Financial market development, monetary policy and financial stability in Korea

Bank of Korea

Abstract

Over the last 20 years, Korea's financial markets have developed very considerably, driven mainly by domestic demand and trade volumes. The government's efforts to improve financial infrastructure and larger inflows of foreign portfolio investment have also contributed to financial development in Korea.

In parallel, the Bank of Korea has enhanced the efficiency of monetary policy by changing its monetary policy framework and operations. As a result, interest rate linkages between different markets have increased, reinforcing the transmission of the policy rate to market rates. Long-term rates are greatly affected by global factors as the influence of foreign investors on bond markets has expanded since the global financial crisis. Therefore, the transmission of the Bank of Korea's policy rate to long-term rates has been somewhat weakened. The volatility of capital flows, however, has been limited, as financial market resilience has improved.

The depth of the financial market has increased with growing bond issuance and transaction volumes. But growing foreign investment in the domestic financial market has strengthened linkages between the global and domestic financial markets, which could help external shocks to spill over onto the domestic economy. Accordingly, Korea has introduced macroprudential policies to counter FX-related systemic risk since the global financial crisis. These policy measures have reduced capital flow volatility and the share of short-term external debt, helping to manage systemic risks.

Regarding future financial market development, fintech or big tech firms are providing an increasingly broad range of financial services in Korea. These new types of financial service could necessitate significant changes in monetary policy. Financial innovation could increase operational risks and pose a threat to information security, and financial stability. In order to mitigate these risks without undermining financial innovation, we need to strengthen the monitoring of potential risks while contributing to the establishment of infrastructure for the technologies employed by fintech and big techs.

JEL classification: E44, E52, F38, G18.

Keywords: financial market, monetary policy, financial stability, international financial policy.

Changes in Korea's financial markets over the last two decades

Main drivers of financial market development and the impact of the global financial crisis

Over the last 20 years, Korea has witnessed a remarkable development of its direct financial markets, including the short-term money markets, capital markets, foreign exchange markets and derivatives markets.

The major growth engines behind this development include, first, demand from corporates and households for the procurement and management of funds, which has increased in line with economic development, and thus the demand for various financial instruments has also risen. The growth in exports and imports has also led to greater demand for foreign exchange transactions.

Second, the government's policy efforts – easing of financial regulations, improvement of financial infrastructure and the promotion of advanced financial trading techniques – have helped the sound development of markets, improving their self-adjustment function. In particular, the Treasury bond market has become far more efficient thanks to the primary dealer system and the nurturing of the Korean Treasury bond futures market. The inter-institutional RP (repo) market has also developed substantially, owing to an easing of regulations.

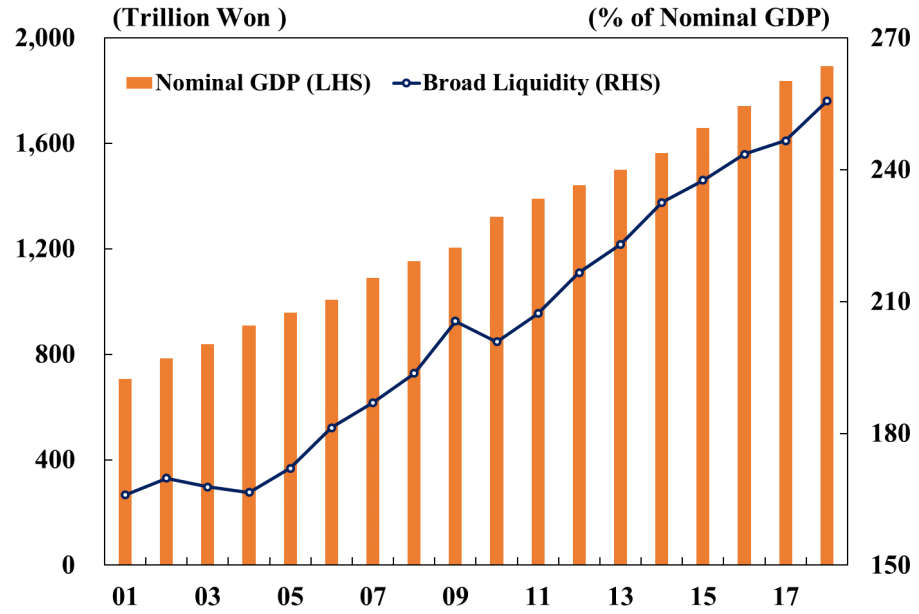
Third, larger inflows of foreign portfolio investment in line with greater market opening, as well as a rise in domestic and overseas financial investments by the National Pension Service (NPS) and insurance firms, have helped to expand the demand base for domestic bond investments and foreign exchange swaps.

Meanwhile, the 1997 Asian financial crisis and the 2007–09 global financial crisis had a significant influence on the development of the domestic financial markets. The financial reforms in the wake of the Asian financial crisis improved the financial soundness and international credit standing of institutions, while market-friendly structural reforms laid the groundwork for financial market development. In conjunction with financial reforms in the capital markets, including improvements to the ownership structures and governance of institutions, and tighter regulation of management, the authorities have helped to strengthen the self-adjustment function of prices such as interest rates and exchange rates. In accord with international reform efforts since the global financial crisis, policymakers have tightened measures to ensure the stable development of the financial markets by introducing foreign exchange-related macroprudential policies[1] in order to mitigate the volatility of capital flows.

[1] Caps on FX derivatives positions (October 2010), the Macroprudential Stability Levy (August 2011) etc.

Nominal GDP and broad liquidity[1]

Graph 1

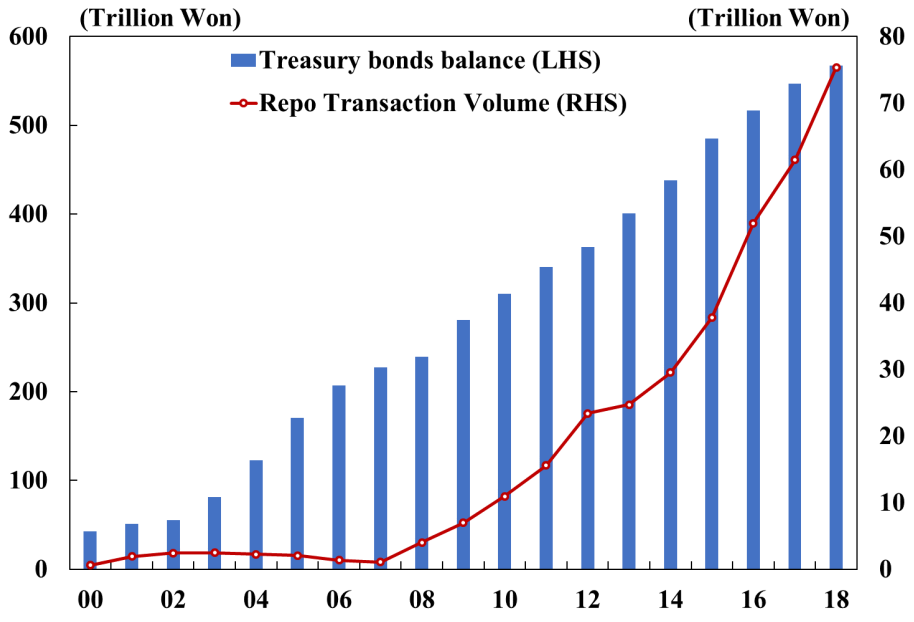


[1] Liquidity aggregates of financial institutions (Lf) +Government bonds+municipal bonds+corporate bonds +corporate bills etc.

Source: Bank of Korea.

Outstanding balances of Treasury bonds[1] and inter-institutional RP transaction volumes[2]

Graph 2

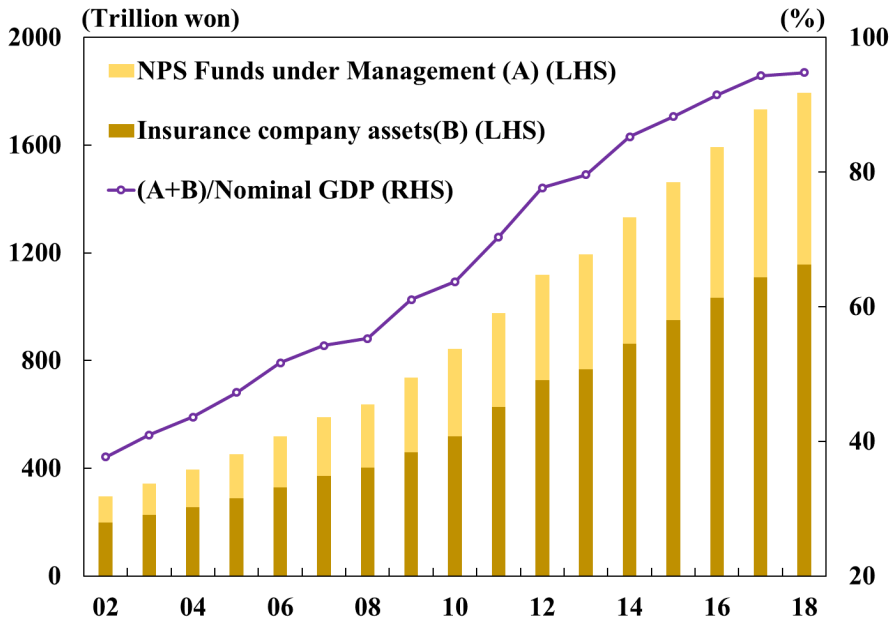


[1] Outstanding balances at period-ends.

[2] Daily average outstanding balances during the periods.

Sources: Bank of Korea, Korea Securities Depository.

Insurance firms' assets and NPS funds under management Graph 3



Source: Statistics Korea.

Impact of financial market development on monetary policy

Monetary policy implementation

The Bank of Korea has enhanced the efficiency of monetary policy by changing its monetary policy framework and operations, in accordance with Korea's financial market development. With the development of Korea's direct financial markets, the transmission effect of interest rates has increased. In consideration of this, the Bank of Korea adopted inflation targeting as its framework for monetary policy in 1998 and refocused its monetary policy operations from the money supply to the interest rate, taking the "call rate target" as the policy rate.

However, the functioning of the call market weakened as the call rate was unable to properly reflect the supply and demand for funds. Accordingly, the Bank of Korea changed its policy rate to the "Bank of Korea Base Rate"[2] in 2008 to improve the functioning of the call market. In addition, it also uses policy instruments such as open market operations to help keep the call rate near the Base Rate.

[2] The base rate used for transactions between the Bank of Korea and financial institutions (seven-day RP transaction interest rate).

Monetary policy transmission

As the financial markets – including the short-term money market, the bond and stock markets and the derivatives market – have developed, the interest rate linkages between them have strengthened. This has reinforced the transmission of the policy rate to market rates. However, as the influence of foreign investors on the bond markets has expanded since the global financial crisis, long-term rates are now strongly affected by global factors. Therefore, the transmission effects of the policy rate on long-term rates have been somewhat weakened.

Most household and corporate loans are at floating rather than fixed rates, and as floating rates are linked to short-term rates, it seems that the transmission of monetary policy to lending rates has not changed greatly. In addition, the expectations channel of monetary policy transmission is seen to have strengthened, as market participants' expectations concerning monetary policy are being priced pre-emptively into derivatives products.

Monetary policy autonomy and foreign monetary policy spillovers

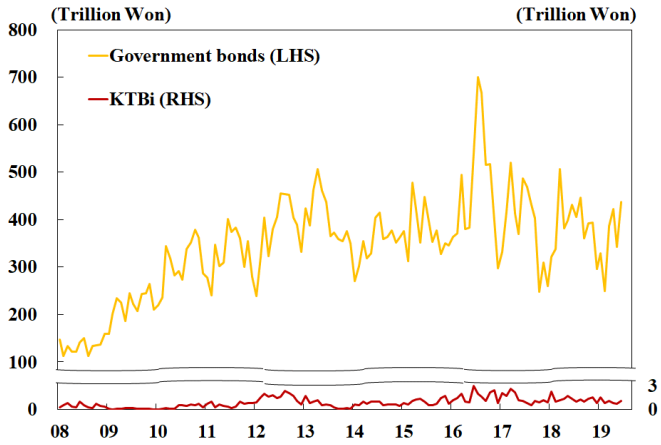
The Bank of Korea has adopted an interest rate-oriented monetary policy framework under inflation targeting. Under this framework, exchange rates, which are largely affected by global factors such as major countries' monetary policies, and capital flows, are not a major consideration for monetary policy decision-making. However, the Bank of Korea does take into account the effects of capital flows and exchange rate fluctuations on the domestic economy and financial sector as it conducts monetary policy. Price variables including bond yields are significantly affected by major economy monetary policies, but the volatility of capital flows has been limited as financial market resilience has strengthened, thanks to the increased depth of the financial markets and the higher international credit standing of financial institutions.

Measurement and use of market price-based inflation expectations

Inflation-linked Korea Treasury Bonds (KTBi) have been issued since 2007, but their issuance volume is not large and yields are volatile. Therefore, the KTBis do not provide a useful indication of a break-even inflation rate.[3] As only 10-year KTBis are issued, it is not feasible to measure inflation expectations for other periods.

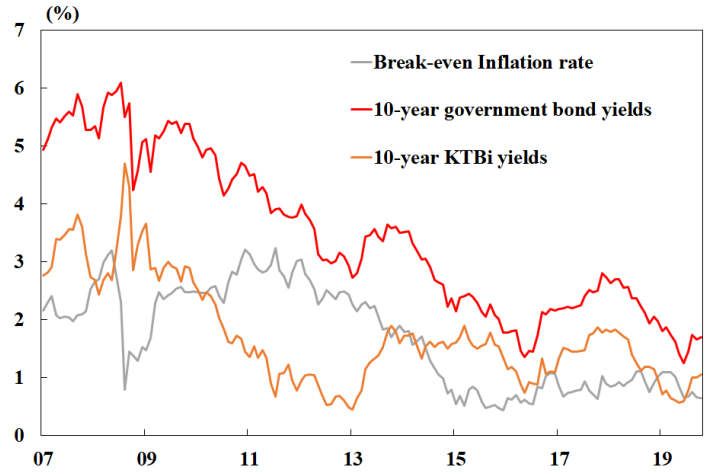
[3] 10-year BEI = Government bond yields (10-year) – KTBi yields (10-year).

Trading volumes of government bonds and KTBi Graph 4



Sources: Korea Financial Investment Association; KOSCOM.

Government bonds, KTBi yields and BEI Graph 5



Source: KOSCOM.

Monetary policy communication

At Korea's level of financial market development, market participants' expectations of monetary policy are reflected rapidly in prices. Therefore, smooth and efficient communication with the market has become important. Accordingly, the Bank of Korea uses various communication tools to explain its monetary policy decisions and their background to economic agents at home and abroad, in an effort to enhance the transparency and accountability of monetary policy. Immediately after each monetary policy-setting meeting, the Bank of Korea explains the background of its policy decision through a press briefing and reveals the names of any Monetary Policy Board members with dissenting opinions. The minutes of the policy-setting meeting are released about two weeks later and the English version is published about four weeks later. In addition, the Governor attends the National Assembly two to three

times a year to explain the state of monetary policy operations. The Bank of Korea also seeks to strengthen communication with experts from various sectors and market participants, by holding regular meetings with domestic and foreign economic experts and the heads of financial institutions.

Effect of financial market development on financial stability

Financial system stability

The diversification of financial products along with financial market development increases bank efficiency in terms of raising and managing funds, and strengthens risk management. In particular, as markets for high-quality liquid products, such as government bonds and monetary stabilisation bonds, have expanded, it has become easier for banks to manage their liquidity risks, while the development of the asset-backed securities market has facilitated credit risk management.

In the meantime, counterparty risks and mis-selling of financial products have increased due to the complexity of derivative and securitisation structures. Also, non-bank financial institutions have increased their presence, based on market-based financial products such as RPs, financial debentures and asset-backed commercial paper. These have all contributed to expanding the shadow banking sector, which in Korea is estimated to be worth about USD $1.9 trillion as of 2017 (115% of GDP), relatively low when compared with the United States ($30.8 trillion, 159%) or to the United Kingdom ($10.2 trillion, 353%).

External position and FX risk

With the development of financial markets and the continuing current account surplus, it has become increasingly straightforward for businesses and financial institutions to raise funds in Korea. So external borrowing has not risen much while investments in external bonds have increased, which has led to an improved external position. With inflows of foreign investor funds and the current account surplus, funding conditions in the swap market have continued to be favourable. This has contributed to better risk management at pension funds and insurance companies, both of which hedge their FX risks on external investments in the swap market.

Net external assets[1] position — Table 1

(USD 100 millions)

	Non-bank financial institutions	Banks	Public sector	Non-financial corporations etc.
End of June 2008(A)	2	–1,302	2,163	–381
End of June 2019(B)	1,505	47	3,158	2
B-A	+1,503	+1,348	+995	+382

[1] External assets – external liabilities.

Spillover effects of external shocks and resilience

The depth of the financial market has increased with growing bond issuance and greater transaction volumes, and with an expansion of the market participant base. This has strengthened the market's external shock absorption capacities and resilience. Meanwhile, the development of relevant derivatives markets, such as Treasury futures[4] and interest rate swaps,[5] has worked positively in terms of risk management. On the other hand, growing foreign investment in the domestic financial markets has increased the linkages between global and domestic financial markets, which could help to transmit external shocks into the domestic economy. However, such spillovers have been limited so far, as most foreign bond investment funds are long-term investors from public institutions (73%, as of the end of 2018).

Shares of domestic bond[1] holdings by major investors — Table 2

(%)

	Individuals, etc.	Institutional investors				Foreigners
		Banks	Insurance companies	Securities companies	Pension funds	
End of 2002	11.2	30.6	10.9	1.3	10.2	0.1
End of 2018	11.5	20.8	22.7	6.1	14.6	6.0

[1] Government bond, financial bond, monetary stabilisation bond, corporate bond etc

FX market volatility and the role of offshore markets

With the growing size of spot exchanges and derivative products, FX liquidity has become ample, and the auto-adjustment function of prices has been enhanced. This has resulted in enhanced shock absorption capacities, increasing the resilience of domestic FX markets. In the meantime, offshore won/dollar non-deliverable forward markets have catalysed the won's role in global transactions, complementing the spot market, and influencing the domestic FX spot market. For example, won/dollar NDF transactions between non-residents and domestic banks directly affect spot exchange rates, as domestic banks hedge NDF positions using spot exchange products.

Trading size volumes ofin Korea's FX markets[1] — Table 3

(USD 100 millions, %)

		2007	2010	2013	2016
Total FX products		352	438	475	478
	Spot	174	185	198	202
	Derivatives	178	253	277	276
Share of won transactions in the global market		1.2	1.5	1.2	1.7

[1] Daily average, based on April in each year.

[4] Trading volume for three-year treasury futures (daily average, contracts): 52,000 in 2002 → 94,000 in 2018.

[5] Trading volume for interest rate swaps (trillion won): 169 in 2002 → 3,064 in 2018.

Policies for mitigating financial stability risks

Since the global financial crisis, Korea has introduced macroprudential policies, such as ceilings on FX derivative positions,[6] and a macroprudential stability levy,[7] to mitigate FX-related systemic risks. These FX-related macroprudential policy measures are seen to have had a positive effect on reducing the share of short-term external debt, easing capital flow volatility and managing systemic risks. In addition, Korea has strengthened its macroprudential regulations, such as loan-to-value and debt-to-income ratios, in response to the growing risks of financial imbalances, such as a sharp rise in household debt ratios in the current low interest rate environment.

Looking ahead

Development of fintech and big tech

If fintech or big tech firms provide a broader range of financial services and gain greater access to the central bank's settlement infrastructure, this could affect monetary policy transmission channels. Enhancing the efficiency of financial markets through financial innovation could have a positive impact on monetary policy transmission, but financial innovation could also limit the effectiveness of traditional monetary policy transmission channels or give rise to new ones. Expanded financial services from fintech or big tech firms could lead to a surge in their holdings of customer deposits.[8] If they manage these deposits on their own in money markets, this would possibly affect those markets. If fintech, big tech firms and stablecoins (for example, Libra) were to be combined to create new types of financial service, this could bring about considerable change in the current implementation and transmission of monetary policy based on the legal tender system. For instance, monetary policy might not be transmissible to economic activities that involve stablecoins, which are not legal tender. Increasing investment in stablecoins could also affect global capital flows.

Financial innovation could also increase cyber and operational risks, information security risks, and financial instability risks. If innovative financial sectors were to become more closely linked with traditional financial institutions, and the regulation and supervision of these sectors were not as systematic as that of traditional financial institutions, the risks arising from these sectors could spread across the financial industry as a whole. For instance, to cope with a deterioration in the asset quality of P2P institutions, the authorities are working to set a minimum level of capital (KRW 500 million) for such institutions, and also to strengthen investor protection measures.

In order to mitigate the related risks without undermining financial innovation, we need to strengthen the monitoring of potential risks while contributing to the establishment of infrastructure related to technologies used by fintech and big tech

[6] Domestic Banks/Foreign Bank Branches: 50%/250% (2010) → 30%/150% (2013) → 40%/200% (2016).

[7] Impose levies of 0.02% to 0.2%, depending on maturity, on non-deposit foreign currency liabilities of banks (2011) → Impose levies of 0.06% to 0.1%, depending on maturity, on securities companies, credit financed companies, and insurance companies as well as banks (2015).

[8] Korea's fintech firms currently deposit these funds at financial institutions.

firms. In doing so, appropriate regulation needs to be applied to sectors that could undermine financial system stability so as to ensure the risks are duly managed. In addition, in order to support financial innovation, experimentation with new technologies should be strengthened through virtual spaces, such as regulatory sandboxes. In addition, policymakers could support the development of regulatory technology (RegTech) of financial companies, so that they can strengthen their compliance and risk management.

Tasks for future financial market development

As Korea's financial markets have developed significantly in terms of size and institutional framework, market efficiency has improved, and resilience has also strengthened. However, as financial markets have become substantially dependent on global factors, monetary policy transmission effects have weakened somewhat. If the volatility of capital flows were to increase, this could limit room for manoeuvre in terms of monetary policy. In this respect, it is necessary to continuously strengthen the resilience of capital markets against FX and other external shocks. To this end, it is very important to increase market capacity by developing financial products and expanding market demand, and also to continuously improve financial infrastructure, for example, by strengthening credit and transaction information disclosures. Furthermore, it is also necessary to strengthen regulations on shadow banking and OTC derivatives in line with recommendations from international organisations.