loans | 72.5 | 56.7 | 31.4 | 33.6 | 33.6 | 33.6 | 33.6 |
| Foreign | 0.9 | 1.0 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 |
| Loans | 0.9 | 1.0 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 |
| Monetary gold and SDR | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Net incurrence of liabilities** | 41.5 | 57.2 | 16.1 | 12.5 | 9.3 | -3.3 | -7.3 |
| Domestic | 41.5 | 57.2 | 16.1 | 12.5 | 9.3 | -3.3 | -7.3 |
| Foreign | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | (In percent of GDP) | | | | |
| **Revenue** | 24.0 | 23.0 | 22.7 | 23.4 | 23.5 | 23.5 | 23.6 |
| Tax revenue | 16.3 | 15.4 | 15.1 | 15.6 | 15.6 | 15.6 | 15.7 |
| Social contributions | 3.8 | 3.8 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| *Of which:* Social security contributions | 3.2 | 3.2 | 3.0 | 3.1 | 3.1 | 3.1 | 3.1 |
| Other revenue | 3.9 | 3.8 | 3.9 | 4.1 | 4.1 | 4.1 | 4.1 |
| **Expenditure** | 22.4 | 23.0 | 21.0 | 21.6 | 21.5 | 20.8 | 20.8 |
| Expense | 20.6 | 21.8 | 19.9 | 20.5 | 20.1 | 19.5 | 19.4 |
| Net acquisition of nonfinancial assets | 1.8 | 1.2 | 1.1 | 1.1 | 1.4 | 1.3 | 1.3 |
| **Net lending (+) / borrowing (-)** | 1.6 | 0.0 | 1.7 | 1.8 | 2.0 | 2.7 | 2.8 |
| Less: Policy lending | 0.1 | 1.7 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| **Overall balance** | 1.5 | -1.7 | 1.4 | 1.5 | 1.6 | 2.4 | 2.5 |
| Less: Social Security Fund balance | 2.7 | 2.4 | 2.5 | 2.6 | 2.5 | 2.4 | 2.4 |
| **Overall balance excluding Social Security Funds** | -1.1 | -4.1 | -1.1 | -1.1 | -0.9 | 0.0 | 0.1 |
| **Memorandum items:** | | | | | | | |
| Operating balance (trillion won) | 35.2 | 12.8 | 32.6 | 35.9 | 43.8 | 57.0 | 62.3 |
| In percent of GDP | 3.4 | 1.2 | 2.8 | 2.9 | 3.3 | 4.0 | 4.1 |
| Primary balance (trillion won) | 30.2 | -6.1 | 30.1 | 33.2 | 38.0 | 50.4 | 55.1 |
| In percent of GDP | 2.9 | -0.6 | 2.6 | 2.7 | 2.9 | 3.6 | 3.6 |
| Overall structural balance (trillion won) | 17.5 | -9.6 | 17.8 | 18.8 | 23.1 | 33.3 | 37.9 |
| In percent of GDP | 1.7 | -0.9 | 1.5 | 1.5 | 1.7 | 2.4 | 2.5 |
| Nominal GDP (trillion won) | 1,026.5 | 1,065.0 | 1,173.3 | 1,237.1 | 1,318.4 | 1,411.8 | 1,511.5 |
| Central government debt (trillion won) | 297.9 | 346.1 | 373.8 | 402.8 | 418.4 | 418.9 | 417.3 |
| In percent of GDP | 29.0 | 32.5 | 31.9 | 32.6 | 31.7 | 29.7 | 27.6 |
| Total non-financial SOE debt (trillion won) | 199.6 | 237.5 | 292.0 | 329.5 | … | … | … |
| *Of which:* Korea Land and Housing Corporation debt | 85.8 | 109.2 | 125.5 | 130.6 | … | … | … |

Sources: Ministry of Strategy and Finance; and IMF staff estimates and projections.

**Table 3.2. Korea: Integrated Balance Sheet - Consolidated General Government, 2008–11**

| | 2008 | | | 2009 | | | 2010 | | | 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Closing/ Opening balance | Transactions | Other economic flows | Closing/ Opening balance | Transactions | Other economic flows | Closing/ Opening balance | Transactions | Other economic flows | Closing/ Opening balance | Transactions | Other economic flows | Closing/ Opening balance |
| | (In trillions of won) | | | | | | | | | | | | |
| **Net financial worth** | 392.3 | | | 386.5 | | | 415.1 | | | 446.4 | | | 452.3 |
| **Financial assets** | 668.1 | 38.0 | -11.7 | 694.4 | 42.1 | 24.7 | 761.2 | 52.3 | 24.9 | 838.3 | 56.9 | -8.6 | 886.5 |
| Currency and deposits | 89.7 | -7.2 | 0.0 | 82.4 | -4.9 | 0.0 | 77.5 | 7.0 | 0.2 | 84.7 | 1.3 | 0.0 | 86.0 |
| Securities other than shares | 190.3 | 20.0 | 5.6 | 215.9 | 26.8 | -0.2 | 242.5 | 6.7 | 5.6 | 254.8 | 19.1 | -0.3 | 273.7 |
| Loans | 200.6 | 7.5 | 1.2 | 209.3 | 12.5 | -0.3 | 221.4 | 18.2 | 0.1 | 239.8 | 14.6 | -0.2 | 254.1 |
| Other | 187.6 | 17.7 | -18.5 | 186.8 | 7.7 | 25.2 | 219.7 | 20.4 | 19.0 | 259.0 | 21.9 | -8.2 | 272.7 |
| **Liabilities** | 275.8 | 7.4 | 24.7 | 307.8 | 51.9 | -13.6 | 346.1 | 39.6 | 6.2 | 391.9 | 34.6 | 7.8 | 434.3 |
| Securities other than shares | 240.9 | 14.2 | 17.9 | 272.9 | 48.9 | -9.4 | 312.5 | 35.5 | 11.7 | 359.6 | 34.4 | 7.8 | 401.8 |
| Loans | 6.0 | -0.7 | 0.5 | 5.7 | 0.7 | -0.1 | 6.3 | 0.8 | 0.0 | 7.0 | -0.6 | 0.0 | 6.4 |
| Other | 29.0 | -6.1 | 6.3 | 29.2 | 2.3 | -4.2 | 27.4 | 3.3 | -5.5 | 25.2 | 0.9 | 0.0 | 26.1 |
| **Memorandum items:** | | | | | | | | | | | | | |
| Net financial worth (in percent of GDP) | 40.2 | | | 37.7 | | | 39.0 | | | 38.1 | | | 36.6 |
| Change in net financial worth (percent) | 17.4 | | | -1.5 | | | 7.4 | | | 7.5 | | | 1.3 |
| Liabilities/Financial assets ratio | 0.4 | | | 0.4 | | | 0.5 | | | 0.5 | | | 0.5 |
| Nominal GDP | 975.0 | | | 1,026.5 | | | 1,065.0 | | | 1,173.3 | | | 1,237.1 |

Source: Haver Analytics.

## Table 4. Korea: Medium-Term Projections, 2011–17

| | | Projections | | | | | |
|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| **Real GDP (percent change)** | 3.6 | 3.0 | 3.9 | 4.0 | 4.0 | 4.0 | 4.0 |
| Total domestic demand | 2.0 | 2.4 | 3.1 | 3.8 | 4.0 | 4.2 | 4.2 |
| Final domestic demand | 1.3 | 2.6 | 3.1 | 3.9 | 4.0 | 4.2 | 4.2 |
| Consumption | 2.2 | 2.5 | 2.9 | 3.9 | 4.1 | 4.3 | 4.3 |
| Gross fixed investment | -1.1 | 3.1 | 3.6 | 3.9 | 3.9 | 4.2 | 4.2 |
| Stock building 1/ | 0.7 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net foreign balance 1/ | 1.9 | 1.0 | 1.2 | 0.6 | 0.4 | 0.3 | 0.2 |
| **Prices, period average (percent change)** | | | | | | | |
| Consumer price | 4.0 | 2.8 | 3.2 | 3.0 | 3.0 | 3.0 | 3.0 |
| GDP deflator | 1.7 | 3.5 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9 |
| **Savings and investment (in percent of GDP)** | | | | | | | |
| Gross national savings | 31.8 | 31.2 | 31.3 | 31.1 | 30.6 | 30.3 | 30.0 |
| Gross domestic investment | 29.5 | 29.2 | 29.6 | 29.6 | 29.5 | 29.5 | 29.4 |
| Current account balance | 2.4 | 2.0 | 1.7 | 1.5 | 1.1 | 0.8 | 0.7 |
| **Consolidated central government (in percent of GDP)** | | | | | | | |
| Revenue | 23.4 | 23.5 | 23.5 | 23.6 | 23.6 | 23.6 | 23.6 |
| Expenditure | 21.6 | 21.5 | 20.8 | 20.8 | 20.7 | 20.7 | 20.7 |
| Net lending (+) / borrowing (-) | 1.8 | 2.0 | 2.7 | 2.8 | 2.9 | 2.9 | 2.9 |
| Overall balance | 1.5 | 1.6 | 2.4 | 2.5 | 2.6 | 2.6 | 2.6 |
| Excluding Social Security Funds | -1.1 | -0.9 | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 |
| Debt, domestic plus external | 32.6 | 31.7 | 29.7 | 27.6 | 25.6 | 23.6 | 21.7 |
| **Trade (percent change)** | | | | | | | |
| Merchandise exports | 19.7 | 4.6 | 9.7 | 10.2 | 10.9 | 11.3 | 12.1 |
| Volumes 2/ | 11.6 | 5.6 | 10.0 | 10.4 | 10.7 | 10.8 | 10.9 |
| Merchandise imports | 23.8 | 5.3 | 10.4 | 10.9 | 11.8 | 12.1 | 12.3 |
| Volumes 2/ | 8.7 | 4.0 | 10.9 | 12.0 | 12.2 | 12.5 | 12.6 |
| Terms of trade | -8.2 | -2.2 | 0.1 | 0.7 | 0.5 | 0.8 | 1.3 |
| **Balance of payments (in billions of U.S. dollars)** | | | | | | | |
| Current account | 26.5 | 22.5 | 21.0 | 19.3 | 15.5 | 11.3 | 10.8 |
| (In percent of GDP) | 2.4 | 2.0 | 1.7 | 1.5 | 1.1 | 0.8 | 0.7 |
| Trade balance | 31.0 | 28.8 | 27.7 | 26.0 | 22.6 | 18.5 | 18.9 |
| Merchandise exports | 552.6 | 577.9 | 633.8 | 698.4 | 774.5 | 861.6 | 965.7 |
| Merchandise imports | 521.6 | 549.1 | 606.1 | 672.4 | 751.8 | 843.0 | 946.8 |
| **External debt** | | | | | | | |
| In billions of U.S. dollars 3/ | 398.4 | 419.4 | 440.3 | 461.3 | 482.0 | 502.4 | 522.3 |
| (In percent of GDP) | 35.7 | 36.7 | 36.4 | 35.5 | 34.7 | 33.7 | 32.7 |
| Debt service ratio 4/ | 6.4 | 7.4 | 7.3 | 7.0 | 6.9 | 7.0 | 7.2 |
| **Memorandum items:** | | | | | | | |
| Nominal GDP (in trillions of won) | 1,237 | 1,318 | 1,412 | 1,511 | 1,618 | 1,732 | 1,855 |
| Per capita GDP (in U.S. dollars) | 22,426 | 22,882 | 24,097 | 25,710 | 27,434 | 29,265 | 31,223 |
| Output gap (percent of potential GDP) | -0.1 | -0.6 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Contribution to GDP growth.
2/ Customs clearance basis.
3/ Includes offshore borrowing of domestic financial institutions and debt contracted by their overseas branches.
4/ Debt service on medium- and long-term debt in percent of exports of goods and services.

**Table 5. Korea: Financial Soundness Indicators, 2005–11**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|
| **Financial Sector** | | | | (In percent) | | | |
| Total loans/GDP | 91.9 | 102.4 | 110.1 | 125.5 | 120.7 | 111.6 | 112.2 |
| Commercial banks | 63.3 | 71.0 | 75.2 | 83.3 | 79.1 | 73.2 | 72.8 |
| Other financial institutions | 28.6 | 31.3 | 34.9 | 42.2 | 41.6 | 38.4 | 39.4 |
| Bank loans | | | | (Year-on-year percent change) | | | |
| SMEs | 4.7 | 17.7 | 22.5 | 13.2 | 4.8 | -0.2 | 2.6 |
| Households | 10.7 | 13.4 | 5.1 | 6.9 | 5.2 | 5.3 | 5.6 |
| Large companies | 15.9 | -4.6 | 32.9 | 60.0 | -6.4 | 15.7 | 31.8 |
| Banks 1/ | | | | (In percent) | | | |
| Capital adequacy ratio | 13.0 | 12.8 | 12.3 | 12.3 | 14.4 | 14.6 | 14.0 |
| Tier 1 capital ratio | 9.3 | 9.2 | 9.0 | 8.8 | 10.9 | 11.6 | 11.1 |
| Return on assets | 1.3 | 1.1 | 1.1 | 0.5 | 0.4 | 0.5 | 0.7 |
| Net interest margin | 2.8 | 2.6 | 2.4 | 2.3 | 2.0 | 2.3 | 2.3 |
| Total loan to deposit ratio 2/ | 105.8 | 112.0 | 119.1 | 120.5 | 111.0 | 105.7 | 105.0 |
| Substandard or below loans, share | | | | (In percent of total loans) | | | |
| Commercial banks | 1.3 | 0.9 | 0.7 | 1.2 | 1.2 | 1.9 | 1.3 |
| Specialized banks | 1.1 | 0.7 | 0.7 | 1.1 | 1.4 | 2.0 | 1.5 |
| Mutual savings banks | 13.8 | 10.5 | 8.8 | 9.1 | 9.3 | 10.8 | 16.4 |
| Credit unions | 5.4 | 4.5 | 3.8 | 3.5 | 3.7 | 3.7 | 3.6 |
| **Corporate Sector** | | | | (In percent) | | | |
| Corporate debt/GDP 3/ | 101.3 | 108.6 | 112.3 | 135.8 | 132.0 | 127.5 | 129.4 |
| Delinquency ratio (domestic commercial bank loans) | 1.5 | 1.2 | 1.0 | 1.5 | 1.0 | 1.1 | 1.1 |
| Debt ratio to: | | | | | | | |
| Equity | 100.9 | 98.9 | 107.1 | 123.2 | 109.6 | 84.8 | 84.9 |
| Total assets | 22.9 | 22.4 | 24.9 | 26.3 | 26.0 | 20.9 | 21.5 |
| Sales | 19.9 | 19.9 | 23.3 | 24.3 | 25.3 | 19.5 | 20.0 |
| Interest coverage ratio 4/ | 525.4 | 439.3 | 435.3 | 415.8 | 417.1 | 764.3 | 675.4 |
| Current assets/current liabilities | 121.4 | 120.5 | 119.8 | 112.8 | 121.2 | 117.8 | 120.4 |
| Operating income/sales | 6.1 | 5.3 | 5.9 | 5.9 | 6.2 | 8.1 | 6.3 |
| Financial expenses/sales | -1.2 | -1.2 | -1.4 | -1.4 | -1.5 | -1.3 | … |
| Ordinary income/sales | 6.6 | 5.8 | 6.2 | 3.2 | 6.0 | 8.0 | 6.3 |
| **Household Sector** | | | | (In percent of disposable household income) | | | |
| Household credit | 110.5 | 118.3 | 122.0 | 125.4 | 129.5 | 131.7 | 135.5 |
| *Of which* : Non-bank financial institutions | 49.4 | 51.9 | 55.3 | 58.2 | 61.5 | 64.6 | 67.8 |
| Delinquency ratio (all bank loans) | | | | (In percent) | | | |
| Households | 1.1 | 0.7 | 0.6 | 0.6 | 0.5 | 0.6 | 0.7 |
| Credit card 5/ | 2.2 | 1.7 | 1.3 | 1.8 | 1.4 | 1.3 | 1.9 |
| | | | | (Year-on-year percent change) | | | |
| Housing prices, percent change | 4.0 | 11.6 | 3.1 | 3.1 | 1.5 | 1.9 | 6.9 |
| *Of which* : Seoul | 6.3 | 18.9 | 5.4 | 5.0 | 2.7 | -1.2 | 0.3 |

Sources: Bank of Korea; Financial Supervisory Service; and CEIC Data Company Ltd.

1/ Includes commercial and specialized banks.
2/ Includes commercial banks only.
3/ Includes non-financial corporations.
4/ Operating income to gross interest payments.
5/ Over one month.

**Table 6. Korea: Indicators of Financial and External Vulnerability, 2007–12**

(In percent of GDP, unless otherwise indicated)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Data |
|---|---|---|---|---|---|---|---|
| **Financial indicators** | | | | | | | |
| Consolidated central government debt 1/ | 33.0 | 31.8 | 35.3 | 34.8 | 35.4 | 34.1 | Proj. |
| Broad money (M3, percent change, end of period) | 10.0 | 9.1 | 9.4 | 5.9 | 6.6 | 7.4 | Apr-12 |
| Private sector credit (Dep. Corp. survey, percent change, end of period) | 14.7 | 16.8 | 2.8 | 5.2 | 7.0 | 7.0 | May-12 |
| One-month call borrowing rate (in percent) | 5.0 | 2.9 | 2.0 | 2.5 | 3.3 | 3.3 | Jun-12 |
| **External indicators** | | | | | | | |
| Exports (percent change, 12-month basis in US$) | 15.8 | 11.6 | -17.6 | 28.8 | 19.7 | -1.9 | May-12 |
| Imports (percent change, 12-month basis in US$) | 15.5 | 21.9 | -25.4 | 31.5 | 23.8 | -2.2 | May-12 |
| Terms of trade (percent change, 12-month basis) | -2.5 | -14.4 | 10.8 | -0.9 | -8.2 | -7.0 | Apr-12 |
| Current account balance (in percent of GDP) | 2.1 | 0.3 | 3.9 | 2.9 | 2.4 | 2.0 | Proj. |
| Capital and financial account balance (in percent of GDP) | -0.8 | -6.2 | 4.1 | -0.1 | -1.6 | -0.7 | Proj. |
| *Of which:* Inward portfolio investment (equity, debt securities, etc.) | 2.3 | -10.3 | -3.6 | -0.5 | -3.2 | 1.1 | Proj. |
| Other investment (loans, trade credits etc.) | 4.5 | -1.1 | 0.0 | -0.5 | 1.1 | 1.0 | Proj. |
| Inward foreign direct investment in the form of debt or loans | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.3 | Proj. |
| Gross official reserves (US$ billion) | 262.1 | 201.1 | 269.9 | 291.5 | 304.2 | 312.4 | Jun-12 |
| Central bank short-term foreign liabilities (US$ billion) | 9.6 | 18.3 | 11.7 | 10.3 | 8.9 | ... | .... |
| Short-term foreign liabilities of the financial sector (US$ billion) | 134.0 | 110.4 | 115.7 | 102.1 | 100.6 | ... | ... |
| Official reserves in months of imports GS (projection for full year) | 7.2 | 4.6 | 8.1 | 6.8 | 5.9 | 5.9 | Proj. |
| Broad money (M3)/reserves (ratio) | 6.9 | 7.3 | 6.4 | 6.5 | 6.5 | 6.5 | Apr-12 |
| Reserves to total short-term external debt (percent) 2/ | 136.9 | 111.7 | 146.2 | 162.6 | 165.9 | 167.4 | Proj. |
| Total external debt | 31.8 | 34.0 | 41.5 | 35.4 | 35.7 | 36.7 | Proj. |
| *Of which:* Public sector debt | 3.0 | 2.3 | 3.3 | 4.4 | 4.8 | ... | ... |
| *Of which:* Short-term debt | 15.3 | 16.1 | 17.9 | 13.8 | 12.2 | 12.3 | Proj. |
| Total external debt to exports GS (percent) | 72.1 | 60.4 | 80.1 | 65.5 | 61.5 | 62.0 | Proj. |
| External interest payments to exports GS (percent) | 1.6 | 1.9 | 0.8 | 0.3 | 0.3 | 0.5 | Proj. |
| External amortization payments to exports GS (percent) | 5.3 | 5.9 | 7.0 | 6.4 | 6.1 | 7.0 | Proj. |
| Exchange rate (per US$, period average) | 929 | 1,100 | 1,277 | 1,156 | 1,108 | 1,147 | 7/26/2012 |
| REER appreciation (+) (12-month basis) | -1.2 | -18.9 | -11.6 | 8.4 | 0.1 | -2.6 | May-12 |
| **Financial market indicators 3/** | | | | | | | |
| Stock market index (KOSPI) | 1897 | 1124 | 1683 | 2051 | 1826 | 1782 | 7/26/2012 |
| Stock market index (KOSPI, percent change (y/y)) | 32.3 | -40.7 | 49.7 | 21.9 | -11.0 | -17.3 | 7/26/2012 |
| Foreign currency debt rating (Moody's/S&P) | A2/A | A2/A | A2/A | A1/A | A1/A | A1/A | 7/26/2012 |
| Credit default swap on government (index) | 16.5 | 114.2 | 137.6 | 123.1 | 98.7 | 116.0 | 7/26/2012 |
| Cross currency swap spreads (1 year, basis points) | -83.0 | -176.5 | -189.0 | -120.3 | -141.8 | -79.3 | 7/26/2012 |

Sources: Korean authorities; private market sources; and IMF staff estimates and projections.

1/ Including government-guaranteed restructuring bonds issued by KDIC and KAMCO.

2/ Short-term debt measured on a residual maturity basis.

3/ Values for the trading day in each year corresponding to the reference date in the right most column.

**Table 7. Korea: International Investment Position, 2008–11**

(In billions of U.S. dollars)

| | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|
| **Assets** | 489.47 | 625.88 | 694.05 | 742.1 |
| Direct Investment Abroad | 97.91 | 120.44 | 143.16 | 160.6 |
| Portfolio Investment | 75.11 | 101.15 | 112.21 | 103.0 |
| Equity Securities | 47.88 | 72.32 | 81.92 | 71.0 |
| Debt Securities | 27.23 | 28.83 | 30.29 | 32.0 |
| Financial Derivatives | 10.36 | 28.68 | 27.58 | 26.6 |
| Other Investment | 104.87 | 105.60 | 119.53 | 145.3 |
| Monetary Authorities | 4.35 | 5.12 | 4.66 | 4.7 |
| General Government | 3.05 | 3.67 | 3.89 | 4.5 |
| Banks | 78.68 | 73.46 | 80.23 | 96.2 |
| Other Sectors | 18.78 | 23.35 | 30.75 | 40.0 |
| Reserve Assets | 201.22 | 270.01 | 291.57 | 306.4 |
| | | | | |
| **Liabilities** | 547.91 | 730.79 | 831.36 | 839.2 |
| Direct Investment in Korea | 94.68 | 121.10 | 134.23 | 135.7 |
| Portfolio Investment | 252.15 | 391.58 | 489.11 | 478.2 |
| Equity Securities | 124.64 | 237.08 | 317.32 | 284.3 |
| Debt Securities | 127.51 | 154.50 | 171.79 | 193.9 |
| Financial Derivatives | 15.75 | 32.60 | 27.36 | 28.5 |
| Other Investment | 185.33 | 185.52 | 180.66 | 196.7 |
| Monetary Authorities | 15.24 | 8.15 | 7.33 | 7.3 |
| General Government | 3.03 | 2.29 | 1.65 | 1.0 |
| Banks | 122.68 | 130.67 | 122.38 | 137.2 |
| Other Sectors | 44.38 | 44.41 | 49.31 | 51.2 |

Source: IMF, *International Financial Statistics* .

## APPENDIX I. KOREA: RISK ASSESSMENT MATRIX

| Nature/Source of Main Threats | Overall Level of Concern | |
|---|---|---|
| | **Likelihood of Severe Realization of Threat in the Next one–three Years** (high, medium or low) | **Expected Impact if Threat is Realized** (high, medium or low) |
| 1. Strong intensification of the euro area crisis | **Medium**<br>If this risk materializes, it could lead to a double dip recession in advanced economies.<br>This would also lead to a spike in global risk aversion, large capital outflows, and further bank deleveraging. | **High**<br>Korea would be significantly affected by a global recession via lower exports (and knock-on effects on domestic demand). Korean banks rely on wholesale funding, though less than before, and would likely face some funding pressures. Also it could lead to disorderly financial markets and a sharp fall in the Korean won. |
| 2. Slower growth in China by 2 percentage points relative to the baseline. | **Low**<br>Growth in China slows following a housing bust that creates local government defaults and a stronger than expected rise in banks' NPLs. | **Medium**<br>If China slows significantly relative to the baseline, it would have significant trade spillovers to Korea as it is Korea's largest trading partner. There will also be second-round effects through declining global growth. |
| 3. Substantial and prolonged spike in oil prices | **Low**<br>The materialization of geopolitical risks in the Middle East would put sustained upward pressure on oil prices. | **Medium**<br>Elevated oil prices would have a considerable knock-on effect on inflation and could unhinge inflation expectations.<br>The growth effect on Korea is also likely to be substantial. |
| 4. Large capital inflows | **Medium**<br>Growth and interest rate differentials, along with high global liquidity, could lead to the resumption of large capital inflows. | **Medium**<br>Large capital inflows would put upward pressure on the won.<br>Intervention to avoid overshooting could lead to a perception of a one way bet, which could in turn lead to large capital inflows and financial stability concerns. |
| 5. Spillovers from political instability in North Korea | **(Very) Low**<br>While the recent leadership transition has been orderly so far, political uncertainties have been elevated and can potentially lead to destabilization of the Korean peninsula. | **(Very) High**<br>The fallout of such an event will have far reaching effects on South Korea and will be multifaceted, entailing large fiscal costs and financial market instability. |
| 6. High household indebtedness triggering financial stress | **Low**<br>The elevated household debt burden could expose households to interest rate and rollover risks, despite several mitigating factors.<br>Non-bank financial institutions have sharply increased lending, particularly to lower-income households. | **Medium**<br>The high level of household debt could lead to rising NPLs in the future, which could in turn hurt banks' balance sheets. High household debt could also impinge on consumption. |

## APPENDIX II. KOREA: MAIN RECOMMENDATIONS FROM THE 2011 ARTICLE IV CONSULTATION

The 2011 Article IV consultation was concluded by the Executive Board on July 29, 2011. Executive Directors agreed that growth was expected to continue above potential, taking note of the buildup of inflationary pressures and near-term risks to growth and financial stability. Against this background, Directors agreed that the immediate policy priority is to ensure a soft landing and safeguard financial stability—through proactive monetary tightening, greater exchange rate flexibility, and ongoing fiscal consolidation, complemented by macroprudential policies. While supporting the broadly neutral stance of fiscal policy, Directors welcomed the plan to balance the central government budget by 2013–14 and encouraged the authorities to better link long-term liabilities to annual budgets, and enhance longer-term fiscal sustainability. Directors recommended a restructuring of the MSB industry, saw scope for making interest rate policy more responsive to financial stability considerations, noted a role for market-based housing policies in containing leverage, and called for a gradual phase out of administrative price stabilization measures. Directors considered macroprudential tools a useful complement to macroeconomic policies in addressing financial stability concerns, while seeing the benefits of greater exchange rate flexibility in managing capital flows and absorbing external shocks. Directors underscored the need to rebalance the sources of growth by raising productivity in the non-tradables sector.

Since the last Article IV consultation, the global headwinds have caused Korea's growth to decline to below potential. While inflationary pressure remained high in the second half of 2011, it has declined in recent months reflecting lower commodity prices and weak domestic demand. Against this backdrop, the authorities have taken the following policy actions:

- The policy rate was kept on hold through June 2011, but in July 2012 the BOK cut it by 25 basis points, in view of the worsening economic outlook.
- In line with the medium-term consolidation plan, the 2012 budget is broadly neutral, although frontloaded to support the economy in the first half of the year. However, in view of the weaker-than-expected economic outlook in the second half of year, the authorities have recently adopted a modest fiscal stimulus.
- While allowing the exchange rate to move flexibly in response to market conditions, the authorities have continued to fine-tune and expand macroprudential policy measures to reduce financial vulnerabilities.
- The authorities have also maintained efforts to reduce excessive borrowing by households including by tightening regulations on non-bank lending. They closed down 20 MSBs in 2011-12 following a comprehensive review of the MSB sector.
- They are following through with their commitments under G-20 MAP on services and labor market reform, continuing efforts on restructuring of SMEs, and increasing social spending by 20 percent in the 2012 budget to address income inequality.

INTERNATIONAL MONETARY FUND

# REPUBLIC OF KOREA

## STAFF REPORT FOR THE 2012 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

July 30, 2012

Prepared By

Asia and Pacific Department

## CONTENTS

# ANNEX I. FUND RELATIONS

(As of June 26, 2012)

**Membership Status:** Joined August 26, 1955; Article VIII

**General Resources Account**

| | SDR Million | Percent Quota |
|---|---|---|
| Quota | 3,366.40 | 100.00 |
| Fund holdings of currency (exchange rate) | 2,190.34 | 65.06 |
| Reserve tranche position | 1,176.06 | 34.94 |
| Lending to the Fund | | |
| New arrangements to borrow | 510.06 | |

**SDR Department**

| | SDR Million | Percent Allocation |
|---|---|---|
| Net cumulative allocation | 2,404.45 | 100.00 |
| Holdings | 2,293.19 | 95.37 |

**Outstanding Purchases and Loans**

None

**Financial Arrangements** (In SDR Million)

| Type | Date of Arrangement | Expiration Date | Amount Approved | Amount Drawn |
|---|---|---|---|---|
| Stand-by | Dec. 04, 1997 | Dec. 03, 2000 | 15,500.00 | 14,412.50 |
| Of which SRF | Dec. 18, 1997 | Dec. 17, 1998 | 9,950.00 | 9,950.00 |
| Stand-by | Jul. 12, 1985 | Mar. 10, 1987 | 280.00 | 160.00 |
| Stand-by | Jul. 08, 1983 | Mar. 31, 1985 | 575.78 | 575.78 |

**Projected Obligations to Fund**[1]

(SDR Million; based on existing use of resources and present holdings of SDRs)

| | Forthcoming | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| Principal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Charges/interest | 0.07 | 0.17 | 0.17 | 0.17 | 0.17 |
| Total | 0.07 | 0.17 | 0.17 | 0.17 | 0.17 |

[1] When a number has overdue financial obligations outstanding for more than three months, the amount of arrears will be shown in this section.

**Exchange Rate Arrangement:**

Korea's exchange rate system has been classified as "floating" since 2009. Over 1997–2008, the exchange rate was classified as "free floating" ("independently floating" under the older classification system). Korea maintains exchange restrictions for security reasons, in accordance with UN Security Council Resolutions, which have been notified to the Fund under the procedures set forth in Executive Board Decision 144 (52/51).

**FSAP and ROSC Participation:**

MCM: An FSAP update has been requested by the authorities and is tentatively scheduled for 2013. The last FSAP mission was conducted during October 2002. The mission completed the FSAP by assessing the short-term vulnerability of the financial sector to macroeconomic and sectoral shocks and analyzing overall financial sector soundness and developmental challenges, including issues arising from the draft standards assessments. A follow-up technical assistance mission on the supervision of derivatives markets was held in Seoul during January 9-20, 2003. The Financial System Stability Assessment report has been published (Country Report No. 03/81) and is available on the web through the following link: http://www.imf.org/external/np/fsap/fsap.asp.

FAD: Discussions on fiscal transparency were held in Seoul during June 2000, and a report was drafted and finalized in November 2000, with input from APD staff. The report has been published and is available on the web through the following link:
http://www.imf.org/external/np/rosc/kor/fiscal.htm.

STA: Discussions on Korea's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS) were held in Seoul during December 2009, and a Report on the Observance of Standards and Codes (ROSC) was drafted and finalized in July 2010. The report has been published and is available on the web through the link:
http://www.imf.org/external/pubs/ft/scr/2010/cr10229.pdf

**Technical Assistance:**

FAD: A technical assistance mission on government finance statistics took place in Seoul during the period November 8–19, 2010. A mission visited Seoul during August 31-September 16, 2005 to provide technical assistance on the reform of tax policy and administration. A technical assistance mission visited Seoul during January 8–19, 2001 to evaluate current practices in budgeting and public expenditure management and to provide advice on setting up a medium-term fiscal framework.

MCM: Technical assistance missions visited Seoul to provide advice on financial holding company supervision and derivatives regulation during December 8–17, 2008, on measures to deepen the money market during December 4–14, 2007, on strengthening the debt management function and further development of the government securities market during September 20–October 2, 2006, on the reform and development of the foreign exchange market during March 30–April 13, 2006, and on macroprudential and derivatives supervision during October 27–November 7, 2005.

STA: Technical assistance missions visited Seoul during March 29–April 12, 2000 to provide advice on balance of payments and external debt statistics, with a view toward improving the recording of financial derivatives and developing an international investment position statement, and during November 28–December 11, 2007 on the GFSM 2001 framework. Two missions to support reforms related to government finance statistics visited Korea during November 28–December 11, 2007 and November 8–19, 2010, respectively.

**Resident Representative:**

The resident representative office in Seoul was opened in March 1998 and was closed in September 2008.

# ANNEX II. STATISTICAL ISSUES

As of June 30, 2012

| I. Assessment of Data Adequacy for Surveillance |
| --- |
| **General:** Data provision is adequate for surveillance. |
| **National Accounts:** The overall structure of the national accounts follows the recommendations of the *1993 System of National Accounts*. Chain-linked (reference year 2005) and nominal GDP estimates are compiled using the production and expenditure approaches; nominal GDP estimates are also compiled using the income approach. After the revision to reference year 2005, the estimation method for expenditure components has been altered from the commodity flow method to the direct estimation method, in which each expenditure component is measured directly. The size of the informal sector has not been measured. Improved methods are required to adjust quarterly (seasonally-unadjusted) GDP estimates to agree with annual (benchmark) GDP estimates. |
| **Consumer Price Index:** The Consumer Price Index (CPI) covers 92.9 percent of total households of Korea; it excludes farming and fishing households. The consumption basket is updated only every five years; currently, expenditure weights are derived from the *2010 Family Income and Expenditure Survey*. The new CPI index partially adopts geometric averaging—it also uses the ratio of arithmetic means. The geometrics means should be used for all unweighted aggregation. The last available price is carried forward for missing seasonal items, a procedure that should be replaced by imputation. |
| **Producer Price Index:** The Producer Price Index (PPI) covers all domestic industrial activities and a large segment of service activity. It excludes exported products, however, because the Export Price Indexes are compiled separately in Korea. The weights are based on 2005 revenue shares and are in need of updating. The PPI could be improved by making more use of imputing missing prices using the prices of similar commodities, rather than carrying forward the last reported price. Although an arithmetic mean of price relatives is currently used rather than a geometric mean, a supplementary index is also compiled using a geometric mean. However, the headline PPI should be changed to the one based on a geometric mean at the elementary level. The PPI classification by activity conforms to the KSIC, which is itself based on the International Standard Industrial Classification (ISIC)—with slight modifications only to reflect local considerations. The Korean commodity classification used for the PPI does not conform to the Central Product Classification (CPC) and one based on the CPC should be adopted as soon as possible. |
| **Government Finance Statistics:** Two sets of government finance statistics (GFS) are compiled for the central government, one using national definitions and the other using internationally recognized standards. Concepts and definitions used in the latter followed the recommendations of the *Manual on Government Finance Statistics 1986* until recently. The authorities have embarked on an ambitious program to implement reporting according to *GFSM 2001*, and the first set of financial statements based on the reformed system was released in 2012. The 2009 ROSC indicated that while compilation practices are generally sound, some room for improvement of the accessibility and timeliness of data and metadata existed. Following the 2009 ROSC, the Korean authorities resumed reporting consolidated GFS data on the general government for publication in the *Government Finance Statistics Yearbook (GFSY)*. The timeliness of these data does not comply with SDDS requirements, mainly due to the lack in timeliness on local government source data. During the 2009 ROSC, the authorities also agreed to |

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|---|
| improve national dissemination practices and initiated work on improving national websites. However, high frequency data for inclusion in the *International Financial Statistics* (*IFS*) are not yet reported. |
| **Financial Sector Data*:*** Monetary and financial statistics (MFS) compiled by the Bank of Korea (BOK) broadly follow the IMF's *Monetary and Financial Statistical Manual 2000*. Data relating to foreign assets and foreign liabilities are affected by the BOK practice of valuing its financial assets and liabilities at book value (rather than at market value) and revaluing its foreign currency-denominated assets and liabilities twice yearly (rather than on a monthly basis). The BOK is in discussion with STA about reporting MFS using the standardized report forms (SRFs) and drafting related metadata for publication in the *IFS*. Draft SRFs for the central bank and other depository corporations were reported to STA. The BOK anticipates providing the final SRFs when STA's review is completed within this calendar year.<br><br>Korea participates in the regular reporting of *Financial Soundness Indicators* (FSIs) to the IMF for dissemination on its website. FSI data and metadata are available to the public through the IMF's website at: http://fsi/FSIHome.aspx#Country. |
| **External Sector Statistics:** The BOK currently compiles and publishes the BOP and IIP statistics consistent with the Balance of Payment and International Investment Position Manual, sixth Edition (BPM6) analytical framework (see http://ecos.bok.or.kr/). The authorities have indicated that the data published in the BOK website are the results of the first-stage implementation of the BPM6. Additional stages leading to the full implementation of the BPM6 framework are scheduled during 2012.<br><br>The quality of the quarterly external debt statistics has greatly improved. In early 2007, the BOK switched from annual to quarterly reporting of the International Investment Position. Data dissemination on international reserves and foreign currency liquidity meets the SDDS specifications. Since April 2006, the authorities have disseminated foreign reserves data on a monthly basis rather than twice a month, as had been done since 1997.<br><br>Korea reports balance of payments and IIP data for the *IFS* (quarterly data) and the *Balance of Payments Statistics Yearbook* (annual data) publications. |

| **II. Data Standards and Quality** | |
|---|---|
| Korea has subscribed to the Fund's Special Data Dissemination Standard (SDDS) since September 1996, and it uses SDDS flexibility options for the timeliness of the general government operations, central government operations and. analytical accounts of the banking sector data. Korea is also availing itself of a relevant flexibility option for the coverage of exchange rates. | A Data ROSC reassessment was published in July 2010. |

**Korea—Table of Common Indicators Required for Surveillance**

(As of June 26, 2012)

| | Date of Latest Observation | Date Received | Frequency of Data[7] | Frequency of Reporting[7] | Frequency of Publication[7] | Memo Items: Data Quality – Methodological Soundness[8] | Memo Items: Data Quality – Accuracy and Reliability[9] |
|---|---|---|---|---|---|---|---|
| Exchange Rates | 6/26/12 | 6/26/2012 | D | D | D | | |
| International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1] | May. 2012 | Jun. 2012 | M | M | M | | |
| Reserve/Base Money | Apr. 2012 | Jun. 2012 | M | M | M | O, O, O, LO | O, O, O, O, O |
| Broad Money | Apr. 2012 | Jun. 2012 | M | M | M | | |
| Central Bank Balance Sheet | Apr. 2012 | Jun. 2012 | M | M | M | | |
| Consolidated Balance Sheet of the Banking System | Apr. 2012 | Jun. 2012 | M | M | M | | |
| Interest Rates[2] | 6/26/11 | 6/26/11 | D | D | D | | |
| Consumer Price Index | May 2012 | Jun. 2012 | M | M | M | O, O, O, O | O, O, LO, O, O |
| Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4] | NA | NA | NA | NA | NA | O, O, O, O | O, O, N/A, O, NA |
| Revenue, Expenditure, Balance and Composition of Financing[3]–Central Government | Mar. 2012 | Jun. 2012 | M | M | M | | |
| Stocks of Central Government and Central Government-Guaranteed Debt[5] | Q1 2012 | Jun. 2012 | Q | Q | Q | | |
| External Current Account Balance | May 2012 | Jun. 2012 | M | M | M | O, LO, LO, LO | O, O, O, O, O |
| Exports and Imports of Goods and Services | May 2012 | Jun. 2012 | M | M | M | | |
| GDP/GNP | Q1 2012 | Apr. 2012 | Q | Q | Q | O, O, O, O | O, O, LO, O, LO |
| Gross External Debt | Q1 2012 | May 2012 | Q | Q | Q | | |
| International Investment Position[6] | Q1 2012 | May 2012 | Q | Q | Q | | |

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

[2] Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

[3] Foreign, domestic bank, and domestic nonbank financing.

[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

[5] Including currency and maturity composition.

[6]Includes external gross financial assets and liabilitiy positions vis-à-vis nonresidents.

[7] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

[8] Reflects the assessment provided in the data ROSC or the Substantive Update (published in July 2010, and based on the findings of the mission that took place during December 09–22, 2009) for the dataset corresponding to the variable in each row. The assessment indicates whether international standards concerning concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O); largely observed (LO); largely not observed (LNO); not observed (NO); and not available (NA).

[9] Same as footnote 8, except referring to international standards concerning source data, statistical techniques, assessment and validation of source data, and revision studies.

**Statement by the IMF Staff Representative on Korea**
**August 27, 2012**

1. This statement provides additional information that has become available since the circulation of the staff report. This information does not change the thrust of the staff appraisal.

2. **Recently released data reinforce the assessment in the staff report that there remain downside risks to the baseline growth projections**. External weaknesses have continued to drag down Korea's exports. July trade data show that exports declined by 8.8 percent year-on-year after rising by 1 percent in June, driven by falling exports to China and the European Union. Imports also showed weakness, contracting by 5.4 percent year-on-year in July. Domestic demand indicators also softened in July as retail sales (at the discount chains) declined 8.2 percent year-on-year and domestic car sales fell 2.9 percent.

3. **Inflationary pressures have declined faster than previously anticipated**. Headline inflation fell from 2.2 percent year-on-year in June 2012 to 1.5 percent in July, far below market consensus. However, inflation expectations have declined only slightly to 3.6 percent in July 2012, remaining above the central inflation target. As mentioned in the staff report, normalization of the policy rate should resume once the output gap starts to close and this may now happen somewhat later in 2013 than previously expected.

4. **Consistent with the authorities' plan to achieve a "soft landing," the growth of household debt has continued to moderate**. Household debt grew by 5.6 percent year-on-year in the second quarter of 2012, slowing from 7 percent in Q1. Even though the growth of household debt has been on a declining path since Q2 2011, the still elevated level of debt remains a concern.

5. **The government announced an average increase in the electricity tariff of 4.9 percent on August 3**. The ministry commented that while an increase of more than 10 percent is warranted by the increase in the price of fuel used for power generation, this year's price increase has been restrained by the need to minimize the burden on households and the negative impact on firms, in the face of difficult economic times.

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# IMF Executive Board Concludes 2012 Article IV Consultation with the Republic of Korea

On August 27, 2012, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with the Republic of Korea.[1]

## Background

After a strong rebound in 2010, the Korean economy slowed in 2011 and into 2012 in line with global economic developments. Weaknesses in the global economy, particularly the intensification of the euro area crisis, have led to a widespread slowing of growth momentum. Domestically, high household debt continues to be a drag on private consumption. Growth is therefore expected to moderate, with a small negative output gap expected to remain for the rest of 2012. The economy is projected to grow at about 3 percent in 2012, rebounding to around 4 percent in 2013. The main short-term risk to the outlook is a further escalation of the euro area crisis, which would have a significant impact on Korea.

Inflation rose and remained elevated at around 4 percent in 2011, about 1 percent above the central inflation target set by the Bank of Korea (BOK). This reflected high commodity prices and other transitory supply-side shocks as well as demand-side pressures from the earlier expansion. More recently, in line with the slowing activity and retreating commodity prices, headline inflation has decelerated to 1.5 percent in July 2012, aided by the introduction of government subsidies for child care services. Inflation

[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

expectations, however, have remained elevated at close to 3.5 percent. Headline inflation is expected to pick up in the second half of the year, averaging just below 3 percent for the year as a whole.

The external vulnerability of the Korean financial system has diminished considerably since the global financial crisis due to the concerted efforts of the authorities. This reflects higher foreign reserves relative to short-term debt, a reduction in banks' short-term debt, the adoption of macroprudential measures designed to curb banks' reliance on non-core wholesale funding, and the strengthening of the banks' foreign currency liquidity positions.

Banking system indicators remain strong. Domestic banks are well capitalized, with an average capital adequacy ratio of 14 percent at end-2011. The recently introduced regulatory ceiling on loan-to-deposit ratios (of 100 percent) has been met by all domestic commercial banks.

The current macro policy mix combines an accommodative monetary policy and a broadly neutral fiscal stance. The overall balance (excluding social security funds) is expected to record a deficit of about 0.9 percent of GDP in 2012, compared with the 2011 outturn of a 1.1 percent deficit. In response to data showing a weaker-than-expected economic outlook and lower headline inflation, the Ministry of Strategy and Finance adopted a modest stimulus package in June to support the economy while the BOK cut its policy rate by 25 bps in July 2012 after putting it on hold for the past year.

**Executive Board Assessment**

The Executive Directors commended the authorities for adjusting macroeconomic policies and strengthening the resilience of the financial system in response to global headwinds and financial stress. Growth has decelerated and is projected to remain below potential for 2012, while inflationary pressures have receded. Directors noted that the near-term challenge is to manage the escalating downside risks to the outlook, particularly those related to a possible further intensification of the euro area crisis and its spillover.

Against this background, Directors considered that the current macroeconomic policy mix is appropriate. They supported the front-loading of budget spending in 2012 and the recent fiscal stimulus package, and welcomed the authorities' commitment to implement the budget fully while maintaining the medium-term consolidation objectives. Directors also agreed that monetary policy should continue to be accommodative, but stressed that, in light of the elevated inflation expectations, normalization should resume once the economy strengthens and the negative output gap starts to close.

Directors noted that, in the event of a severe downside scenario, Korea has policy space to respond, especially on the fiscal side, including through limited and temporary use of government managed funds and additional discretionary spending. Korea's flexible exchange rate and ample international reserves would also help cushion against external shocks. Noting that the won is assessed to be moderately undervalued in real effective terms, Directors welcomed the authorities' intention to limit intervention to smoothing exchange rate fluctuations.

Directors welcomed progress in reducing external vulnerabilities in the financial system—external buffers have been strengthened, short-term debt has declined, and banks have reduced their reliance on wholesale funding. They noted nonetheless that the financial system remains subject to large swings in capital flows and funding risks. This calls for continued vigilance and efforts to enhance the effectiveness of macroprudential policies, including through improved coordination among regulatory agencies.

Noting the still high level of household debt, Directors called on the authorities to follow through with their strategy for a "soft landing," especially by strengthening asset classification and provisioning rules for non-bank financial institutions. They welcomed the progress in restructuring insolvent mutual savings banks, and encouraged the authorities to monitor remaining balance sheet weaknesses closely. Directors looked forward to a comprehensive assessment of Korea's financial system in the upcoming FSAP.

Directors underscored the need to address the medium-term challenges of rapid population aging and rising income inequality, and to boost potential growth. They supported the government's plan for a targeted increase in social spending over time, which will likely require a strengthening of revenue performance, mainly by broadening the tax base. They also encouraged further efforts to improve the oversight and governance of state-owned enterprises. Continued labor market reforms should focus on enhancing workforce and creating a more conducive environment for female participation. Directors also recommended boosting service sector productivity by enhancing competition through deregulation, further SME restructuring, and creating a more level playing field for the tradable and nontaxable sectors.

***Public Information Notices (PINs)*** form part of the IMF's efforts to promote transparency of the IMF's views and analysis of economic developments and policies. With the consent of the country (or countries) concerned, PINs are issued after Executive Board discussions of Article IV consultations with member countries, of its surveillance of developments at the regional level, of post-program monitoring, and of ex post assessments of member countries with longer-term program engagements. PINs are also issued after Executive Board discussions of general policy matters, unless otherwise decided by the Executive Board in a particular case. The staff report (use the free Adobe Acrobat Reader to view this pdf file) for the 2012 Article IV Consultation with the Republic of Korea is also available.

**Korea: Selected Economic Indicators, 2008–13**

| | | | | | Projections | |
|---|---|---|---|---|---|---|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| **Real GDP (percent change)** | 2.3 | 0.3 | 6.3 | 3.6 | 3.0 | 3.9 |
| Total domestic demand | 1.4 | -2.7 | 6.2 | 2.0 | 2.4 | 3.1 |
| Final domestic demand | 0.8 | 0.6 | 4.5 | 1.3 | 2.6 | 3.1 |
| Consumption | 2.0 | 1.2 | 4.1 | 2.2 | 2.5 | 2.9 |
| Gross fixed investment | -1.9 | -1.0 | 5.8 | -1.1 | 3.1 | 3.6 |
| Stock building 1/ | 0.6 | -3.1 | 1.4 | 0.7 | -0.2 | 0.0 |
| Net foreign balance 1/ | 1.1 | 2.8 | 0.1 | 1.9 | 1.0 | 1.2 |
| **Nominal GDP (in trillions of won)** | 1,026.5 | 1,065.0 | 1,173.3 | 1,237.1 | 1,318.4 | 1,411.8 |
| **Saving and investment (in percent of GDP)** | | | | | | |
| Gross national saving | 31.6 | 30.2 | 32.4 | 31.8 | 31.2 | 31.3 |
| Gross domestic investment | 31.2 | 26.3 | 29.5 | 29.5 | 29.2 | 29.6 |
| Current account balance | 0.3 | 3.9 | 2.9 | 2.4 | 2.0 | 1.7 |
| **Prices (percent change)** | | | | | | |
| CPI inflation (end of period) | 4.1 | 2.8 | 3.0 | 4.2 | 2.8 | 3.1 |
| CPI inflation (average) | 4.7 | 2.8 | 2.9 | 4.0 | 2.8 | 3.2 |
| Core inflation (average) | 4.3 | 3.6 | 1.8 | 3.2 | 2.2 | 3.0 |
| GDP deflator | 2.9 | 3.4 | 3.6 | 1.7 | 3.5 | 3.0 |
| Real effective exchange rate | -19.9 | -12.5 | 11.4 | … | … | … |
| **Trade (percent change)** | | | | | | |
| Export volume | 6.8 | 0.1 | 16.2 | 11.6 | 5.6 | 10.0 |
| Import volume | 0.9 | -2.2 | 16.8 | 5.5 | 4.0 | 10.9 |
| Terms of trade | -14.3 | 10.8 | -0.9 | -8.2 | -2.2 | 0.1 |
| **Consolidated central government (in percent of GDP)** | | | | | | |
| Revenue | 24.0 | 23.0 | 22.7 | 23.4 | 23.5 | 23.5 |
| Expenditure | 22.4 | 23.0 | 21.0 | 21.6 | 21.5 | 20.8 |
| Net lending (+) / borrowing (-) | 1.6 | 0.0 | 1.7 | 1.8 | 2.0 | 2.7 |
| Overall balance | 1.5 | -1.7 | 1.4 | 1.5 | 1.6 | 2.4 |
| Excluding Social Security Funds | -1.1 | -4.1 | -1.1 | -1.1 | -0.9 | 0.0 |
| **Money and credit (end of period)** | | | | | | |
| Overnight call rate 2/ | 2.9 | 2.0 | 2.5 | 3.3 | 3.0 | … |
| Three-year AA- corporate bond yield 2/ | 7.7 | 5.5 | 4.3 | 4.2 | 3.4 | … |
| M3 growth 3/ | 9.1 | 9.4 | 5.9 | 6.6 | 8.3 | … |
| **Balance of payments (in billions of U.S. dollars)** | | | | | | |
| Exports, f.o.b. | 434.7 | 358.2 | 461.4 | 552.6 | 577.9 | 633.8 |
| Imports, f.o.b. | 429.5 | 320.3 | 421.4 | 521.6 | 549.1 | 606.1 |
| Oil imports | 85.9 | 50.8 | 68.7 | 100.8 | 101.0 | 96.3 |
| Current account balance | 3.2 | 32.8 | 29.4 | 26.5 | 22.5 | 21.0 |
| Gross international reserves (end of period) | 201.1 | 269.9 | 291.5 | 304.2 | 319.2 | 334.3 |
| In percent of short-term debt (residual maturity) | 111.7 | 146.2 | 162.6 | 165.9 | 167.4 | 168.2 |
| **External debt (in billions of U.S. dollars)** | | | | | | |
| Total external debt (end of period) | 317.4 | 345.7 | 359.4 | 398.4 | 419.4 | 440.3 |
| *Of which*: Short-term (end of period) | 149.9 | 149.2 | 139.8 | 136.1 | 140.5 | 145.7 |
| Total external debt (in percent of GDP) | 34.0 | 41.5 | 35.4 | 35.7 | 36.7 | 36.4 |
| Debt service ratio 4/ | 7.9 | 7.8 | 6.8 | 6.4 | 7.4 | 7.3 |

Sources: Korean authorities; and IMF staff estimates and projections.
1/ Contribution to GDP growth; 2/ Data for 2012 are as of July 5; 3/ Data for 2012 are as of April. 4/ Debt service on medium- and long-term debt in percent of exports of goods and services.