Korea's Economy 2008

Korea's Economic Achievements and Prospects The Graying of Korea: Addressing the Challenges of Aging Financial Asia Rising: Asian Stock Markets in the New Millenium Korea's Money Market Ingredients for a Well-functioning Capital Market Ingredients for a Well-functioning Capital Market The Capital Market Consolidation Act and the Korean Financial Market Progress in Corporate Governance Its Issues Affecting Foreign Invested Companies and Foreign Investors U.S.-Korea Economic Relations: View from Seoul U.S.-Korea Economic Relations: A Washington Perspective Peering into the Future: Korea's Response to the New Trading Landscape North Korea's External Resources and Constraints a publication of the Korea Economic Institute and the Korea Institute for International Economic Policy

# Volume 24

The Roles of China and South Korea in North Korean Economic Change Realistic Expectations of the Future Role of the IFIs on the Peninsula

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# KOREA'S MONEY MARKET

By Dominique Dwor-Frécaut

#### Korea's Money Market

Korea's money market includes the call market as well as markets for monetary stabilization bonds (MSBs), negotiable certificates of deposit (CDs), repurchase agreements (repos), commercial paper (CP), and cover bills (CB). Korea's money market so far seems to have been relatively immune to the global credit crunch generated by the crisis in the U.S. subprime mortgage markets. Korean interbank rates are rising, however, which suggests that banking liquidity remains tight (*Table 1*).

# *Table 1:* Money Market Trends in Korea, 1990–June 2006, in trillions of Korean *won*

	1990	2000	2004	2005	2006 (June)
Call market <sup>a</sup>	3.6	12.9	27.5	34.6	30.4
Monetary stabilization bonds	15.2	66.4	142.8	155.2	157.5
Certificates of deposit	6.8	14.2	43.5	63.8	66.8
Repurchase agreements	3.4	26.3	34.6	42.9	52.2
Commercial paper	22.7	9.1	15.9	20.0	23.0
Cover bills	0.2	11.2	3.9	4.0	3.9

Source: Bank of Korea data.

a Daily average transactions during the last month in the period.

#### Call Market

The call market is the market in which funds are traded in the shortest periods (typically overnight loans) to adjust for temporary surpluses or shortages of funds among financial institutions. All types of financial institutions in Korea, including commercial banks, security companies, insurance, investment trust, credit unions, and branches of foreign banks, participate in the call market. The Bank of Korea (BOK) is an important player in this market because of its importance for monetary policy. Monetary policy in Korea consists of targeting a level of inflation decided by the BOK every year. The BOK's monetary policy committee (MPC) meets every month to decide on a target for the overnight call rate that is consistent with its inflation target. In 2007 and 2008, the BOK has targeted inflation to remain in a 2.5–3.5 percent range. The overnight call rate is currently at 5 percent (*Figure 1*).

After the MPC decides on an appropriate target for the overnight call rate, BOK staff implement that target through adding liquidity to or withdrawing it from the call market. Banks are required to maintain reserves with the BOK, but these reserves can increase or fall because of factors such as private sector transactions, government transactions, or purchases of foreign currencies by the central bank. The BOK forecasts the change in banks' reserves arising from various sources, compares it with the required level of reserves, and computes the scale of the surplus or shortage of reserves before it finalizes the scale of its market operations. Until recently, the actual call rate has generally been above the target, which suggests the BOK has maintained tight liquidity conditions in the call market

#### MSB and Repo Markets

Until recently, MSB issuance was the main instrument used by the BOK to control liquidity. MSBs are liabilities issued by the central bank to soak up liquidity. They are issued in 11 different maturities ranging from 14 days to two years. Once issued, they are not, in principle, redeemable prior to maturity. The ceiling on the volume of MSBs that may be legally issued is set at 50 percent of broad money (M2), but in November 2007 the BOK announced it would issue quarterly ceilings on the amount to be issued, within the 50 percent ceiling. MSBs are sold through auctions to financial institutions selected by the BOK on the basis of asset quality and financial soundness. In 2007, these numbered approximately 50.



#### Figure 1: Bank of Korea Target and Actual Overnight Call Rates, percentage

Source: Bloomberg.

Actual and target rates

The ratio of MSBs outstanding to M2 has been falling; it was 12.6 percent in November 2007, down from a peak of 16.7 percent in March 2005 (*Figure 2*). In absolute levels, MSBs outstanding fell to 152.2 trillion *won* in November 2007, from 161.6 trillion *won* in March 2005. This reflects the shifting of liquidity management to other instruments largely out of concerns over the cost of foreign exchange intervention and liquidity management to the central bank.

In 2006, the central bank made a loss of 1.8 trillion *won*, which largely reflects large-scale intervention in the foreign exchange (FX) market. To prevent the Korean *won* from appreciating, the BOK had been purchasing large quantities of U.S. dollars and, until recently, had been issuing large quantities of MSBs to mop up the liquidity created by its purchases of U.S. dollars. The BOK losses reflect that the interest it earns on its FX reserves—in 2006 this was 8.6 trillion *won*—is barely enough to fund the interest it has to pay on MSBs and repos, which was 8 trillion *won* in 2006. In addition, because the BOK holds substantial FX reserves, currently \$261.5 billion or

about 27 percent of Korea's GDP, each time the *won* appreciates, the BOK makes substantial *won* capital losses on its FX holdings.

Spread between actual

#### *Figure 2:* Monetary Stabilization Bonds Outstanding in Korea, December 2002–November 2007



Source: CEIC Data Company, Ltd.

To reduce the costs associated with FX intervention, the BOK has tried to reduce the costs of sterilizing that intervention. First the BOK has started using the cross-currency swap market for liquidity management (a cross-currency swap is an exchange of cash flows in one currency against cash flows in another currency). For instance, instead of issuing MSBs to mop up the liquidity created by its purchases of FX, the BOK has instead borrowed from the Korean won market and lent on the onshore U.S. dollar market, in effect it "paid the swap." (The combination of spot FX intervention and sterilization through the swap market is in effect equivalent to intervention on the forward FX market.) In November 2007, the outstanding swaps of the BOK represented \$22.7 billion, or the equivalent of 24.5 trillion Korean won.

Second, the BOK has reduced the size of its direct lending operations: in November 2007, direct lending by the BOK represented 6.4 trillion Korean *won*, down from 8.6 trillion *won* in February 2006. This lending is extended at subsidized rates to commercial banks to be on lent to small- and medium-size enterprises (SMEs), an arrangement that reflects the BOK's past role as a policy bank that is gradually being phased out. This reduction has allowed the BOK to limit the expansion of its balance sheet and hence the provision of liquidity to the economy. Because of reserve requirements, banks need central bank liquidity in order to expand credit; a smaller central bank balance sheet—that is, less central bank liquidity in the economy—limits credit expansion.

Third, the BOK raised reserve requirements in November 2006 to an average of 3.8 percent (up from 3 percent) for deposits in Korean *won* and to 7 percent (up from 5 percent) on foreign currency deposits. By raising reserve requirements, the BOK has in effect lowered the credit multiplier, that is, the increase in credit generated by an increase in central bank liquidity. In addition, because reserves are not remunerated (by contrast, the BOK has to pay market rates on the MSBs it issues), by raising reserve requirements the BOK is in effect shifting the cost of liquidity management to the banking system (and ultimately to depositors and borrowers).

Fourth, the BOK has increased its reliance on repos. A repo is a form of collateralized lending: one party sells a security to another party and agrees to repurchase it

on a specified date for a specified price. To withdraw liquidity from the market, the BOK has been doing repos mainly with banks. In 2006, the BOK widened the range of securities eligible for the repo market and lengthened the maturities to 14 days from the previous shorter maturities. Financial institutions that engage in the call market are eligible to participate in repo transactions among themselves. The Korea Money Broker Corporation, the Korea Inter Dealer Brokerage Corporation, the Seoul Money Brokerage Service, and securities companies operate as intermediaries. At the end of 2006, the outstanding repos of the BOK were 25.1 trillion *won*, up from 15.8 trillion *won* at end of 2005.

Starting in March 2008, the BOK intends to switch its policy rate to the seven-day repo rate from the overnight call rate. The BOK feels that banks have become too reliant on the overnight call rate to manage their liquidity and that, as a result, its intervention on the call market has been too one sided, that is, it has been a net supplier of liquidity. The central bank expects that the move to the seven-day repo will spur commercial banks to better manage their liquidity and help the development of money markets as well as improve the linkage between short- and longer-term rates. On the other hand, the switch to the seven-day repo could increase the cost of short-term funding to the banks because they will have to acquire more collateral-government bonds-in order to have access to liquidity.

#### *The CD, Commercial Paper, and Promissory Note Markets*

Negotiable CDs are negotiable debt instruments sold by banks to depositors at a discount, with the face value being paid at maturity. The CD market consists of the issuing banks, intermediaries, and investors. All banks (except the Export-Import Bank of Korea) are allowed to issue CDs. Intermediary businesses are usually handled by securities companies and merchant banks. Tenors of up to 12 months are liquid, and the 91-day CD is the benchmark normally used for floating rates index benchmarks—for example, for interest rate swap fixing (an interest rate swap is a contract that allows investors to exchange a stream of fixed interest payments against a stream of floating interest payments) or for consumer or SME lending rates. CD issuance has increased sharply during the past year: banks' outstanding CDs represented 66.5 trillion *won* in October 2007, compared with 36.4 trillion *won* a year ago (*Figure 3*). This reflects the fast growth in bank lending, especially to SMEs, which has not been matched by a commensurate expansion in bank deposits. As a result, banks have been getting their marginal funding from the CD market, which has driven up CD rates.

#### *Figure 3:* Certificates of Deposit Outstanding and Three-Month CD Rates in Korea, November 2004–November 2007



Sources: Bloomberg; CEIC Data Company, Ltd.

The increase in the CD rate since August 2007 is also likely to reflect global markets' uncertainty and volatility. With the size and distribution of the losses associated with the U.S. subprime mortgage market crisis still largely unknown, global interbank markets have become frozen as banks are reluctant to lend to each other out of concerns over impaired capital positions. As a result, global spreads between interbank rates and Treasury bills are at a historic high. Although Korean commercial banks have only a very limited direct exposure to subprime-related paper, their reliance on market funding rather than depositor funding leaves them open to the risk of a loss of confidence in the interbank market. As a result, since August 2007, Korean interbank rates seem to have become more correlated with global interbank rates.

Commercial paper is an accommodation bill issued by companies with sound credit status for the purpose of

raising short-term funds. In general, only companies with credit ratings exceeding a certain level are allowed to float CP. Transactions in the CP market are made primarily by financial institutions for holding or for sale to investors.

Cover bills are promissory notes newly issued and held by financial institutions after the division or combination of underlying commercial bills, trade bills, and factoring in discounted receivables. Banks, merchant banking corporations, and mutual savings and finance companies are able to issue CBs. CBs are purchased by financial institutions and corporations rather than by individuals.

### Korea's Foreign Exchange Market

Korea's FX markets have seen fast growth in recent years thanks to capital account and financial liberalization. But Korea is only the fifth-largest FX market in non-Japan Asia, with 0.8 percent of global turnover. To reach its goal of becoming the finance and logistics hub of Northeast Asia, Korea will need to provide a stable, business-friendly environment to support the development of its FX market.

#### In Line with Global Trends

Korea's FX market has grown strongly during the past few years (*Table 2*). Total spot and derivatives turnover increased by 220 percent during 2001–06, with spot turnover increasing by 240 percent and derivatives

# *Table 2:* Korea's Foreign Exchange Market, 2001–2006, in trillions of Korean *won*

	2001	2002	2003	2004	2005	2006
Spot	53.2	50.7	56.1	86.1	96.8	127.5
Forwards	11.3	12.5	20.7	29.6	36.1	50.8
Swaps	49.5	19.6	30.1	51.6	64.7	77.5
Total deriva- tives	60.8	32.1	50.8	81.2	100.8	128.3
Total spot and deriva- tives	114.0	82.8	106.9	167.3	197.6	255.8

Source: Bank of Korea.

turnover increasing by 210 percent. The volume of derivatives trading in Korea is roughly equal to the volume of spot trading. This is in line with global trends: the Bank for International Settlements (BIS) triennial survey of foreign global exchange markets found that during 2001–07 global FX turnover in spot and derivatives had increased by 260 percent. Global turnover in forwards and swaps at \$2.1 trillion is now twice as large as global spot turnover at \$1 trillion.

The BIS survey shows that in 2007 the five largest FX trading centers represented nearly 70 percent of world turnover (*Figure 4*). In non-Japan Asia, the largest FX market is in Singapore, which reflects its role as regional financial center. FX turnover in Singapore represented nearly 6 percent of world turnover in 2007. By contrast, Korea is only the fifth-largest exchange rate market in non-Japan Asia, behind Singapore, Hong Kong, Australia, and India (*Figure 5*). According to the BIS, Korea's FX market turnover in 2007 represented 0.8 percent of total global FX turnover.

*Figure 4:* The World's Five Largest Foreign Exchange Markets, 2001 and 2007, percentage



Source: Bank for International Settlements.

*Figure 5:* The 10 Largest Foreign Exchange Markets in Asia (excluding Japan), 2001 and 2007, percentage of world foreign exchange market



Source: Bank for International Settlements.

#### Development Spurred by Financial and Capital Account Liberalization

Korea's FX market development reflects financial liberalization and the opening of the capital account after the 1997 crisis. In December 1997 Korea shifted to a free-floating exchange rate system. In May 1998, the ceiling on foreign investment in Korean equities was abolished, and the local bond markets and money markets were fully opened to foreign investors.

In June 1998, the government announced a plan to liberalize all FX transactions in two stages. The first stage of liberalization took effect on 1 April 1999 with the introduction of the new Foreign Exchange Transaction Act. Except for a few types of transactions, current account transactions by corporations and banks were fully liberalized. Regulations on capital account transactions were converted into a negative system, and, thereby, the permission requirement was lifted except in the cases of transactions for which it was stipulated by law or decree. Foreign participation in the FX derivatives market was liberalized. Overseas borrowings with maturities of less than one year by financially sound domestic corporations were allowed. Regulations on foreign direct investment (FDI) were streamlined in order to match the standards of the Organization for Economic Cooperation and Development. Nonresidents were allowed to make deposits and open trust accounts denominated in Korean won with maturities of more than one year.

The second stage of liberalization took effect on 1 January 2001. The remaining ceilings on current account transactions by individuals were eliminated, including the ceilings on overseas travel expenses, emigration expenses, withdrawals of domestic assets by nonresident nationals, and deposits and trusts abroad. Obligations of repatriation of overseas claims were eased. Restrictions on nonresidents' domestic currency deposits and trusts with maturities of less than one year were eliminated, and the process of securities investment by foreigners was simplified.

Further liberalization was introduced in April 2002, when the Korean government announced a plan for the development of the Korean foreign exchange market to support Korea's emergence as a finance and logistics hub in Northeast Asia.

As a first step in implementing the plan, in July 2002 the Korean government eased the procedural regulations concerned with individuals' external payments, permitted securities companies and insurance companies to participate in the interbank FX market, and allowed the internationalization of the Korean *won*.

The opening of the capital account resulted in large balance of payments surpluses. Current account surpluses averaged 2.2 percent of GDP, and capital account surpluses averaged 1.1 percent of GDP during 2000–05. To prevent the appreciation of the Korean *won*, Korea's central bank like many of its Asian peers intervened heavily in the FX market: during 2000–05 Korea's FX reserves increased by

\$126 billion (*Figure 6*), giving rise to the heavy costs discussed earlier. During 2000–03, the value of the Korean *won* was maintained roughly constant on a real effective exchange rate (REER) basis, that is, on a trade-weighted basis adjusted for differences in inflation with Korea's trading partners. During 2004–05, however, the Korean *won* was allowed to appreciate by about 25 percent on a REER basis.

The appreciation of the KRW during 2004-05 took place despite a stepped-up accumulation of reserves: annual FX reserve growth was 24 percent on average compared with 13 percent on average during 2001-02 and 15 percent during 2005-06. The appreciation of the won during 2004-05 reflected that capital and current account inflows were increasing sharply. The basic balance of payments (the sum of current account, FDI, and portfolio balances) peaked at \$56 billion (about 9 percent of GDP) in the year to May 2004, its highest level ever. This reflected at least two factors: a lack of recovery in private investment after the crisis that led to large, persistent excess savings over investments as well as large inflows of FDI and investment in Korean portfolio securities, as structural reforms and capital account opening enhanced the attractiveness of Korea as an investment destination.

# Liberalization of FX Outflows Reducing Balance of Payments Surpluses

The surge in balance of payments surpluses prompted the Korean government to refocus FX policy on the liberalization of capital outflows because greater capital outflows would alleviate the pressure on the Korean *won* to appreciate and the cost of large-scale sterilized intervention. In June 2005, the government announced its Overseas Investment Activation Plan, which abolished the ceiling on overseas finance or insurance business investment by nonfinancial institutions and expanded the limits on real estate acquisition abroad and overseas direct investment by individuals.

In 2006, the regulations on capital transactions were further simplified, and limits on real estate acquisition abroad by residents, on overseas direct investment by individuals, on the overall net open positions of FX banks, and on the obligation for repatriation of overseas claims were expanded. In addition, the currency exchange business in Korean *won* by foreign financial institutions was liberalized, and limitations on the im-



# *Figure 6:* Korea's Foreign Exchange Reserves Compared with the Real Effective Exchange Rate for the Korean *Won*, January 2000–November 2007

Source: CEIC Data Company, Ltd.

port and export of the Korean *won* for money exchange purposes were reduced. The government implemented further measures to support the internationalization of the Korean *won*, liberalization of FX transactions such as overseas investment by Korean nationals, and the upgrading of the FX market.

In January 2007, further measures to boost capital outflows were implemented: permitted institutional investors and overseas investment objects were expanded, the limit on real estate acquisition abroad by residents intending to invest was raised, and the process involved in making overseas direct investments was streamlined.

In 2006, Korea's basic balance of payments swung into a deficit, largely as a result of greater capital outflows (*Figure 7*). Outflows of FDI have increased as firms have moved abroad to increase their competitiveness or gain global scale. And portfolio outflows are increasing steadily as Korean investors are increasing the international diversification of their savings. At the same time, the current account surplus has been declining as household savings have fallen in line with their increasing indebtedness. In addition, the large and fast appreciation of the Korean *won* during 2004–05 and the increase in the price of energy have further reduced the goods and services surplus. Korea is now the only country in Asia to be running a basic balance of payments deficit.

# Strength of Won Reflects Expectations, Not Balance of Payments Strength

Despite the steady increase in the basic balance of payments deficit, the value of the Korean *won* has not weakened much on a REER basis, and the *won* has steadily appreciated against the U.S. dollar. This apparent inconsistency reflects the development of the FX derivatives market: the balance of payments data capture only spot market FX transactions between onshore and offshore counterparties. Derivatives markets transactions (forwards, currency swaps, and options) get captured by the balance of payments statistics only to the extent that they give rise to an actual payment between onshore and offshore parties, and cash payments usually represent only a very small fraction of the notional value of derivatives contracts. Hence, the balance of payments data do not capture the full impact of derivatives flows on the spot exchange rate.

Derivative flows must have supported the appreciation of the Korean *won* because the balance of payments flows have been pointing in the direction of a weaker Korean *won*. The impact of forward transactions on spot is instantaneous because banks break forward transactions between a spot and forward desk. Currency swaps affect the spot over time as they are equivalent to a series of forward transactions. Options affect the spot rate through hedging that usually takes place through the forward market. Transactions in the FX derivatives markets largely reflect hedging and funding activities as well as speculation. In Korea large exporters and importers usually have hedged FX receipts and outlays in the forward market; insurers, overseas investors, and banks have hedged their asset purchases or carried out funding activities in the swap market; and SMEs have usually hedged FX receipts and outlays in the option market. Forward sales of the U.S. dollar by exporters, especially shipbuilders, have recently received strong news coverage. While the current account surplus has been shrinking, export growth has been sustained at around 15 percent for the past 18 months while exports of ships have been growing at close to 30 percent per year.

Speculation is generally taking place mainly through spot, forward, and swap markets and has played an important role in providing liquidity to the market. This is especially important because hedging transactions tend to be one-sided: if there is a market consensus on cur-





U.S. dollars, billions

Source: CEIC Data Company, Ltd.

rency appreciation, for example, market participants who are structurally long U.S. dollars (exporters or Korean corporates or investors who own U.S. dollar assets) are more likely to hedge than structurally short U.S. dollar market participants (importers or Korean corporates with U.S. dollar–denominated debt).

For instance, despite the current account's falling into deficit in the first half of 2007, the six-month forward U.S. dollar–Korean *won* declined from a peak of about 950 to a trough of about 910 in July, that is, priced a stronger appreciation of the Korean *won*. This largely reflected strong export growth and hedging, that is, U.S. dollar forward sales by exporters. And, with the market consensus in favor of Korean *won* appreciation, importers did not hedge (buy U.S. dollars forward).

In the long run, however, appreciation of the Korean won is inconsistent with a current account deficit. At 910, the six-month forward appeared oversold in view of the fundamentals, and speculators started to buy, which helped move the six-month forward back to about 940 in mid-August (the move also reflected global equity market weaknesses). Without speculators, the six-month forward could have fallen well below 910, and its volatility would have been higher. Higher forward volatility in turn increases corporate hedging costs and reduces the signaling value of the forward rate. (Of course, if speculators had expected the KRW to appreciate, they could have increased the volatility of the Korean won, but making wrong calls repeatedly would in the long run lead to speculators' exiting the market).

As mentioned above, that derivatives flows support Korean *won* appreciation likely reflects expectations of *won* appreciation. These likely reflect a number of factors, including global U.S. dollar weakening; tight Korean monetary policy (in July and August 2007, the BOK hiked the policy rate by 25 basis points twice in a row, the first time ever since the introduction of inflation targeting in 1999); and continued accumulation by the BOK of FX reserves, which signals pressure for the Korean *won* to appreciate.

In addition, as mentioned above, owing to an apparent market consensus on appreciation of the Korean *won*, structurally long U.S. dollar market participants seem to be currently hedging more than structurally short U.S. dollar market participants. Hence, even though the overall basic balance is shrinking, balance of payments receipts are growing apace, which supports continued growth in hedging flows against *won* appreciation, that is, in short U.S. dollar positions.

To a large extent, therefore, appreciation of the Korean *won* is a "bubble": the *won* is appreciating because market participants expect *won* appreciation. Any news that leads to a shift in expectations for the strength of the *won*—for instance, global U.S. dollar stabilization, markedly slower export growth, easing of monetary policy in Korea—could see exporters reduce their hedging and importers increase theirs. This could bring about a sharp weakening of the Korean *won* as both spot (the balance of payments) and derivatives markets transactions would then support the depreciation of the Korean *won*.

### Regulatory Risk Could Slow Development of FX Market in Korea

Korea's short-term foreign debt increased by \$80.2 billion to \$146.1 billion in September 2007 from \$65.9 billion in December 2005. Most of this increase reflects an increase in banks' short-term foreign borrowings by \$73.6 billion to \$124.8 billion over the same period. Unlike the short-term foreign borrowings that led to the 1997 crisis, however, this accumulation of short-term debt does not represent a risk for financial or external stability. First, since 2006, the BOK has effectively banned lending in FX to unhedged borrowers; hence, this accumulation of debt does not create an open FX exposure. Second, these debts are largely self-liquidating, like trade credits, as they represent banks' efforts to close the open FX exposure created largely by exporters' sales of U.S. dollars. Smaller hedging flows from exporters will see banks' outstanding short-term FX debts decline. And, even after this increase in short-term FX debts, the external liquidity position of Korea remains extremely strong. FX reserves at \$261.5 billion represent 180 percent of short-term FX debts.

In addition, and as stressed by the International Monetary Fund, foreign borrowing that merely closes an open FX position does not put pressure on the currency, in contrast with unhedged external borrowing, which does.<sup>1</sup> The source of the strength of the Korean *won* is hedging by structurally long U.S. dollar–market participants and market expectations of Korean *won* appreciation rather than banks' short-term FX borrowings. During September 2007, for example, banks made net repayments of short-term debts of \$8 billion. Yet, during September 2007, the *won* appreciated from 940 to 915 per U.S. dollar.

In July 2007, the Korean authorities announced that, in order to reduce short-term FX borrowings, the amount of tax-exempt interest rate costs on foreign banks' borrowing from headquarters would be reduced on 1 January 2008 from six times foreign banks' total equity to three times. The news proved to be very disruptive to the onshore FX market and led to substantial losses among Korean and foreign banks. In addition, the spot and forward U.S. dollar-Korean won exchange rates fell on the news, as the measure effectively represented an increase in the cost of U.S. dollar funding and, hence, increased the forward discount (the appreciation of the Korean won priced in by the forward exchange rate). More recently, the new measure has added to a shortage of onshore U.S. dollar liquidity that has emerged after this summer's increase in global financial market volatility.

There is a risk that these unexpected regulatory changes could lead banks to curtail their participation in Korea's FX market, which could set back Korea's plans to become Northeast Asia's finance and logistics hub. If the Korean authorities feel that the recent increase in short-term FX debt is a source of concern. perhaps this could be better addressed through tighter prudential rules on banks' U.S. dollar liquidity ratios rather than through an increase in their funding costs that has generated market volatility, has made it more difficult to hedge, and has not prevented appreciation of the Korean won. Even better, a reduction in FX intervention by the BOK and further liberalization of the capital account could help weaken expectations of Korean won appreciation and bring about more balanced flows on the FX market.

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<sup>1. &</sup>quot;Republic of Korea: 2006 Article IV Consultation—Staff Report; Staff Statement; Public Information Notice of the Executive Board Discussion; and Statement by the Executive Director for the Republic of Korea," IMF Country Report no. 06/380 (Washington, D.C.: International Monetary Fund, October 2006), http://www.imf.org/external/pubs/ft/scr/2006/cr06380.pdf.

