FSB FINANCIAL STABILITY BOARD

Peer Review of Korea

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Foreword

Financial Stability Board (FSB) member jurisdictions have committed, under the FSB Charter and in the *FSB Framework for Strengthening Adherence to International Standards,*[1] to undergo periodic peer reviews. To fulfil this responsibility, the FSB has established a regular programme of country and thematic peer reviews of its member jurisdictions.

Country reviews focus on the implementation and effectiveness of regulatory, supervisory or other financial sector standards and policies agreed within the FSB, as well as their effectiveness in achieving desired outcomes. They examine the steps taken or planned by national authorities to address International Monetary Fund (IMF)-World Bank Financial Sector Assessment Program (FSAP) and Report on the Observance of Standards and Codes (ROSC) recommendations on financial regulation and supervision as well as on institutional and market infrastructure that are deemed most important and relevant to the FSB's core mandate of promoting financial stability. Country reviews can also focus on regulatory, supervisory or other financial sector policy issues not covered in the FSAP that are timely and topical for the jurisdiction itself and for the broader FSB membership. Unlike the FSAP, a peer review does not comprehensively analyse a jurisdiction's financial system structure or policies, or its compliance with international financial standards.

FSB jurisdictions have committed to undergo an FSAP assessment every 5 years; peer reviews taking place 2-3 years following an FSAP complement that cycle. As part of this commitment, Korea volunteered to undergo a peer review in 2017.

This report describes the findings and conclusions of the Korea peer review, including the key elements of the discussion in the FSB's Standing Committee on Standards Implementation (SCSI) in October 2017. It is the twenty-second country peer review conducted by the FSB, and it is based on the objectives and guidelines for the conduct of peer reviews set forth in the March 2015 version of the *Handbook for FSB Peer Reviews.*[2]

The analysis and conclusions of this peer review are based on the responses to a questionnaire by financial authorities in Korea and reflect information on the progress of relevant reforms as of May 2017. The review has also benefited from dialogue with the Korean authorities as well as discussion in the FSB SCSI.

The draft report for discussion was prepared by a team chaired by Olaf Sleijpen (Division Director – Supervision Policy, De Nederlandsche Bank) and comprising Sathyan David (Reserve Bank of India), Virginia Giglio (Bank of Italy), Angus Tarpley (US Federal Deposit Insurance Corporation) and Mustafa Yuksel (Reserve Bank of Australia). Sam Smith and Costas Stephanou (FSB Secretariat) provided support to the team and contributed to the preparation of the peer review report.

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[1] See http://www.financialstabilityboard.org/publications/r_100109a.pdf.

[2] See http://www.fsb.org/2015/03/handbook-for-fsb-peer-reviews/.

Abbreviations

ALM	Asset-liability management
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
ASIFI	Act on Structural Improvement of the Financial Industry
BCBS	Basel Committee on Banking Supervision
BOK	Bank of Korea
CAEL	Capital, assets, earnings and liquidity
CAMEL-R	Capital, assets, management, earnings, liquidity and risk management
CCP	Central counterparty
CCCs	Community credit cooperatives
CUBS	Credit unions and building societies
DNFBPs	Designated non-financial businesses and professions
D-SIB	Domestic Systemically Important Bank
DPA	Depositor Protection Act
DTI	Debt-to-income
ELA	Emergency Liquidity Assistance
EOO	Emergency Operation Office
FMI	Financial Market Infrastructures
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSC	Financial Services Commission
FSR	Financial Stability Report
FSS	Financial Supervisory Service
FX	Foreign exchange
G-SIB	Global Systemically Important Bank
G-SIFI	Global Systemically Important Financial Institution
GDP	Gross domestic product
IADI	International Association of Deposit Insurers
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
KAs	Key Attributes of Effective Resolution Regimes for Financial Institutions
KDIC	Korea Deposit Insurance Corporation
KFCC	Korean Federation of Community Credit Cooperatives
KFSB	Korea Federation of Savings Banks
KoFIU	Korea Financial Intelligence Unit
KRX	Korea Exchange
KRW	Korean won
LCR	Liquidity Coverage Ratio
LTV	Loan-to-value
MCCs	Mutual credit cooperatives
MEFM	Macroeconomic Finance Meeting
MoIS	Ministry of the Interior and Safety
MoSF	Ministry of Strategy and Finance
MoU	Memorandum of Understanding
MSBs	Mutual savings banks
MSIP	Ministry of Science, ICT and Future Planning
NBDIs	Non-bank depository institutions
NBFIs	Non-bank financial institutions

NCWO	No creditor worse off than in liquidation
NPL	Non-performing loan
PCA	Prompt Corrective Action
RBA	Risk-based approach
ROA	Return on assets
ROE	Return on equity
ROSC	Report on the Observance of Standards and Codes
RRP	Recovery and resolution planning
SBL	Substandard or below loans
SFC	Securities and Futures Commission
SME	Small and medium sized enterprises

Executive summary

Background and objectives

The main purpose of this peer review is to examine two topics that are relevant for financial stability in Korea: the crisis management and resolution framework, and regulation and supervision of non-bank depository institutions (NBDIs). The peer review focuses on the steps taken by the Korean authorities to implement reforms in these areas, including by following up on relevant FSAP recommendations and FSB commitments.

Main findings

Good progress has been made in recent years on both topics. The resolution framework already includes a number of the resolution powers set out in the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions* (*Key Attributes*), and reforms are underway to strengthen it further. The authorities have also taken steps to strengthen and more closely align prudential standards in the NBDI sector to those of banks, and have reacted proactively to emerging risks. However, there is additional work to be done in both areas. On crisis management and resolution, this involves implementing resolution reforms to close the gaps vis-à-vis the *Key Attributes* and further strengthening crisis preparedness arrangements. On regulation and supervision of NBDIs, this involves strengthening the role of the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS) in the regulation and supervision of mutual credit cooperatives (MCCs); enhancing MCC and mutual savings bank (MSB) prudential standards; increasing the focus on MCC federations; and developing measures to pro-actively manage the orderly consolidation of the MCC/MSB sectors.

Crisis management and resolution

The resolution regime incorporates a number of elements found in the *Key Attributes* and has been tested in previous crises. The authorities have commenced a pilot recovery and resolution planning (RRP) exercise, and announced reforms that would further align the resolution regime with the *Key Attributes* by introducing a statutory bail-in power and a power to impose a temporary stay on the exercise of early termination rights, and by formalising RRP requirements. Cooperation on systemic risk monitoring and crisis management issues is facilitated through the inter-agency Macroeconomic Finance Meeting (MEFM) and, since November 2016, through the FSC-FSS Emergency Operation Office (EOO). There has also been some progress in reducing the Korea Deposit Insurance Corporation's (KDIC) Deposit Insurance Fund deficit, while reforms are underway to accelerate depositor pay-out.

Notwithstanding this progress, further work is needed to strengthen the framework.

- ***Implementation of reforms:*** It is important that the authorities maintain momentum in finalising the reforms and implement them in a way that would bring Korea further in alignment with the *Key Attributes*. As part of that effort, the FSC should design the bail-in regime so as to promote its effective use and improve its legal certainty. First, consistent with the objectives of the *Key Attributes*, the authorities should ensure that there are sufficient resources that can be bailed-in given the liability structure of financial institutions – particularly systemic ones – in Korea. Second, to ensure the exercise of bail-in powers without material risk of a legal challenge, the authorities should consider introducing regulation to require subordination of the types of liabilities subject to bail-in. Currently,

the lack of depositor preference means that uninsured depositors absorb loss alongside general creditors who rank pari passu in the creditor hierarchy. While some financial institutions in Korea adopt a financial holding company model, which could facilitate structural subordination of bail-inable liabilities, the use of this model is not widespread across the financial system; even where the structure is utilised, the holding company may not be the entity that issues instruments and liabilities that could be subject to bail-in.

The authorities should also consider introducing legal amendments to the resolution regime to ensure that early resolution triggers permit the exercise of the full range of tools under the regime. Because of the need to preserve value when utilising resolution tools such as bail-in, the *Key Attributes* require timely and early entry into resolution when a firm is no longer viable or likely to be no longer viable. Entry into resolution in the Korean regime is based on a determination that the financial institution is insolvent. This does not necessarily require the financial institution to be balance sheet insolvent, as resolution could also be initiated in respect of a financial institution that is under suspension of payment of claims or that is illiquid. However, this is unlikely to be a sufficiently early trigger for resolution, particularly when considered against the Prompt Corrective Action framework, the first stage of which may not be reached until minimum capital requirements have already been breached. The regime does include an "insolvency threatened" trigger that could facilitate an earlier entry into resolution, but this trigger only permits the use of a capital injection tool and not the other tools available under the regime. The authorities should therefore either amend the "insolvency threatened" trigger or introduce a similar early resolution trigger that permits the exercise of the full range of resolution tools under the regime. Relatedly, the FSC as the resolution authority should review and, as appropriate, take steps to strengthen the decision-making process so as to facilitate an early entry into resolution.

Lastly, the authorities should consider introducing a requirement for the KDIC to recover from shareholders and unsecured creditors, or from the financial system more widely, the costs of any temporary public funding used to facilitate orderly resolution. The KDIC has the legal authority to raise insurance premiums (subject to a maximum amount) to recover losses to the Deposit Insurance Fund, and did so in the case of the 2011 MSB crisis. However, there is no legal or regulatory requirement to recoup the costs of any temporary public funding used in resolution and thereby minimise the risk of public support.

- ***Crisis preparedness:*** A number of authorities are involved in crisis management and resolution and there are various fora and structures for cooperating and sharing information. These include the MEFM (which the KDIC attends only when discussing information sharing and joint inspections); the EOO (restricted only to the FSC and FSS); and the interlocking board structures of the FSC, FSS, BOK and the KDIC. However, as noted in the FSAP, there is no dedicated forum to coordinate on crisis preparedness and crisis management. The authorities point out that such coordination takes place informally through existing structures, but there is scope to improve this arrangement by creating a forum – potentially as a standing group under the MEFM – to share information on troubled financial institutions at an early stage as well as to coordinate the development of crisis management protocols among all safety net participants.

  As the authorities introduce new resolution tools and continue developing and maintaining RRPs, it is important that they not only coordinate but also test the robustness of those plans

and tools on a periodic basis, as recommended in the FSAP. So far, only a hypothetical simulation exercise assuming large-scale insolvency in the MSB sector with the participation of the FSC, BOK, FSS and the KDIC has been conducted. A crisis simulation exercise involving the resolution of a systemic bank would be an effective way to test the application of the resolution framework. The simulation could involve representatives of a sufficiently senior level from each of the authorities responsible for resolution. Findings from the simulation could support the development of recovery and resolution plans, crisis management protocols and communication plans, and help identify other areas of future collaboration between the authorities.

Regulation and supervision of non-bank depository institutions

The main types of institutions within the NBDI sector are MSBs and MCCs (see Table), both of which have long-standing historical roles in offering basic deposit services and small-scale credit to individual borrowers and small to medium-sized enterprises, particularly for local communities and lower-income households. NBDIs made up 13% of financial system assets (equivalent to 43% of gross domestic product) and almost 30% of deposits as at end-2016.

Table: Size, structure and prudential framework of the NBDI sector (December 2016)

NBDI types	Number	Assets (KRW trillion)	Prudential regulator	Prudential supervisor and examining body
Mutual Savings Banks	79	52	FSC	FSS
Mutual Credit Cooperatives	3,582	574		
-o/w Credit Unions	*904*	*74*	*FSC*	*FSS & Federation*
-o/w Cooperatives	*1,357*	*362*	*FSC*	*FSS & Federation*
-o/w Community Credit Cooperatives	*1,321*	*138*	*MoIS*	*MoIS & Federation*
Merchant bank	1	2	FSC	FSS
Korea Post	1	69	MSIP	MSIP
Total	**3,663**	**697**		

MoIS = Ministry of the Interior and Safety. MSIP = Ministry of Science, ICT and Future Planning.

In recent years, asset classification norms, loan-to-value and debt-to-income limits as well as loan loss provisioning rules for MSBs and MCCs have been largely aligned with banks; a higher capital requirement (on a Basel I basis) will be imposed on larger MSBs from 2018; and large MSBs are supervised more intensely. These measures help bring MSBs and MCCs more in line with the regulatory/supervisory framework for banks, address regulatory arbitrage and mitigate the risks from NBDI lending. The establishment of the MCC Policy Council in 2013 has strengthened regulatory cooperation on MCC-related issues, and has enhanced the consistency of prudential standards both across MCC entity types as well as between MCCs and banks. Recent measures relating to household debt indicate the authorities' pro-active stance in identifying emerging risks and enhancing regulation and supervision to address them.

In spite of these steps to enhance NBDI regulation and supervision by bringing them more in line with banks, there remain certain differences in approach. Such differences are not necessarily undesirable, as they may reflect differences in the business model and the risks posed by these entities. Moreover, any changes to regulatory arrangements would need to recognise the public policy role of MCCs/MSBs and the fact that they mostly cater to segments

of the population other than those targeted by banks. Notwithstanding these caveats, further steps can be taken to strengthen the framework for regulation and supervision of NBDIs.

- ***Strengthen role of FSC/FSS in regulation and supervision of MCCs:*** One of the difficulties in promoting robust and consistent regulation and supervision across the MCC sector is the multitude of entity types and their distinct operating frameworks. In particular, the regulatory and supervisory responsibility for credit unions and cooperatives in the agricultural, fisheries and forestry sectors rests with the FSC/FSS, although they rely largely on the respective MCC national federation for regulatory reporting and onsite examinations. However, for historical reasons, it is the Ministry of the Interior and Safety (MoIS) that is responsible for regulating and supervising Community Credit Cooperatives (CCCs), by relying largely on the CCC federation to conduct examinations and collect data. The authorities point out that the CCCs' history and regional development mission aligns with the role of the MoIS; that a dedicated bureau within the MoIS supervises these entities; that there is close consultation with the FSC on credit-related matters, including through the MCC Policy Council; and that the current supervisory system was set up by law after stakeholder consultations. Nevertheless, to enhance the consistency of approach and as a matter of good international practice, the regulation and supervision of CCCs' credit business should be assigned to the relevant prudential authorities (FSC and FSS) and be aligned with the other MCCs.

  Currently, the FSS devotes about the same number of examiners for the MCC sector (except CCCs) as it does for the MSB sector, even though the former is around eight times larger in terms of assets and over eight times larger in terms of deposits. This seems an imbalance in the FSS's focus and resources, perhaps reflecting a legacy from the 2011 MSB crisis. Given the greater importance of the MCC sector, the FSS should expand the resources devoted to the MCC sector, including by redeploying examiners where possible.

  While federations are the frontline examiners of MCCs, the FSS still conducts general examinations on a small subset (around 2%) of MCCs annually. As is already the case with other financial institutions, the FSS should adopt a more forward-looking, risk-based approach to supervision of MCCs, for example by targeting those that exhibit materially higher (than the sector average) deposit or loan growth, or that conduct more risky business. The FSS could also undertake thematic examinations on issues that require particular attention – as it has already done recently in relation to household debt – such as property lending and fit-and-proper requirements.

- ***Enhance prudential standards for MSBs/MCCs:*** While MSBs and MCCs are not active internationally or permitted to engage in certain riskier activities like banks (e.g. derivatives or foreign exchange transactions), they face other business risks. The concentration in their geographical presence and customer type mean that they are more exposed to common shocks (whether sectoral or regional), while the fact that they cater to less creditworthy borrowers implies that they are more heavily exposed to credit losses in case of a cyclical downturn. It is important that the prudential requirements for MCCs and MSBs are sufficiently robust, in line with international standards and practices, to reflect these risks.

  First, an 8% capital requirement will apply for MSBs with assets greater than Korean Won (KRW) 1 trillion from January 2018. However, the remaining 64 MSBs (accounting for 45% of total MSB assets) will continue to be subject to a 7% capital requirement. In order

to enhance resilience and align with international practice, the authorities should consider expanding the list of MSBs subject to the 8% capital requirement after they monitor how implementation of this requirement affects MSBs with assets greater than KRW 1 trillion.

Second, MSBs at present may be wholly owned by a single shareholder – either a natural or a legal person – with FSC authorisation. The largest MSB owned by a single shareholder (a financial company) has KRW 2 trillion in assets, while the largest MSB owned by a single person has KRW 130 billion in assets. The authorities state that the risks of single ownership are mitigated by 'fit and proper' requirements and by the FSC/FSS power to remove unqualified managers/directors and to issue an order to dispose the equity of large shareholders. However, the fact that a single shareholder – particularly an individual – is allowed 100% ownership of an MSB raises concerns about effective corporate governance. This also differs from the policy applying to banks, where individual share ownership is limited (with exceptions) to 10%. The authorities may want to reconsider the rule allowing 100% ownership of an MSB, reflecting international good practice.

Third, more than 85% of the liabilities of the MCCs and MSBs are made up of (typically short-term) deposits, while around 65% and 80% respectively of their assets are loans and advances, many of which have longer maturities or floating rates. MSBs/MCCs are subject to a basic liquidity ratio requirement, which does not accurately reflect the extent to which an institution engages in asset-liability mismatch and liquidity/maturity transformation. Drawing on the experience in other countries, the FSC and FSS should require MCCs to develop an asset-liability management (ALM) system to assess the liquidity and asset-liability mismatches of MCCs, at least for entities above a certain threshold size.

Finally, there are differences in minimum capital requirements (net worth ratio) across the five MCC types, ranging from 2% (for credit unions and certain cooperatives) to 5% (for agricultural cooperatives). Without lowering the overall resilience of the sector, the authorities should improve the consistency of capital requirements across the five MCC types so as to help level the playing field given the similar activities and borrower types of these entities, as well as the risks to which they are exposed.

- ***Increase focus on MCC federations:*** The national federations carry out important public functions with respect to their respective MCC types. They are involved in the examination of their credit business; manage excess liquidity on behalf of their member entities, including by redistributing it to other MCCs; deal with MCCs experiencing financial difficulties; and operate the deposit insurance system for their respective MCCs. These operations, which are specified in different legislative acts and Government regulations, can give rise to differences in supervisory approach, rigour and outcomes. Given the importance of their public functions, the size of their operations and the potential for conflicts of interest, it is important that the national federations are effectively regulated and supervised, and that risks stemming from their operations are appropriately assessed.

  The first area of focus involves supervisory and examination practices. While reliance on private bodies to supervise private financial institutions is not uncommon in other countries, it can give rise to challenges relating to those bodies' capacity constraints, operational independence and the ability to apply a uniform approach across the sector or to detect emerging (system-wide) risks. Given this, the FSC/FSS should enhance their oversight of MCC federations in order to strengthen the quality and consistency of federation

supervision and examination of MCCs. This process could involve the commissioning of a stocktake of supervisory and examination practices across the federations and the development of uniform guidance across all five MCC types on their supervisory and examination functions to clarify the authorities' expectations (including benchmarks and quality assurance processes) of federations' performance vis-à-vis MCC examinations.

The second area involves rules and oversight mechanisms to clearly separate the business activities of the federations from their public policy functions, particularly supervisory and deposit insurance activities. For example, the federations engage in financial activities on their own account, including by managing the liquidity of their members and by investing in a range of assets such as government bonds, corporate bonds, real estate, loans to corporates and the equity of publicly-listed firms. Each MCC federation is subject to different laws and regulations on lending rules, list of eligible investment securities as well as limits on particular investment types. In addition, most Directors in a federation are typically drawn from the MCCs that the federation supervises. The FSC/FSS should therefore consider whether and how to strengthen existing corporate governance rules (e.g. with respect to fit-and-proper requirements and firewalls between activities) to ensure that potential conflicts of interest within a federation are managed. Relatedly, the FSS should expand the scope of its onsite examinations of federations' activities to assess how potential conflicts of interest are addressed (as part of broader governance arrangements) and consider moving to an annual (as opposed to biennial) frequency of those examinations.

Third, given their size, range of activities and interconnections with MCCs and other financial institutions, the financial activities of (at least some) federations should be included in systemic risk analysis conducted by the BOK and FSS, and relevant data on the federations' functioning should be provided to those authorities for this purpose. In that context, it may be useful for the BOK to attend, as an observer or invitee, MCC Policy Council meetings in order to exchange views on risks in the MCC sector, including with respect to the MCC federations and their activities.

The final area of focus involves deposit insurance. Deposits with banks, MSBs and the merchant bank are covered by the KDIC, while deposits with MCCs are covered by schemes run by the national federations. The retail clientele and small average size of deposits in MCCs means that the deposit coverage ratio for MCCs is much higher (80%-98%) than for banks (around 30%). MCCs account for a sizeable share (around 25%) of total financial system deposits in Korea. While the federations' schemes are aligned with the KDIC in terms of deposit coverage (KRW 50 million), they vary in other important aspects such as deposit insurance premiums and public policy objectives. Nor is it clear that the private deposit insurance funds have the operational independence required under the International Association of Deposit Insurers (IADI) Core Principles. Unlike in the case of KDIC, there is limited publicly available information on the operations of these schemes. To ensure that the MCC deposit insurance schemes of the federations operate in a sound manner and in accordance with international good practice, the authorities should assess their functioning against the IADI standard and address material deficiencies.

- ***Manage the orderly consolidation of the MCC/MSB sectors:*** A key feature of the MCC sector is the structural decline in the number of entities over past decades, reflecting both the ongoing consolidation in the sector and the very low number of new licenses issued.

Nonetheless, there remain in excess of 3,500 MCCs in operation at present. Similarly, MSBs dropped from 93 in 2012 to 79 in 2016, primarily as a result of the 2011 crisis in that sector. To date, MCCs (and to a lesser extent, MSBs) have continued, as a whole, to operate on a profitable basis. However, they face intensified pressures from low economic growth and interest rates, competition from banks and financial technology firms, as well as increasingly tighter regulations on their activities to align them with those for banks. This raises the possibility that in competing for loans and deposits, MCCs and MSBs could loosen lending standards or expand into riskier assets in a 'search for yield'.

The high number of MCCs makes Korea an international outlier relative to its population, and raises two issues for authorities. First, it is not clear how much of this sector is viable over the medium-term given that these entities tend to serve less creditworthy borrowers. Second, the large number of MCCs means that the authorities rely on the federations for supervision and examinations in this sector – which, as discussed above, brings up its own set of challenges. These issues would likely come to the fore during a credit downturn.

Continued consolidation within the MCC and MSB sectors could help on both of these fronts by building more resilient entities that are able to achieve economies of scale and cost savings. Having fewer, albeit larger, entities would also allow the FSS to conduct more examinations of MCCs itself. While consolidation is already taking place organically within the MCC sector, the authorities could be proactive on that front, to reap longer-term benefits in terms of reduced risks and improved supervisory outcomes while ensuring financial access to particular segments of the market. This involves developing measures to proactively manage the orderly consolidation of the MCC and MSB sectors – such as, for example, encouraging entities in those sectors to share costs (e.g. through common technology platforms, credit scoring systems and back office infrastructures); and fostering innovative ways to expand those entities' capital base while retaining their mutual status.

Recommendations

In response to the aforementioned findings and issues, the peer review has identified the following recommendations to the Korean authorities:

Crisis management and resolution

1. The authorities should implement, on a timely basis, planned reforms on RRP requirements as well as bail-in and temporary stay powers. In addition, they should: (a) review the decision-making process and develop triggers that facilitate early entry into resolution and permit the use of the full range of resolution powers under the Act on Structural Improvement of the Financial Industry (ASIFI) and Depositor Protection Act (DPA); and (b) consider introducing a requirement to recover from the industry the costs of temporary public funding used to facilitate resolution.

2. The authorities should: (a) consider the establishment of a dedicated forum on crisis preparedness; and (b) jointly run a hypothetical simulation of the resolution of a systemic bank on a periodic basis.

Regulation and supervision of non-bank depository institutions

3. The authorities should strengthen the role of the FSC/FSS in MCC regulation and supervision by: (a) assigning regulatory and supervisory responsibilities for community

credit cooperatives to the FSC/FSS, as is the case for other MCC types; (b) expanding (including by redeploying) FSS resources to MCC examinations; and (c) adopting a risk-based supervisory approach for MCCs (e.g. targeted examinations on high-risk loans and fit-and-proper requirements).

4. The FSC should enhance MSB/MCC prudential requirements, in line with international standards, to reflect the risks to which these entities are exposed. This includes developing an asset-liability management framework for MCCs above a minimum threshold size.
5. The authorities should increase their focus on MCC federations by: (a) conducting a stocktake of the supervisory and examination practices of the federations, with a view to develop uniform guidelines for federations to perform those functions; (b) reviewing corporate governance rules to ensure that potential conflicts of interest within a federation are managed, and undertaking more in-depth examinations of federation operations; and (c) including the financial activities of federations in systemic risk analysis. In addition, the deposit insurance arrangements of federations should be assessed against the international standard (IADI Core Principles), so that any material deficiencies can be identified and addressed.
6. The authorities should develop measures to pro-actively manage the ongoing consolidation in the MCC and MSB sectors, in order to promote long-term sustainability while ensuring financial access with minimal disruption.

1. Introduction

Korea underwent an assessment update under the Financial Sector Assessment Program (FSAP) in 2013. The FSAP Update included assessments of the Basel Committee on Banking Supervision (BCBS) *Core Principles for Effective Banking Supervision*, International Organization of Securities Commissions (IOSCO) *Objectives and Principles of Securities Regulation* and Committee on Payments and Market Infrastructures (CPMI)-IOSCO *Principles for Financial Market Infrastructures*.[3, 4]

The FSAP concluded that the vulnerability of the Korean financial system had diminished considerably since the 2008 crisis, with improved capitalisation, low levels of non-preforming loans and strengthened foreign currency liquidity profiles of the banking sector. It noted, however, that banks' profitability remained weak and while vulnerabilities from corporate and household exposures appeared contained in the near term, further economic weakness could impair the soundness of both sectors. Macroprudential policies had slowed the growth of banks' lending to households, but had spurred household exposures to less regulated non-bank financial institutions (NBFIs).

The FSAP further noted that the authorities had strengthened the regulation and supervision of the financial sector. However, the assessments of standards and codes identified gaps related to the governance, mandate, and risk-sensitive approaches of regulatory and supervisory authorities that could undermine supervisory effectiveness and needed to be addressed. Additional efforts were needed to update the regulations including with respect to financial conglomerates and NBFIs. The FSAP also noted a number of concerns with the regulatory architecture. These related, in particular, to its independence from political influence or the perception of it, multiple objectives that diluted the focus on the core supervisory mandate, and overlapping responsibilities and complex processes requiring intense inter-agency communication. The FSAP made a number of recommendations in response to these findings.

The IMF's 2016 Article IV report[5] concluded that output growth had been sluggish since 2012 and that the Korean economy was facing a number of structural headwinds, but that it had considerable fiscal space to manage these challenges. The report commended the authorities for their focus on corporate restructuring (including by safeguarding the policy banks' capital positions) and urged that plans for financial and operational restructuring of distressed firms be implemented swiftly, while ensuring an adequate social safety net to assist affected workers. It found that the financial system remains resilient, although it advocated further measures to address macro-financial risks stemming from the rapid growth of household debt.

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[3] See "Korea: Financial System Stability Assessment" (May 2014, IMF Country Report No. 14/126 https://www.imf.org/external/pubs/cat/longres.aspx?sk=41569.0). The detailed assessments on the observance of standards and codes were published in October 2014 and are available on the IMF website (https://www.imf.org/external/np/fsap/fsap.aspx?CountryName=Korea,%20Republic%20of#).

[4] In September 2016, the BCBS published its assessments of the consistency with the Basel III framework of the risk-based capital and liquidity coverage ratio regulations in Korea. See http://www.bis.org/bcbs/publ/d380.pdf and http://www.bis.org/bcbs/publ/d379.pdf for details.

[5] See the IMF's "Republic of Korea: 2016 Article IV Consultation" (August 2016, Country Report No. 16/278; https://www.imf.org/external/pubs/ft/scr/2016/cr16278.pdf).

This peer review report has two main sections, corresponding to the two topics being reviewed. Section 2 focuses on the framework for crisis management and resolution, while Section 3 covers the framework for regulation and supervision of non-bank depository institutions (NBDIs). In addition, Annex 1 provides background information on the structure of the Korean financial system; Annex 2 compares prudential standards for banks, mutual savings banks (MSBs) and mutual credit cooperatives (MCCs); Annex 3 discusses the deposit-taking operations of, and regulatory framework for, Korea Post; and Annex 4 describes the structure and functioning of the MCC Policy Council. Annex 5 presents the follow-up actions reported by the authorities to other key FSAP recommendations; these actions have not been analysed as part of the peer review and are presented solely for transparency and completeness.

2. Crisis management and resolution

Background

The FSAP concluded that the resolution framework for financial institutions in Korea provides a comprehensive range of options but could nevertheless be improved to ensure certainty and avoid delays in resolution processes, particularly with reference to financial conglomerates and systemically important financial institutions (SIFIs), including their cross-border operations.

In particular, the FSAP found that the authorities were equipped with several tools for managing a financial crisis, including: the ability to influence systemic liquidity in money and securities markets; broad deposit insurance and investor protection; and mechanisms to intervene and resolve troubled financial institutions. It noted that Korea had established several funds in the wake of the global financial crisis to provide assistance (directly or indirectly) to financial institutions. Since these funds can potentially distort incentives, the FSAP recommended that their role should be reviewed carefully to fully address moral hazard issues. It also recommended formalising institutional arrangements for crisis management to help preserve and build upon institutional memory and existing frameworks. These included, in particular, setting up a dedicated apex forum to lead the inter-agency cooperation and coordinate work on crisis preparedness and crisis management. To promote the Korea Deposit Insurance Corporation's (KDIC) ability to intervene effectively during or in the lead up to a crisis, the FSAP recommended replenishing KDIC's Deposit Insurance Fund and establishing an explicitly assured and irrevocable line of credit from the Government to provide back-up funding to the KDIC.[6]

This section examines the progress made by the authorities to strengthen the crisis management and resolution framework in recent years, including by addressing the aforementioned FSAP recommendations. Drawing on the FSB's *Key Attributes of Effective Resolution Regimes for Financial Institutions* (*Key Attributes*)[7] and other policy guidance[8] as well as experience in

[6] See the January 2015 FSAP technical note on crisis preparedness and the crisis management framework in Korea (IMF Country Report No. 15/5, https://www.imf.org/external/pubs/cat/longres.aspx?sk=42584.0).

[7] See http://www.fsb.org/2014/10/r_141015/.

[8] See, for example, the FSB's "Principles for Cross-border Effectiveness of Resolution Actions" (November 2015, http://www.fsb.org/2015/11/principles-for-cross-border-effectiveness-of-resolution-actions/).

other countries, it examines the objectives, scope and functioning of the resolution framework in order to identify any gaps and provide lessons of experience for FSB members.

Steps taken and actions planned

Legal framework and institutional arrangements: The legal framework for the resolution of financial institutions in Korea is established in two pieces of legislation: the Act on Structural Improvement of the Financial Industry (ASIFI) introduced in 1991, and the Depositor Protection Act (DPA) enacted in 1995. Under these two respective Acts, powers are conferred on two authorities with responsibility for resolution in Korea: the Financial Services Commission (FSC) and the KDIC. Together, the two Acts create an administrative resolution regime for financial sector entities distinct from the ordinary insolvency regime.

The FSC acts as the lead resolution authority. In this capacity, it is responsible for determining if the conditions for entry into resolution have been met and for deciding the resolution strategy.[9] The FSC is also responsible for supervisory policies and early intervention, including the imposition of corrective measures. The KDIC is Korea's integrated deposit insurer and is responsible for implementing the resolution actions determined by the FSC. The Financial Supervisory Service (FSS) is the supervisory authority for financial institutions, and acts under the guidance of the FSC. The Bank of Korea (BOK) also plays a role in the crisis management and resolution framework through, among other things, its lender of last resort function (see Box 1 for a detailed description of the roles of the authorities).

The resolution regime for financial sector entities under the ASIFI applies to banks (including state-owned banks, domestic branches of foreign banks and financial holding companies),[10] insurance companies and other financial institutions.[11, 12] However, the scope of the regime does not extend to financial market infrastructures and non-regulated entities within a bank group as these do not fall under the definition of a financial institution stipulated in the ASIFI. The Korean framework does not distinguish between resolution powers and measures for systemic versus non-systemic firms, although the FSC's pilot exercises on recovery and resolution planning (RRP) focus on domestic systemically important banks (D-SIBs).[13] There are also no sector-specific adaptations to the resolution framework for different types of financial institutions (e.g. a bank compared to an insurance company).

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[9] The FSC has a dedicated group (Financial and Corporate Restructuring Policy Bureau) focusing on financial and corporate restructuring issues, including with respect to resolution. The head of that group reports to the FSC Secretary General, Chairman and Vice Chairman.

[10] As of year-end 2016, there were 17 domestic banks and 43 foreign bank branches in operation. Several banks are organised under a financial holding company structure, whereby operating banks sit under a non-operating holding company. Of the five D-SIBs (see footnote below), four have a financial holding company structure.

[11] This includes investment traders, brokers, collective investment business entities, investment advisory business entities, discretionary investment business entities, insurance companies, mutual savings banks, trust business entities and merchant banks.

[12] The resolution regime under the DPA applies to insured financial institutions and, in certain circumstances, the financial holding company parent of an insured financial institution.

[13] The D-SIBs identified by the FSC are Hana Financial Group, Shinhan Financial Group, KB Financial Group, NH Financial Group and Woori Bank. Together, these represent more than 60% of banking sector assets. See https://www.fsc.go.kr/eng/new_press/releases.jsp?menu=01&bbsid=BBS0048&selYear=2017&nxPage=1.

Box 1: Authorities involved in crisis management and resolution in Korea

FSC: The FSC is the lead resolution authority in Korea. It is a government body – with the status of a ministry empowered to legislate financial laws and their subordinate regulations – that is responsible for financial sector and supervisory policies, including early intervention and the decision to resolve troubled financial institutions. The FSC's powers include the imposition of prompt corrective actions and determination of resolution mechanisms for troubled financial institutions. The FSC is empowered to impose corrective and resolution measures, such as suspending executives, appointing new management, suspending business lines, or writing down shareholder equity.[14]

FSS: The FSS is the integrated supervisor for the examination of financial entities (banks, securities firms, insurance companies and certain non-bank financial institutions) and operates under the guidance of the FSC. The FSS is a specially legislated supervisory authority staffed by private sector employees who are not part of the government civil service system. The FSS Governor is appointed by the President of Korea on the recommendation of the FSC Chairman.

KDIC: Responsible, jointly with the FSC, for resolution. The KDIC operates an integrated deposit insurance system and resolves troubled financial institutions under the oversight of the FSC, by making loans, guarantees and contributions in accordance with the principle of least cost to the Deposit Insurance Fund. It may also provide financial assistance to an insured financial institution or a financial holding company parent thereof.[15] In addition to managing the ex-ante funded Deposit Insurance Fund, the KDIC has certain auxiliary supervisory powers and may request the FSS to conduct a joint examination of an insured institution and its financial holding company if deemed necessary for prudential management of insured financial institutions. The highest decision making body of the KDIC is the Deposit Insurance Committee.[16]

BOK: As Korea's central bank, the BOK is responsible for the country's monetary and credit policies, payment systems operations, and is the lender of last resort.[17] The BOK's role in resolution includes providing financial assistance directly or indirectly. The BOK also has the authority to request the FSS to conduct an examination of a specific financial institution or to conduct a joint examination with the participation of specialists from the BOK, if deemed necessary for implementing monetary policies.

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[14] The FSC is governed by nine commissioners: the FSC Chairman; Vice Chairman; two standing commissioners (appointed at the recommendation of the Chairman); four ex-officio positions held by the Vice Minister of Strategy and Finance, Governor of the FSS, Deputy Governor of the BOK and the President of the KDIC; and one non-standing commissioner who is appointed with the recommendation of the Chairman of the Korea Chamber of Commerce and Industry. The FSC Chairman is appointed by the President with the recommendation of the Prime Minister. The Vice Chairman is appointed by the President with the recommendation of the Chairman of the FSC and concurrently holds chairmanship of the Securities and Futures Commission (SFC) within the FSC.

[15] See Article 38 of the DPA. Financial assistance includes the provision of loans to; the depositing of funds with; purchasing assets from; guaranteeing or accepting obligations of; purchasing equity shares from; or making contributions to, the institution. See also Article 2(7) of the DPA.

[16] The Deposit Insurance Committee is composed of seven individuals including the Chairman and President of the KDIC, who serves as Committee Chairman. The other ex-officio members are the Vice Chairman of the FSC, the Vice Minister of Strategy and Finance and the Senior Deputy Governor of the BOK. The other committee members are appointed by the FSC. Of the three, one committee member is commissioned directly by the FSC, while the other two are recommended by the Minister of Strategy and Finance and the Governor of the BOK respectively.

[17] The BOK is managed by the Monetary Policy Board, which is composed of seven members, all of whom are appointed by the President. The Board comprises the BOK Governor and Senior Deputy Governor, and five members appointed on the recommendations of the Minister of Strategy and Finance, the BOK Governor, the FSC Chairman, the Chairman of the Korea Chamber of Commerce and Industry, and the Chairman of the Korea Federation of Banks.

In addition to the resolution framework, an ordinary insolvency regime may be used in cases where (i) the failure of a financial institution would not cause instability in the financial markets; and (ii) resolution under the ordinary insolvency regime is determined to be the least costly option by the resolution authorities. The ordinary insolvency regime may also be used as part of a resolution strategy implemented under the ASIFI and DPA, for example to liquidate the portion of a failed financial institution that is left behind after certain of its assets and liabilities have been transferred to an acquiring institution or to a bridge institution. The insolvency proceeding is led by the court and is set out in the Debtor Rehabilitation and Bankruptcy Act.

The KDIC's deposit insurance system is set out in the DPA. When the Act was introduced in 1995, deposit insurance coverage was set at Korean Won (KRW) 20 million. During the Asian financial crisis, a blanket guarantee on eligible deposits was provided.[18] A limit on the deposit insurance coverage per depositor and institution was reinstated in 2001, set at KRW 50 million (approximately USD 44,000), where it remains to this date. In the wake of the global financial crisis in 2008, the deposit insurance coverage was extended to foreign currency deposits. The KDIC's deposit insurance scheme covers banks, insurance companies, securities companies, the merchant bank and MSBs;[19] however, it does not cover MCCs - these operate their own private schemes (see Section 3). Assessments are collected once a year (on a quarterly basis for commercial banks), using a risk-based system that was implemented in 2014.

Domestic cooperation: Cooperation among domestic authorities is facilitated through the Macroeconomic Finance Meeting (MEFM). The MEFM was established in July 2012 to promote cooperation and coordination on the identification and assessment of threats to financial stability and to facilitate information exchange among relevant institutions. It is convened and chaired by the First Vice Minister of the Ministry of Strategy and Finance (MoSF) and is attended by the deputies of the FSC, BOK and FSS; the KDIC does not usually attend, but may be invited when discussing information sharing and joint inspections. In principle, the MEFM meets on a quarterly basis, but it can also be convened as needed upon the request of two or more members. Decisions are reached by consensus, but the implementation of those decisions is carried out by member authorities in accordance with their existing statutory mandates as the MEFM does not have independent legal authority to act, nor does it have any enforcement power.

The FSAP recommended that the authorities consider formally setting up an apex forum to lead inter-agency cooperation and coordination work specifically on crisis preparedness and crisis management. In November 2016, the Emergency Operation Office (EOO) was established. The EOO is a joint office between the FSC and the FSS, headed by the Vice Chairman of the FSC. It is responsible for the year-round monitoring of financial market risk factors and the

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[18] To prevent moral hazard, from 1 August 1998 to 31 December 2000, deposits made until 31 July 1998 were protected for the full amount; those made after 1 August 1998 were protected up to KRW 20 million, including principal and interest if their value did not exceed KRW 20 million. In case of deposits made after 1 August 1998 whose value exceeded KRW 20 million, full coverage was provided for principal only.

[19] For more details, see the KDIC website (http://www.kdic.kr/english/deposit/sub1.jsp) and the FSB's "Thematic Review on Deposit Insurance Systems" (February 2012, available at http://www.fsb.org/2012/02/r_120208/).

rapid development of measures to respond to a financial crisis, including the preparation of crisis management protocols. For example, last year the EOO was tasked with monitoring the impact of changing interests rates on household debt and developing policy recommendations for the FSC and the FSS.

In addition to the MEFM and the EOO, there are several other mechanisms to facilitate information sharing among the authorities. In particular, Article 58 of the Establishment Act and Article 21-4 of the DPA establish mechanisms for the sharing of examination information from the FSS to the FSC (for supervised financial sector entities) and to the KDIC (for supervised insured financial institutions and financial holding companies, where necessary for the protection of depositors). The MoSF, FSC, BOK, FSS and KDIC have entered into information sharing memoranda of understanding (MoU) under which these authorities share information on financial institutions (see Section 3). In addition, the FSS and BOK have signed an MoU that provides for information exchange for financial supervision and banking safety and soundness purposes; the FSS also has an MoU with the KDIC for cooperation on financial institution supervision. Additionally, the interlocking board structures of the FSC and KDIC facilitate cooperation and information sharing, including on resolution matters.

The FSAP also included a recommendation that the authorities undertake periodic crisis simulation exercises. In August 2016, the FSC ran a simulation exercise assuming widespread hypothetical insolvencies in the MSB sector with participation of FSC, BOK, FSS and KDIC.

Early intervention: The FSAP recommended that the Korean authorities consider the development of a risk-sensitive supervision model with more flexible and frequent examinations that also provides sufficient coverage of smaller supervised entities. To address this recommendation, the FSC and the FSS introduced in April 2015 the *Measures on Reforming Examinations and Sanctions of Financial Institutions*, which utilises the CAMEL-R rating system for the supervision of domestic commercial banks.[20] This system allows greater flexibility in the frequency of on-site examinations, including through the use of risk management and thematic review of potential risk factors (see also Box 3 in Section 3 on the supervision and examination framework used by the FSS).

Under Article 10 of the ASIFI, the FSC[21] may intervene prior to insolvency when a financial institution is experiencing distress, by imposing Prompt Corrective Actions (PCA) on the institution. PCAs are triggered based on quantitative and qualitative indicators (including on capital adequacy) set forth in the CAMEL-R rating system. The PCA consists of three stages based upon the severity of the condition and the required action (see Table 1).

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[20] The CAMEL-R rating system comprises the assessment of capital adequacy, asset quality, management, earnings, liquidity and risk management. The rating utilises quantitative metrics (capital adequacy, asset quality, earnings and liquidity) updated quarterly, as well as qualitative metrics updated through the on-site examination process.

[21] This authority may also be delegated to the Governor of the FSS. See Article 10.5 of the ASIFI.

Table 1: PCA framework in Korea[22]

Action	Management improvement recommendation	Management improvement requirement	Management improvement order
Trigger	1. Capital ratio < 8%; 2. Overall CAMEL-R rating of 1-3, with asset quality or capital adequacy rating of 4 or 5; or 3. Serious financial irregularities or non-performing loans (NPLs) that would obviously lead to situation 1 or 2	1. Capital ratio < 6%; 2. Overall CAMEL-R rating of 4 or 5; 3. Serious financial irregularities or NPLs that would obviously lead to situation 1 or 2; or 4. Failure to implement plan as part of management improvement recommendation	1. Failing financial institutions as defined in Article 2.2 of the ASIFI; 2. Capital ratio < 2%; or 3. A failure or inability to implement the plan as part of the management improvement requirement, notwithstanding the FSS's demand to implement the plan
Measures	1. Improvement in manpower and organisational management; 2. Cost reduction; 3. Efficient management of business offices; 4. Restrictions on investments in fixed assets, entries into new business areas, and new capital investments; 5. Disposals of bad assets; 6. Increases in, or reductions of, paid-in capital; 7. Restrictions on dividends payment; and/or 8. Allocation of special loan loss provisioning.	1. Closure, consolidation, or restriction on the establishment of new business offices; 2. Reduction of organisational size; 3. Restrictions on holding risky assets and disposals of assets; 4. Restrictions on the level of deposit interest rates; 5. Divestitures of subsidiaries; 6. Replacement of officers; 7. Partial suspension of business; 8. Establishing a financial holding company, being acquired by another financial holding company, acquisition by a third party, or a transfer of all or part of its business; and/or 9. Any matter covered in the Management Improvement Recommendation.	1. Retirements of all or parts of the firm's issued stock; 2. Suspension of duties against officers and new appointments of administrators; 3. Establishing a financial holding company, or being acquired by another financial holding company; 4. Transfers of all or parts of the business; 5. Acquisition of the firm by a third party; 6. Suspension of business within six months; 7. Transfers of all or parts of the firm's contracts; and/or 8. Any matter covered in the Management Improvement Requirement.

Actions that can be recommended, required or ordered by the FSC (depending on the severity of the condition) may include: capital increases or decreases; disposal of assets; retirement or consolidation of shares; whole or partial suspension of business; merger with or acquisition by

[22] See Articles 34-36 of the Regulation on Supervision of Banking Business.

a third party; transfer of business or contractual relationships; or other permissible actions. A firm subject to a management improvement recommendation or requirement is expected to develop and implement a management improvement plan to address the deficiency.[23] Once that plan is approved by the FSC, the firm has one year (for management improvement recommendations) or 18 months (for management improvement requirements) to implement it and quarterly implementation updates must be provided to the FSS.[24] At the third stage of PCA, a management improvement order is issued and a conservator may be appointed over the institution. If the firm cannot be restructured, an insolvency determination may be made at the point of non-viability and a resolution proceeding commenced.

Emergency Liquidity Assistance (ELA)**:** In addition to liquidity provided under ordinary central bank facilities, the BOK can provide ELA to banks during times of stress. Lending is always made on a collateralised basis. The BOK has broad discretion as to the range of assets eligible for ELA collateral[25] and is able to determine collateral eligibility on a case-by-case basis. In practice, virtually any security or performing loan with a maturity of one year or less at the time the asset is pledged could be deemed to be eligible collateral. According to Article 80 of the BOK Act, ELA can also be provided to non-banks, including non-financial companies. The Monetary Policy Board of the BOK, in consultation with the Government, could make the determination to provide such assistance. As stipulated in the law, the authority to lend to non-banks is limited to circumstances in which these companies experience severe impediments to obtaining funds from financial institutions or when there is a strong likelihood of such an occurrence, for example during periods of severe monetary and credit contractions.

The FSAP recommended that the BOK reviews its crisis management contingency plan to ensure it adequately covers ELA-related decisions. Following the FSAP, the BOK supplemented its contingency plan with details on ELA depending on financial and foreign exchange market conditions, including an action plan to inject liquidity to capital and bond markets should the need arise. In addition, the BOK, together with other authorities and with representatives of the Korean Government, has developed a contingency plan to address a scenario under which financial system instability may be caused by a capital shortfall in state-sponsored banks. This contingency plan sets out, among other things, the roles of the central bank and the Government and the criteria for the provision of ELA.

Entry into resolution: Resolution procedures are initiated following a determination by the FSC that the firm is insolvent.[26] A financial institution may be designated as insolvent by the FSC in any of the following cases: the firm's liabilities exceed its assets; the pay-out of claims or the redemption of debts (including deposits) is suspended; or claims cannot be paid or debts cannot be redeemed (including deposits) in the absence of external support. In addition, the

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[23] See Article 39 of the Regulation on Supervision of Banking Business, as amended on 3 May 2007 (Regulation on Supervision of Banking Business).

[24] See Articles 39-40 of the Regulation on Supervision of Banking Business.

[25] This support can be in the form of re-discounting, discounting, buying and selling of promissory notes, bills of exchange and other credit securities which institutions have acquired, provided that the instruments mature within one year from the date of acquisition by the BOK. The BOK can also extend ELA against any assets of a banking institution which can be treated as temporarily acceptable collateral.

[26] See ASIFI Article 2 and DPA Article 2.

KDIC may trigger resolution based on a determination that an insured financial institution is "insolvency-threatened" under Article 2 of the DPA, where the financial institution is highly likely to become insolvent due to its weak financial position. The cross-participation of senior officials in the FSC and KDIC Boards facilitates coordination before a decision is taken on resolution-related matters. In practice, it is the FSC that triggers resolution and decides the type of resolution action to be carried out, while the KDIC implements the operation.

A determination of insolvency by the FSC for an insured financial institution triggers the full range of resolution tools under both the ASIFI and DPA (see below), subject to the assessment by the KDIC of the principle of least cost for the tools conferred under the DPA.[27] However, when an insolvency-threatened determination is made by the KDIC under the DPA, the range of tools is limited to the capital injection tool under that same Act.

Resolution tools: The FSC and KDIC have a range of resolution tools at their disposal under the ASIFI and DPA that are found in the *Key Attributes*. Those tools include powers to control and operate a firm, replace management and transfer contracts (available under the ASIFI) and powers to establish a temporary bridge institution and an asset management vehicle (both available under the DPA). See Table 2 for a description of the tools available under the ASIFI and DPA. All resolution tools can be used without the consent of shareholders.

Table 2: Resolution powers available to FSC and KDIC

Authority	ASIFI	DPA	*Key Attributes*
FSC, KDIC	Power to temporarily take control of and operate a firm in resolution, including the ability to enter into, continue, terminate and assign contracts and service agreements, as well as to purchase or sell assets	Power to exercise general control over the business of the financial institution	Power to operate and resolve a firm, including powers to terminate contracts, continue or assign contracts, purchase or sell assets, write down debt and take any other action necessary to restructure or wind down the firm's operations. [KA 3.2 (iii)]
FSC, KDIC	Power to remove and replace senior management and directors of the firm in resolution	Power to recover money from persons responsible for an insolvency	Power to remove and replace the senior management and directors and recover monies from responsible persons, including clawback of variable remuneration. [KA 3.2 (i)]
FSC	Power to give binding directions to the administrator of the firm in resolution and to dismiss the administrator of the firm in resolution		Power to appoint an administrator to take control of and manage the affected firm with the objective of restoring the firm, or parts of its business, to ongoing and sustainable viability. [KA 3.2 (ii)]
FSC	Power to transfer contracts		Power to transfer or sell assets and liabilities, legal rights and obligations, including deposit liabilities and ownership in shares, to a solvent third party, notwithstanding any requirements for consent or novation that would otherwise apply. [KA 3.2 (vi), KA 3.3]
FSC	Power to cancel or write off equity or other instruments of ownership of the firm		Power to write down in a manner that respects the hierarchy of claims in liquidation equity or other instruments of ownership of the firm. [KA 3.5 (i)]

[27] These include payment of insurance claims or provision of financial assistance. See Article 38-4 of the DPA.

KDIC		Power to take temporary public ownership	Power to place the firm under temporary public ownership and control. [KA 6.5]
KDIC (with FSC approval)		Power to establish a temporary bridge bank to take over assets, rights and liabilities from a firm in resolution, and to arrange the sale or wind-down of the bridge bank, or the sale of some or all of its assets and liabilities	Power to establish a temporary bridge institution to take over and continue operating certain critical functions and viable operations of a failed firm. [KA 3.2 (vii)]
KDIC (with FSC approval)		Power to set up an asset management vehicle	Power to establish an asset management vehicle for the management and run-down of non-performing loans or other assets transferred to it from a firm in resolution. [KA 3.2 (viii)]; see also powers under KA 3.2 (iii)]

The choice of resolution tools is based on the severity of the financial institution's condition, the effects on financial stability and, when the use of the Deposit Insurance Fund is envisaged, compliance with the KDIC's least cost principle. However, the KDIC's Deposit Insurance Committee (comprising senior officials from the FSC, BOK and government) is able to propose to the FSC the use of measures that may imply a higher cost for the Deposit Insurance Fund, such as a capital injection, where it determines that the failure of a financial institution is likely to significantly undermine the stability of the broader financial system.

In the case of a transfer of the business of a failed financial institution, either to a newly established bridge institution or to a third party acquirer, the KDIC prepares a plan detailing the assets and liabilities that are to be transferred, and the FSC makes the final decision. The transfer of liabilities is not subject to a 'no creditor worse off than in liquidation' (NCWOL) safeguard, though the authorities report that creditors can seek damages in court for any losses that exceed what they would have incurred under an ordinary insolvency proceeding. The KDIC has full ownership of any bridge institution that is established, and is responsible for its operations and management. The operations of the bridge bank should be terminated after five years, but extensions may be permitted on a case-by-case basis. The KDIC retains all of the proceeds from the eventual sale of the bridge institution, including any amount in excess of its investment.

The imposition of losses on shareholders and creditors is generally achieved by liquidating the failed institution through ordinary insolvency proceedings. The resolution toolkit does not include the power to write-down the claims of uninsured and unsecured creditors or convert them into equity of the failed firm or of any successor in resolution (bail-in). The introduction of a statutory bail-in power is part of the planned reforms to the resolution regime (see below).

The resolution framework has been tested in the past. Most recently, in 2011 the authorities used powers to transfer the business of failed MSBs to a third party acquirer, with KDIC providing funds to the acquirer to cover the difference between assets and liabilities. In cases when there was no prospective buyer for the failed MSB, the authorities used a combination of resolution tools to transfer the institution's business or contracts to a newly established bridge institution. This required cooperation and coordination between the FSC and KDIC, since the transfer and bridge tools are conferred separately under the ASIFI and DPA respectively. In these cases, insured deposits – and, in the case of the MSB crisis in 2011, covered deposits –

were transferred to the bridge institution, with shareholders and other liability holders remaining in the failed financial institution, where they were subject to losses through ordinary insolvency proceedings (in the case of deposits exceeding the coverage, up to KRW 50 million would be paid by KDIC and residual claims could be collected through insolvency proceedings). Six bridge banks were set up since 2011; the longest period that a bridge bank was in place was 21 months.

Financing of resolution actions: The KDIC may provide financial assistance directly to a failed financial institution or to a third party acquirer or bridge institution. Funding can be provided according to the resolution tool that has been selected by the authorities. For example, the KDIC may fund the transfer of assets to a third party acquirer by providing financial assistance to cover the shortfall of the net assets, or fund a newly established bridge institution to meet the regulatory capital requirements.

There is no legal limitation or restriction on the amount of funding that can be provided. However, the provision of funding is subject to compliance with the least cost principle established under the DPA. As noted above, there is an exception to the least cost criterion where the KDIC determines that the failure of a financial institution is likely to significantly undermine the stability of the broader financial system. The provision of funding is also subject to a general principle of fair loss-sharing to ensure that losses are imposed on individuals responsible for the failure of the financial institution (for example, through a reduction in shareholder capital, replacement of management, staff downsizing or salary freezes) prior to or alongside the provision of funding.

The principal source of the KDIC's funds is the Deposit Insurance Fund ("the Fund"), which is funded ex-ante through assessments on insured financial institutions. The FSAP recommended that the Fund, which is in deficit, be replenished. The Fund, which comprises a number of sector-specific accounts as well as a special account established in 2011 to address MSB failures, currently has an overall deficit of KRW 1.6 trillion (see Table 5 in Section 3) due to the special account and the MSB sector account. These two accounts jointly carry a deficit of KRW 15.1 trillion arising from expenditures from the aforementioned MSB failures. The KDIC has funded these deficits through the issuance of bonds (in addition to cross-subsidisation across accounts), and has been gradually reducing the deficit in these two accounts through the collection of deposit insurance premiums[28] and proceeds from the estates of the failed MSBs. The KDIC intends to abolish the special account by the end of 2026. The DPA stipulates the KDIC's duty to replenish any loss to the Deposit Insurance Fund and make public disclosure on the management of the Fund.[29] To this end, the KDIC has prepared since 2012 a five-year financial management plan on the Deposit Insurance Fund, which it updates annually and reports to the National Assembly that in turn publishes a report analysing the plan.

The FSAP also recommended establishing an explicitly assured and irrevocable line of credit from the Government to provide back-up funding to the KDIC. The KDIC has access to a

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[28] To repay the debt, 45% of insurance premiums paid by each sector (100% in the case of MSBs) are put in the special account.

[29] In particular, the relevant Standing Committee of the National Assembly is regularly updated on the management of the special account. After 2012, the KDIC also published a white paper on management of the special account pursuant to Article 24-4 of the DPA.

standing credit facility with nine commercial banks and, pursuant to the DPA, it can secure additional funding by issuing government-guaranteed bonds. Also, the KDIC can receive direct contributions from the Government as well as borrow from the Government or from the BOK. However, there is no requirement to collect additional ex post contributions from the industry in order to replenish the Fund once it has been used.

The DPA does not provide a specific timeframe within which depositor pay-outs must be made. In order to minimise disruption for depositors and foster financial stability, the KDIC and FSC have published proposals to amend the DPA by introducing a requirement to provide a pay-out within seven business days.[30] The introduction of this requirement will be accompanied by changes to the management information systems and data collection of insured financial institutions to ensure the prompt calculation of the pay-out amount.

Cross-border cooperation: MoUs on information sharing with foreign supervisory authorities are in place for supervisory purposes. There are no MoUs for the specific purpose of resolution, but the FSC has signed an MoU with the authorities in one jurisdiction that addresses crisis situations involving firms with cross-border operations. The FSC and FSS also participate, together with BOK, in a crisis management group for a global systemically important bank (G-SIB).

Domestic branches of foreign banks can be resolved if the conditions for entry into resolution in Korea are met. In the event of the bankruptcy of the foreign bank branch's head office in the home jurisdiction, pursuant to Articles 60 and 61 of the *Banking Act* all assets in Korea must be liquidated and the claims of Korean nationals or foreigners residing in Korea must be repaid preferentially over other claimants.

There is no administrative framework for the Korean authorities to recognise or support the resolution actions of a foreign resolution authority. The authorities note that they could take actions under the Korean resolution regime to provide such support to a foreign resolution authority, but this would require the local entity to meet the conditions for entry into resolution. If the Korean subsidiary does not meet the conditions for entry into resolution (e.g. it remains solvent), then the authorities do not have the power to take resolution actions to act in support of the foreign resolution authority.

Recovery and resolution planning and resolvability requirements: The FSC has initiated a pilot exercise with a subset of the D-SIBs. Under this exercise, three D-SIBs will submit recovery plans to the FSS, while the KDIC will prepare resolution plans for two D-SIBs. Guidance on the content of the plans is being developed as part of this pilot exercise, and will be finalised alongside the introduction of formal RRP requirements.

Planned reforms: In October 2015, the FSC announced its intention to amend the ASIFI to introduce: (i) RRP requirements; (ii) a statutory bail-in power; and (iii) a power to provide a temporary stay on the exercise of early termination rights.[31] A dedicated task force comprising

[30] See the FSC press release "Improvement directions to enhance depositor protection and enable efficient operation of depositor protection scheme" of 26 December 2016 https://www.fsc.go.kr/info/ntc_news_view.jsp?bbsid=BBS0030&menu=7210100&no=31630 (in Korean).

[31] See https://www.fsc.go.kr/downManager?bbsid=BBS0048&no=100230.

the FSC, Ministry of Justice, BOK, FSS and KDIC was set up in 2016 with the aim to prepare draft legislation. The details of the reforms remain under discussion.

With respect to RRP requirements, the authorities intend to establish an Assessment Committee, comprising officials from each authority, which would conduct deliberations on the plans. Based on those deliberations, the FSC would confirm and impose improvement measures. The scope of firms subject to RRP requirements has not yet been decided.

The details of the proposed bail-in scheme, including the liabilities that fall within the scope of the bail-in power; the firms subject to the bail-in power; and applicable safeguards (e.g. NCWOL) also remain under discussion. Similarly, the details of the proposed temporary stay, including its duration; the range of financial contracts covered by the stay; and rights to terminate following expiration of the stay have yet to be decided. The authorities have communicated their intention to follow the provisions of the *Key Attributes*.

Lessons learned and issues to be addressed

The authorities have made some progress in recent years to address the FSAP recommendations and to further develop the resolution framework. The existing resolution regime already incorporates a number of the elements found in the *Key Attributes* and has been tested in previous crises. The authorities have commenced a pilot RRP exercise, and announced reforms that would further align the resolution regime with the *Key Attributes* by introducing a statutory bail-in power and a power to impose a temporary stay on the exercise of early termination rights, and by formalising RRP requirements. Cooperation on systemic risk monitoring and crisis management issues is facilitated through the inter-agency MEFM and, since November 2016, through the FSC-FSS EOO. There has also been some progress in reducing the KDIC's Deposit Insurance Fund deficit, while reforms are underway to accelerate depositor pay-out.

Notwithstanding this progress, further work is needed to strengthen the crisis management and resolution framework. This includes implementing reforms to align the resolution framework with the *Key Attributes*, and further strengthening crisis preparedness arrangements.

Implementation of reforms: The FSC task force has held private consultations with domestic banks, rating agencies and other stakeholders on the key features of the proposed reforms to the resolution framework, including the scope of firms subject to RRP requirements and the range of liabilities and financial contracts that would fall within the scope of the proposed bail-in and temporary stay powers. Public hearings were held on the proposed reforms at the end of 2016, and a meeting with market participants was held at the beginning of 2017. It is important that the authorities maintain momentum in finalising the planned reforms and implement them in a way that would bring Korea further in alignment with the *Key Attributes*.

As part of that effort, the FSC should design the bail-in regime so as to promote its effective use and improve its legal certainty. First, consistent with the objectives of the *Key Attributes*, the authorities should ensure that there are sufficient resources that can be bailed-in given the liability structure of financial institutions – particularly systemic ones – in Korea. Second, to ensure the exercise of bail-in powers without material risk of a legal challenge, the authorities should consider introducing regulation to require subordination of the types of liabilities that should be subject to bail-in. Currently, the lack of depositor preference means that uninsured depositors absorb loss alongside general creditors who rank pari passu in the creditor hierarchy. And while some financial institutions in Korea adopt a financial holding company model,

which could facilitate structural subordination of bail-inable liabilities, the use of this model is not widespread across the financial system. For institutions that do utilise such a model – including most of the designated D-SIBs – the holding company may not be the entity that issues instruments and liabilities that could be subject to bail-in. There are various approaches that can be used to achieve subordination, such as through: (i) a more consistent use of the financial holding company model and structural subordination of bail-inable liabilities; (ii) introduction of depositor preference and/or other changes to the creditor hierarchy to statutorily subordinate bail-inable liabilities; or (iii) adoption of a bail-in power with a narrow scope and the statutory exclusion of other liabilities from the scope of the bail-in power such that they cannot legally be bailed-in.

In addition to the planned reforms, the authorities should consider introducing legal amendments to the resolution regime to ensure that early resolution triggers permit the exercise of the full range of tools under the regime. Because of the need to preserve value when utilising resolution tools such as bail-in, the *Key Attributes* require timely and early entry into resolution if a firm is no longer viable or likely to be no longer viable.[32] Under the current regime, entry into resolution is based on a determination that the financial institution is insolvent. This does not necessarily require the financial institution to be balance sheet insolvent, as resolution could also be initiated in respect of a financial institution that is under suspension of payment of claims or that is illiquid (as was the case during the 1997 Asian financial crisis and the 2011 MSB crisis).[33] However, this is unlikely to be a sufficiently early trigger for resolution, particularly when considered against the PCA framework, the first stage of which may not be reached until minimum capital requirements have already been breached (and the final stage is when the total capital ratio is less than 2%). The KDIC has an early intervention trigger that allows it to designate an institution as "insolvency threatened" before it is insolvent. However, following such a determination, the KDIC can only use the capital injection tool under the DPA. The other tools under the DPA are not available, nor is the FSC permitted to utilise the range of resolution tools available under ASIFI. The authorities should therefore either amend the "insolvency threatened" trigger or introduce a similar early resolution trigger that permits the exercise of the full range of resolution tools under both the ASIFI and the DPA.

The role of lead resolution authority is housed within the FSC, which is also responsible for financial sector policy and supervisory decisions.[34] While it is not uncommon for the responsibility for supervision and resolution to be housed in a single authority, it is important to maintain structures and processes to manage any conflicts of interest or the risk of supervisory forbearance that would prevent timely and early entry into resolution as required by KA 3.1. The potential trade-offs between going-concern and gone-concern interests become even more tangible once an early intervention trigger is adopted in the resolution regime, and

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[32] Key Attribute 3.1 states that "Resolution should be initiated when a firm is no longer viable or likely to be no longer viable, and has no reasonable prospect of becoming so. The resolution regime should provide for timely and early entry into resolution before a firm is balance-sheet insolvent and before all equity has been fully wiped out. There should be clear standards or suitable indicators of non-viability to help guide decisions on whether firms meet the conditions for entry into resolution".

[33] The authorities note that eight MSBs entered resolution in 2011 due to lack of liquidity.

[34] The FSC does not assign specific portfolios or tasks to individual Commissioners. The role of the Commissioners is to participate jointly in the FSC decision-making. There is also no separate or dedicated sub-committee on different topics under the Commission.

once resolution strategy decisions are made that involve changes to financial institutions' structure, organisation or business practices to improve resolvability, since these may have undesirable implications (e.g. to those institutions' costs) from a supervisory perspective. Given this, the FSC should review and, as appropriate, take steps to strengthen the decision-making process so as to facilitate an early entry into resolution.

The resolution regime permits the use of the KDIC's Deposit Insurance Fund to provide financial assistance directly to a failed financial institution or to a third party acquirer or bridge institution, subject to compliance with the least cost principle. The Deposit Insurance Fund is primarily funded through ex ante assessments on insured financial institutions. In addition, the KDIC has access to a standing credit facility with commercial banks as well as the option to issue Government-guaranteed bonds and to borrow from the Government or BOK where required. The KDIC also notes that it has the legal basis to raise if needed (subject to a maximum amount) the level of insurance premiums to recover losses to the Deposit Insurance Fund, and did so in the case of the 2011 MSB crisis. However, there is no legal or regulatory requirement to raise assessments to recoup the costs of any temporary public funding used in resolution and thereby minimise the risk of public support. Consistent with KA 6.2, the authorities should consider introducing a requirement for the KDIC to recover from shareholders and unsecured creditors, or from the financial system more widely, the costs of any temporary public funding used to facilitate orderly resolution.

- ***Recommendation 1*: The authorities should implement, on a timely basis, planned reforms on RRP requirements as well as bail-in and temporary stay powers. In addition, they should (a) review the decision-making process and develop triggers that facilitate early entry into resolution and permit the use of the full range of resolution powers under the ASIFI and DPA; and (b) consider introducing a requirement to recover from the industry the costs of temporary public funding used to facilitate resolution.**

Crisis preparedness: A number of authorities are involved in crisis management and resolution and there are various fora and structures for cooperating and sharing information. These include the MEFM (which the KDIC attends only when discussing information sharing and joint inspections); the EOO (restricted only to the FSC and the FSS); and the interlocking board structures of the FSC, FSS, BOK and the KDIC. However, as noted in the FSAP, there is no dedicated mechanism or forum to coordinate on crisis preparedness and crisis management. The authorities point out that such coordination takes place informally through existing structures (e.g. interlocking boards), but there is scope to improve this arrangement by creating a forum – potentially as a standing group under the MEFM – to share information on troubled financial institutions at an early stage as well as coordinate the development of crisis management protocols among all safety net participants.

As the authorities introduce new resolution tools and continue developing and maintaining RRPs, it is important that they test the robustness of those plans and tools on a periodic basis, as recommended in the FSAP. So far, only a hypothetical simulation exercise assuming large-scale insolvency in the MSB sector with the participation of the FSC, BOK, FSS and the KDIC has been conducted. A crisis simulation exercise involving the resolution of a systemic bank would be an effective way to test the application of the resolution framework. For purposes of confidentiality, the failed bank could be hypothetical, utilising fictitious balance sheets and

other financial data. The simulation could involve representatives of a sufficiently senior level from each of the authorities responsible for resolution (FSC, FSS, KDIC, BOK), together with advisors and other staff. Findings from the simulation could support the development of recovery and resolution plans, crisis management protocols and communication plans, and help identify other areas of collaboration between the authorities.

- ***Recommendation 2*: *The authorities should: (a) consider the establishment of a dedicated forum on crisis preparedness; and (b) jointly run a hypothetical simulation of the resolution of a systemic bank on a periodic basis.***

3. Regulation and supervision of non-bank depository institutions

Background

The FSAP noted that non-bank financial institutions account for a large share of domestic lending in Korea and thus play a more important role compared to other countries. Their importance has been underpinned by brisk expansion over the past decade, with their total assets comprising around half of total financial system assets as at end-2016 (see Annex 1).

An important category of non-bank financial institutions is non-bank depository institutions (NBDIs). The FSAP noted that while NBDIs are not closely interlinked with the rest of the financial system, their exposures to joint macro risk factors and collectively large size can pose credit risks.[35] The stress tests conducted as part of the FSAP found that some NBDIs had thin capital buffers against credit risk. The FSAP recommended that the authorities apply a regulatory framework consistent with that for banks to all NBDIs, with larger entities also subjected to stricter supervision. It also called on authorities to, inter alia, enhance the risk-sensitivity of supervision with sufficient coverage of the smaller supervised entities.

Other types of non-bank financial institutions in Korea include insurance companies, specialised credit finance companies and securities companies. These institutions fall outside the scope of this peer review and the aforementioned FSAP recommendation. Korea participates in the annual FSB global shadow banking monitoring exercise, and some of these institutions – given their involvement in non-bank credit intermediation – may pose shadow banking risks (e.g. maturity/liquidity transformation and leverage).[36]

This section provides a high-level overview of the NBDI sector, covering both the main institutional types and the regulatory framework under which they operate. The focus of

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[35] In particular, the FSAP noted that "in recent years, lower-income and lower-rated households have been increasingly securing credit via NBDIs, and the share of delinquent loans at some NBDIs is now relatively high. The rising importance of NBDIs calls for a better alignment of the regulatory and supervisory rules applied to NBDIs with those applied to banks."

[36] See the FSB's "Global Shadow Banking Monitoring Report 2016" (http://www.fsb.org/2017/05/global-shadow-banking-monitoring-report-2016/). In the FSB's global shadow banking monitoring exercise, the Korean authorities did not classify NBDIs in the broad measure of 'other financial intermediaries' or in the 'narrow measure' of shadow banking, on the grounds that they are deposit-taking institutions regulated/supervised in a manner similar to banks. Korea Post was identified as a 'public financial institution', which is a separate category to shadow banking in the FSB's monitoring template.

analysis is on MSBs and MCCs since they dominate the sector and their activities – as well as their risks and prudential framework – resemble to a large extent those of banks. Based on international guidance[37] and experience in this area, the section examines the approach used by the authorities to regulate and supervise NBDIs, identify and assess associated risks, and determine appropriate prudential responses.

Overview of the sector

NBDIs comprise MSBs, MCCs, merchant banking corporations and the postal savings system (Korea Post). MSBs and MCCs have long-standing historical roles in serving local communities and lower-income households, which help explain their enduring presence in the financial system, as well as their particular business models and regulatory arrangements.

Size and structure: NBDIs made up 13% of financial system assets (which is equivalent to 43% of gross domestic product (GDP)) and almost 30% of deposits as at end-2016 (see Annex 1). MSBs and MCCs are the main types of institutions within the NBDI sector (see Table 3).

Table 3: Size and structure of the NBDI sector (December 2016)

NBDI types	Number	Assets (KRW trillion)	Share of total (%)
Mutual Savings Banks	79	52	7.4
Mutual Credit Cooperatives	3,582	574	82.5
-o/w Credit Unions	*904*	*74*	*10.6*
-o/w Cooperatives	*1,357*	*362*	*52.0*
-o/w Community Credit Cooperatives	*1,321*	*138*	*19.9*
Merchant bank	1	2	0.2
Korea Post	1	69	9.9
Total	**3,663**	**697**	**100.0**

Source: Korean authorities.

Mutual savings banks (MSBs): Although they are deposit-taking institutions and extend loans, MSBs are not classified as banks for supervision purposes because they are incorporated and regulated under the *Mutual Savings Bank Act* (as opposed to the *Banking Act*).[38] MSBs primarily offer basic deposit services and provide small-scale credit to individual borrowers and small to medium-sized enterprises (SMEs) at interest rates that are typically higher than the rates charged by commercial banks. They also engage in commercial banking and project financing. Compared to banks, MSBs are generally smaller, niche institutions and face

[37] See, for example, the BCBS reports on "Microfinance activities and the Core Principles for Effective Banking Supervision - final document" (August 2010, http://www.bis.org/publ/bcbs175.htm), "Range of practice in the regulation and supervision of institutions relevant to financial inclusion" (January 2015, http://www.bis.org/bcbs/publ/d310.htm), and "Guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion" (September 2016, http://www.bis.org/bcbs/publ/d383.htm).

[38] The term' mutual' in 'mutual savings banks' is a historical legacy, as MSBs are no longer mutual institutions but are instead owned by shareholders/investors, and some are listed on the stock exchange.

restrictions in their range of business activities (e.g. no MSB is licensed to engage in foreign exchange (FX) funding). Moreover, MSBs are only permitted to operate within certain geographical areas.[39]

A total of 79 MSBs were operating as at end-December 2016. Of these, seven were owned by banks, 16 by securities companies, fund managers, and other financial entities, 22 by non-financial business entities, and 34 by individual owners.[40] The smaller MSBs are typically owned by a single shareholder, which is either an individual person or company.[41]

The current structure of the MSB sector, and its relatively small share of the financial system, reflects a crisis and major restructuring that took place in 2011. Large exposures to the real estate and construction sectors saw heavy losses following the economic slowdown in Korea triggered by the global financial crisis. This led to runs on several MSBs, followed by interventions by the authorities that involved the closures of some of them (see Box 2).

Box 2: The 2011 crisis in the mutual savings bank sector

In 2011, a crisis in the MSB sector saw deposit runs, and widespread closures of stressed MSBs. The problems arose because of the large exposure of certain MSBs to the construction and real estate sector. Project financing (PF) loans had high delinquency rates, a problem exacerbated by the economic slowdown following the global financial crisis. Shareholder and management misconduct was also a contributing factor. For example, FSS examinations of distressed MSBs at that time revealed numerous cases of misconduct or abuse involving depositors being misled into buying risky subordinated bonds.

PF loan defaults led to a persistent deterioration of MSB balance sheets and prompted the need for higher loan loss provisions. The problems came to a head in 2011 with continued loan defaults and a loss of depositor confidence that led to runs on many MSBs.

The authorities took a range of actions to address the problems in the MSB sector:

- suspending the operations of distressed MSBs (20 institutions were closed down) while protecting insured deposits;

- coordinating with commercial banks to establish a Project Financing Stabilization Bank (a 'bad bank') to restructure large project financing loans;

- reviewing the asset portfolios of MSBs, starting with PF loans, to initiate restructuring through asset purchases by the Korea Asset Management Corporation; and

- setting up a Special Account within KDIC in 2011 to cover the costs of financial assistance relating to MSBs. The current deficit in the KDIC's Deposit Insurance Fund is due mainly to the 2011 crisis in the MSB sector (see Section 2).

Two key lessons from that episode are that: (1) even relatively small entities can collectively cause stress in the financial system – the crisis was contained to the MSB sector with limited contagion effects,

[39] In recent years, MSBs expanded beyond their set geographical/business areas following mergers and acquisitions as part of industry restructuring after the 2011 crisis in the MSB sector (see Box 2). However, since 2015 the FSC/FSS have been applying stricter regulation in regards to business territory limits. From that time, any merger involving expansion into another territory is prohibited, except when acquiring and merging with an insolvent MSB, while establishing a new branch outside an MSB's own business territory is also prohibited except when acquiring an insolvent MSB.

[40] Excluding foreign bank branches, the largest MSB had assets as at December 2016 equivalent to the smallest bank (i.e. around KRW 5 trillion in assets).

[41] The largest five MSBs are owned by domestic or foreign-owned non-bank financial companies.

helped in part by a sound, liquid and well capitalised banking sector; and (2) quick and effective responses from the authorities are important in resolving troubled entities – for example, the closure of stressed MSBs was an important step to resolving the crisis and allaying public and depositor concerns.

One of the issues identified in the crisis was that MSBs' risk management and corporate governance needed strengthening. In response, the authorities developed plans to enhance MSB supervision by stronger 'fit and proper' tests, and to tighten single exposure limits. The authorities have also introduced an off-site credit monitoring system from 2013 for MSBs.

Mutual credit cooperatives (MCCs): The largest part of the NBDI sector (both by assets and by number of entities) comprises MCCs, which collectively refer to credit unions; cooperatives in the agricultural, fisheries and forestry sectors; and community credit cooperatives (CCCs).

MCCs are not-for-profit financial cooperatives that are owned and controlled by their members, who share a common affiliation or relationship such as the same workplace.[42] They engage in accepting deposits and extending credit to their members (as well as non-member customers).[43] As part of government policy for low-income households, interest income from deposits in MCCs receives favourable tax treatment, i.e. such income up to a maximum of KRW 30 million is exempt from tax (increased in 2009 from KRW 20 million).

MCCs are distinct from MSBs, and even more so from banks, in that they combine a commercial role with other core functions such as mutual aid and economic businesses.[44] As is the case with MSBs, MCCs are restricted in terms of what services they provide.[45] Each of the five MCC entity types has a national federation that promotes common goals, provides deposit insurance and liquidity management, and is directly involved in examinations of its member cooperatives.[46] MCCs (as with MSBs) are reliant on deposit funding, as they do not issue bonds. CCCs are micro-finance cooperatives developed to revitalise local/regional communities and support economic development.

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[42] Individuals, groups or entities from the relevant community may become members of MCCs. For agricultural, fisheries and forestry cooperatives, individuals are required to meet occupation criteria to become a member. There is no occupational requirement for individuals to become a member of a credit union or a CCC.

[43] Non-members can deposit with, and borrow from, an MCC. However, only members – who must pay a contribution to join the MCC – can benefit from the advantages of membership, such as the tax exemption on interest income on deposits, dividends and voting rights. The respective Act of each MCC stipulates that a non-member may use MCC services as long as this does not impose any impediments to the members' use of the service; under this principle, credit limits to non-members are stipulated in secondary regulations (except for CCCs, where there is no limit). For credit unions, and fisheries and forestry cooperatives, up to one-third of new loans extended in the respective financial year can be lent to non-members, while for agricultural cooperatives the limit is one-half of total loans.

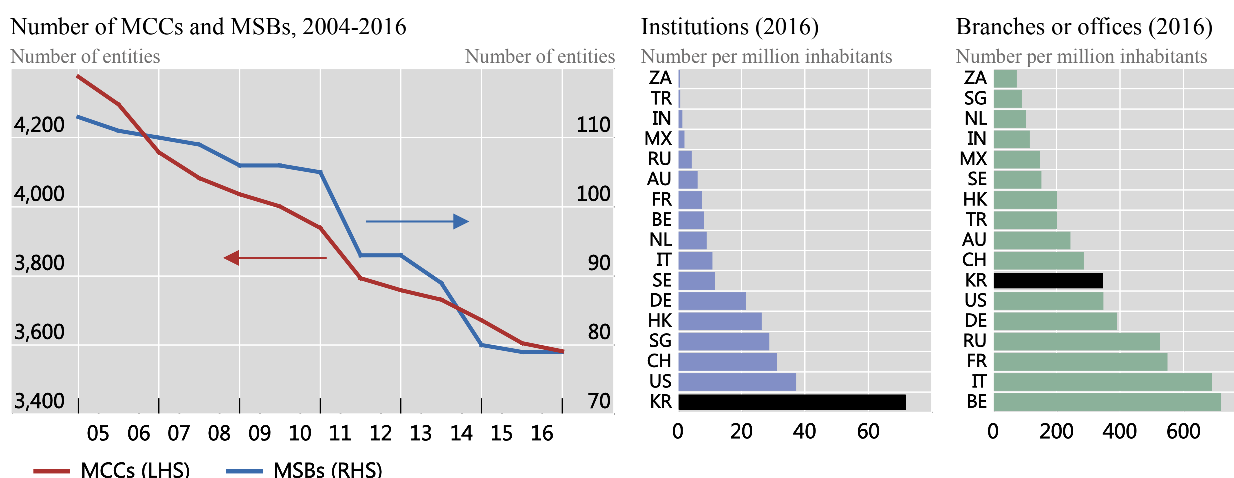
[44] Mutual aid includes providing insurance services to its members, while economic business covers the production, distribution, processing and sale of relevant products.

[45] For example, MCCs are expressly prohibited from carrying on any business activity involving derivatives or foreign currency funding, and are prohibited from issuing debt for funding purposes.

[46] These are: the National Credit Union Federation of Korea (NCUFK); the National Agricultural Cooperative Federation (NACF); the National Federation of Fisheries Cooperatives (NFFC); the National Forestry Cooperative Federation (NFCF); and the Korean Federation of Community Credit Cooperatives (KFCC).

A key feature of the MCC sector is the decline in the number of entities over the past decade. Nonetheless, there remain in excess of 3,500 MCCs in operation at present (Figure 1, left panel), which contributes to Korea being an international outlier in terms of the number of institutions relative to its population (Figure 1, middle panel). There has also been a similar decline in MSB numbers over this period.[47]

Figure 1: Banks and non-bank institutions offering payment services in Korea



Left panel: MCCs= Mutual Credit Cooperatives. MSBs=Mutual Savings Banks. Source: FSC/FSS.

Right panel: Institutions (excluding the central bank) offering payment services to non-banks. AU=Australia. BE=Belgium. CH=Switzerland. DE=Germany. FR=France. HK=Hong Kong SAR. IN=India. IT=Italy. KR=Korea. MX=Mexico. NL=Netherlands. RU=Russia. SE=Sweden. SG=Singapore. TR=Turkey. US=United States. ZA=South Africa. Source: Statistics on payment, clearing and settlement systems in CPMI countries – preliminary figures for 2016.

Other types of NBDIs: There are two other types of NBDIs in Korea:

- Korea Post, which operates through post offices nationwide, is a public financial institution that engages in deposit-taking in addition to its core role as a national postal service.
- There is only a single licensed merchant bank in operation, which is owned by one of five domestic systemically important banks (D-SIBs).[48] This merchant bank accepts deposits, makes loans and can engage in almost all financial businesses (except insurance). Its size and share of financial system deposits are negligible (less than 1% of the NBDI sector). The authorities have not licensed any new merchant banks since 2009.[49]

[47] There were 231 MSBs in 1997, but this fell by two-thirds to 79 as at end-2016. Over the same period, MCC numbers dropped from 6,142 to 3,582, a fall of around 40%.

[48] The number of merchant banks in operation is four if one includes financial institutions that engage in both merchant banking and other financial businesses.

[49] Merchant banks were introduced in Korea in the mid-1970s to facilitate FX financing and provide financial services to corporate conglomerates (chaebols). However, given that short-term FX borrowing was seen as a major driver of the Asian financial crisis that affected Korea in 1997, the authorities encouraged restructuring of FX activities and the merchant banking sector saw a rapid contraction since then (through liquidations or mergers). When the governing law for merchant banks, the 1976 *Merchant Banking Corporation Act*, was consolidated into the *Financial Investment Services and Capital Markets Act* in 2009, new licensing provisions for merchant banks were repealed.

Recent trends**:** MSBs and MCCs play an important role in deposit-taking and extending credit, and they have grown faster than banks in recent years.[50] Deposits with NBDIs account for 29% of all financial system deposits in Korea, with MCCs accounting for the bulk of those deposits (24%), while MSBs and Korea Post have 2% and 3% respectively of total deposits. While the share of total bank and NBDI loans extended by these two types of NBDIs is smaller than for deposits (around 19%), it is greater in those market segments in which they operate, such as housing and SME loans.[51] Given the tiering of clients in the Korean financial system, MSBs and MCCs typically cater to less creditworthy borrowers shunned by banks and therefore lend at higher rates.[52, 53] However, they also provide subsidised policy loans to low-income households and particular economic sectors promoted by the Government.[54]

A number of factors underpin the recent strong in MSB/MCC deposit and loan growth. They include those institutions' ongoing appeal to particular segments of the population due to their clientele profile, local presence (particularly in rural areas) and social activities; the more favourable tax treatment of interest earned on deposits with MCCs vis-à-vis banks; the higher deposit rates they offer given the low interest environment; and a less strict regulatory and supervisory framework for these institutions vis-à-vis banks (see below).

Indicators of MSB and MCC financial performance have generally improved in recent years (see Annex 1), as reflected by increases in their profitability and net worth ratios as well as by declines in the ratios of substandard or below loans (SBL) and delinquent loans. MSBs, in particular, have significantly reduced bad loans following the 2011 crisis. However, even with these improvements, their soundness indicators remain typically inferior to those of banks.[55]

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[50] Loans extended by, and deposits with, MSBs grew 23% and 20% respectively in 2016 (and 21% and 16% respectively in 2015). MCC loans and deposits grew 16% and 8% respectively in 2016 (compared to 9% and 7% respectively in 2015). These growth rates are higher than the ones for banks (6% loan growth and 7% deposit growth in 2016, and 7% and 8% respectively in 2015).

[51] Loans extended by MCCs and MSBs amounted to KRW 380 trillion and KRW 43 trillion respectively as at December 2016. Housing loans in particular are growing at high rates (around 20-30%), and represent 67% and 43% of MCC and MSB loans respectively. Overall, household loans accounted for 76% of MCC loans at end 2016, with corporate and other loans accounting for 15% and 9% respectively. Household loans accounted for 43% of MSB loans as at end 2016 (up from 32% in 2013), with corporate loans accounting for 56% (down from 66% in 2013).

[52] Credit bureaus in Korea use a rating of 1-10 when assigning credit scores to borrowers, with 1 being the strongest rating. These scores are based on a borrower's credit history with financial institutions. In broad terms, banks typically have customers with ratings of 1-3; MCC customers have ratings of 3-5; MSB customers have ratings of 6-8; while borrowers with credit scores below 8 are catered for by informal moneylenders.

[53] MCCs charge slightly higher rates on household loans than the 3-5% offered by banks. MSBs, which cater for riskier customers, can charge as much as the maximum allowable ceiling of 28% imposed by regulation (though bank-owned MSBs typically charge lower rates than the maximum ceiling to avoid reputational damage to their parent).

[54] For example, a Government programme was introduced in 2010 (Sunshine Loans) to channel public funds through MSBs and MCCs in the form of low-cost loans to borrowers with low incomes or poor credit ratings. Under the programme, 85% of those loans extended by MSBs and MCCs are backed by public guarantees. The programme targets borrowers with a credit score of 6-10. See the FSC press release of 20 July 2010, "Sunshine Loans for Low-income Households", available at http://www.fsc.go.kr/eng/new_press/releases.jsp?menu=01&bbsid=BBS0048&selYear=2010&nxPage=3.

[55] For example, banks reported a SBL ratio of 1.4% as at March 2017, compared to 6.8% for MSBs.

Steps taken and actions planned

Regulatory framework: The FSC regulates and sets supervisory and other policies for banks and MSBs, while the FSS supervises those institutions under the guidance of the FSC (see Box 1 in Section 2). This includes reporting requirements for prudential and financial information, as well as off-site monitoring and regular on-site examinations. Different regulatory arrangements apply to MCCs, with the FSC and FSS involved in more limited ways compared to MSBs and banks. Annex 2 summarises the main prudential standards for each sector.

MSBs are the NBDI type most like banks in terms of regulation (they are subject to the Basel framework), supervision (they are supervised/examined by the FSS) and deposit insurance (they are covered by KDIC). However, an important difference is that MSBs are subject to a 7% Basel I capital adequacy ratio and a simpler liquidity ratio requirement than for banks.[56] Furthermore, MSBs may be wholly owned by a single shareholder – either a natural or a legal person – with FSC authorisation.[57] This differs from the arrangement for commercial banks where share ownership by the 'same party' is, with certain exceptions, limited to 10% of the institution's equity.[58]

Different MCC types operate under specific legislation (such as the *Credit Unions Act*) and their regulation and supervision is typically shared with other bodies, both Government ministries as well as the national federations for each of the five MCC types (see Table 4). This reflects both the historical evolution of the MCC sector and the fact that MCCs provide services other than deposit-taking and credit provision. Thus, Government ministries (e.g. the Ministry of Agriculture, Food and Rural Affairs, or the Ministry of the Interior) play a role in MCC licensing and in the regulation of their non-credit businesses, such as mutual aid projects and economic businesses. However, the authorities report that the prudential aspects of their credit business operations are regulated by the FSC as is the case for banks, albeit in a simplified manner given their smaller size and more basic banking operations. A 'net worth ratio' requirement, at different calibrations, is applied to the five MCC entity types instead of the Basel-based capital requirements applied to banks and MSBs.[59] MCCs are subject to a basic

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[56] The liquidity ratio requirement applying to MSBs is a simple minimum ratio of current assets over current liabilities, compared to the Basel III liquidity coverage ratio (LCR) and net stable funding ratio requirements for banks.

[57] When MSBs were brought under official regulation by the *Mutual Savings and Financing Act* that entered into effect in 1972, the sector already included the 100% ownership of some MSBs by single shareholders.

[58] The term 'same party' includes not only a shareholder of a bank, but also persons that are tied or connected to the shareholder by a special relationship ("related persons") such as the shareholder's family members or relatives. Non-financial entities may hold only up to 4% (or 10% with approval by the FSC) of a bank's equity to ensure separation of commerce and banking. Financial entities are subject to a 10% shareholding limit, but may hold in excess of 10% of a bank's equity with FSC/FSS approval. FSC/FSS approval is also required each time the aggregate number of shares by the 'same party' exceeds 10% (15% for a regional bank), 25% and 33%. Bank holding companies are excluded from any bank share ownership restrictions.

liquidity ratio requirement of short-term liquid assets to short-term liquid liabilities (where short-term is defined as less than three months to maturity).[60]

Table 4: Main types of deposit-taking institutions and their regulators/supervisors

<table>
<tr><th>Entity</th><th>Licensing</th><th>Prudential Regulator</th><th>Prudential Supervisor</th><th>Examining Body</th></tr>
<tr><td>Banks</td><td colspan="2" rowspan="3">FSC</td><td colspan="2" rowspan="2">FSS</td></tr>
<tr><td>MSBs</td></tr>
<tr><td>Credit Unions</td><td>FSS plus Federation</td><td rowspan="4">Primary: Respective Federation
Secondary: FSS</td></tr>
<tr><td>Agricultural Cooperatives*</td><td>Ministry of Agriculture, Food and Rural Affairs</td><td rowspan="3">FSC</td><td rowspan="3">FSS plus respective Federation</td></tr>
<tr><td>Fisheries Cooperatives*</td><td>Ministry of Oceans and Fisheries</td></tr>
<tr><td>Forestry Cooperatives*</td><td>Korea Forest Service</td></tr>
<tr><td>Community Credit Cooperatives</td><td>Ministry of the Interior and Safety (MoIS)</td><td colspan="2">MoIS (in consultation with the FSC)
plus
Federation</td><td>Primary: Federation
Secondary: MoIS (with FSS)</td></tr>
</table>

* The primary regulator of these cooperatives is the respective Ministry, which focuses in particular on the MCC's mutual aid and economic business activities. The credit activities of the cooperatives are regulated by the FSC and are supervised/examined mainly by the respective federations (agricultural, fisheries, forestry) and, to a lesser extent, by the FSS. Source: Based on information provided by the Korean authorities.

Deposits with MCCs are not covered by KDIC, but by private deposit insurance funds set up by the individual federations. These industry schemes are funded by mandatory contributions from MCC members and operate pursuant to the individual law governing each separate MCC type. Table 5 presents basic data on the various deposit insurance schemes in Korea. The high coverage ratio for NBDIs (compared to banks) suggests that nearly all deposits with them are relatively low and hence almost entirely covered by the KRW 50 million deposit insurance ceiling set by the individual five national federations for MCCs (which is the same ceiling set by KDIC for banks, the merchant bank and MSBs).

Table 5: Deposit insurance schemes in Korea – Key data as at December 2016

Type of depository institution	Deposit insurer	Deposit insurance fund premium	Coverage ratio (%)*	Deposit insurance fund size (KRW billion)
Banks	KDIC	8/10,000	30.2	7,709
Merchant banks	KDIC	15/10,000	11.5	28
MSBs	KDIC	40/10,000	88.3	-1,683
Credit Unions	Federation	25/10,000	93.6	853
Agricultural Cooperatives	Federation	18/10,000	95.8	3,825
Fisheries Cooperatives	Federation	25/10,000	95.8	211
Forestry Cooperatives	Federation	15/10,000	98.0	77
Community Credit Cooperatives	Federation	13/10,000	80.8	1,144

* Coverage ratio is the proportion of covered deposits to total deposits. Covered deposits are eligible deposits that are actually covered or insured by KDIC or a federation, i.e. they comply with the eligibility criteria for inclusion and the value of the deposits fall within the KRW 50 million limit. Note: The above figures exclude the KDIC's life insurers, non-life insurers and investment companies' accounts, as well as the Special Account that was established in 2011 to deal with MSB failures (see Section 2). Source: Korean authorities.

The authorities are, to some extent, involved in the functioning of these private deposit insurance funds. For example, the National Credit Union Federation of Korea established a Fund Management Committee within the Federation for making key decisions on the operation of its deposit insurance fund. Pursuant to the *Credit Unions Act* and its subordinate laws and regulations, the Chairman of the FSC and the Minister of Strategy and Finance each appoints one member of that Committee, who participate in the decision-making process for the fund. FSC staff and Government ministries that are the primary regulators of other MCC types are both on the respective committee of those MCC federations' deposit insurance funds. Deposit protection for most MCC sectors is further enhanced as the respective laws provide a legal basis for the Government to extend contributions or loans in times of stress. In the past, public support has been extended to MCCs, as credit unions were brought under the KDIC's deposit guarantee following the Asian financial crisis.[61]

In recent years, MCCs' deposit insurance funds have been used primarily to support self-restructuring efforts such as mergers between cooperatives. For most MCC sectors, deposit

[61] Following the Asian financial crisis in the late 1990s, a blanket deposit guarantee covering banks and other entity types, including credit unions, was introduced to restore stability and calm markets (several credit unions had experienced financial stress, with KDIC making capital injections in struggling credit unions and collecting deposit insurance premiums from the credit union sector). As conditions stabilised in the financial system, and in particular in the credit union sector, the KDIC's deposit guarantee for credit unions was withdrawn at the end of 2003.

protection is further secured as the respective laws provide a legal basis for the Government to extend contributions or loans in times of trouble.[62]

The sole merchant bank is regulated by the FSC, supervised/examined by the FSS, and is covered by KDIC's deposit insurance framework. As a government agency, Korea Post has a distinct regulatory framework compared to other NBDIs (see Annex 3). In particular, it is subject to oversight by the Ministry of Science, ICT and Future Planning (MSIP); its deposits are, at least implicitly, fully guaranteed by the Government; and, while it follows certain prudential standards (e.g. a capital adequacy ratio), Korea Post is not examined by the FSS.

Supervisory framework: As previously noted, the FSS (under the guidance of the FSC) is the supervisory and examination authority for banks, the merchant bank and MSBs. The FSC provides the framework for the prudential regulation and supervision of MCCs, but specific responsibility for supervision/examination differs by MCC entity type (see Table 4). For credit unions, the FSC is the sole regulator while the FSS is the supervisor, but with examinations conducted primarily by the credit union federation. For cooperatives in the agricultural, fisheries and forestry sectors, the relevant Government ministry is the licensing authority and primary regulator, while the FSC regulates the credit operations of the MCC and the FSS is the supervisor, relying mainly on the national federation to conduct on-site examinations. For CCCs, the Ministry of the Interior and Safety (MoIS) is the regulatory authority (in consultation with the FSC for credit activities) and relies primarily on the CCC national federation to undertake examinations. The federations (as well as the FSS) issue recommendations for improvements following an examination, and can impose sanctions on the MCC in case of non-compliance.

The FSS conducts off-site monitoring and direct on-site examinations of a selected small sample of MCCs, based on data supplied by the respective federations (in the case of CCCs, its federation provides the data to the MoIS). It also oversees the federations (except for the CCC federation), visiting them annually for their supervisory activities and every two years for their own operations. The FSS has about 30 examiners for MCCs and about the same number of examiners for MSBs (see Box 3 for a discussion of the FSS supervisory/examination framework). In 2016, the FSS identified 318 MCCs (accounting for 8.8% of the sector) that required close monitoring and subsequently conducted on-site examination of 14 of them in that year, with the remaining 304 MCCs examined by the federations. The FSS also examined 24 MCCs outside the monitoring list, resulting in a total of 38 MCCs directly examined by the FSS during 2016.

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[62] The respective laws for agricultural, fisheries and forestry cooperatives provide for a Government contribution or Government or BOK loans as one of the funding sources for their deposit insurance fund. Respective laws for the CCC federation stipulate Government loans as one of the funding sources for its deposit insurance fund. There is no legal basis for Government contributions or loans to support the credit unions' deposit insurance fund. However, when the National Credit Union Federation of Korea faced difficulties in 2006, the Government extended loans to the Federation by entering into an MoU. According to Article 80 of the BOK Act, the BOK can lend directly to any for-profit enterprise (inclusive of NBDIs) including those engaged in financing business other than banking institutions, only when these enterprises face severe impediments to obtaining funds from banks or are very likely to face such difficulties (see Section 2).

The MoIS has about 15 examiners and conducts examinations of around 40 CCCs annually, with the FSS joining these examinations. The MoIS selects CCCs for examination based on risk factors, such as a low net worth ratio or rapidly growing household lending.

Box 3: The supervision and examination framework used by the FSS

The FSS conducts ongoing off-site examinations of NBDI (and other) entities for financial soundness reasons and to monitor compliance. It also conducts general ('full scope') and partial ('targeted') examinations to evaluate a firm's business activities, risk management, financial health, internal controls and management competence. The authorities used to conduct full-scope examination of MSBs every two to three years but, considering the relatively small size of those institutions, have started to conduct targeted examinations when significant supervisory concerns arise. The scope of targeted examinations includes loan brokers' businesses, asset classification and internal controls, calculation of capital adequacy ratio, and operation of information technology systems.

The FSS evaluates financial institutions' financial health and operations and assigns an overall supervisory rating. As discussed in Section 2, for commercial banks, the rating is based on the CAMEL-R approach (capital, assets, management, earnings, liquidity and risk management). MSBs are subject to the same approach but excluding the risk management component, while MCCs are subject to a CAEL assessment. The evaluation of each of the four, five and six components for MCCs, MSBs and banks, respectively, is based on a combination of quantitative and qualitative factors. In broad terms, the examination cycle for most institutions is based on a firm's risk exposure, scale of business and complexity. As with banks, MSBs are fully integrated in the FSS's early warning system, which is a combination of indicators (such as lending growth and asset quality) and models that combine individual financial and other data from banks with macroeconomic data and which focus on the likelihood of changes in solvency.

Due to the significantly higher number of institutions (and smaller size) in the MCC sector compared to other sectors, the supervision and examination function is performed by the MCC national federations in accordance with the respective laws. MCC examinations conducted directly by the FSS tend to focus on a limited number of entities based on an early warning system that it adopted in 2013. The system comprises: i) identification of MCCs requiring close monitoring and on-site examination; and ii) off-site surveillance. The FSS identifies an annual list of MCCs that are likely to become distressed using an insolvency prediction model and CAEL outcomes. On-site examination, whether by the FSS or the federation, is conducted on these MCCs in the year they were added to the list. In addition, the FSS uses off-site surveillance to identify any MCCs that should be included in on-site examinations because they experience a rapid deterioration of their financial health or are not in compliance with regulations.

As mentioned above, the national federations carry out important public functions with respect to their respective MCC types. The federations' corporate structure includes a Chairman/President and a Board of directors (drawn from their member institutions), as well as an audit committee and a department devoted to supervisory/examination functions. The federations are involved in the non-credit aspects of MCC operations (such as mutual aid and economic business) as well as in the examination of their credit business; provide deposit protection for MCC depositors; and manage excess liquidity on behalf of their member

entities.[63] In undertaking these functions, the federations set and administer detailed operational rules through their by-laws, manuals and operational guidelines.[64] Further, MCCs are required to keep 10% of deposits as a reserve, and half of that amount is transferred to their respective federation to maintain, manage and redistribute to other MCCs.

The federations also play an important role in resolving MCCs experiencing financial difficulties. Several options are considered, such as arranging a merger with another MCC (federations have the legal power to enforce this) or closing down its operations. The choice of option is typically guided by minimum cost considerations (with the federations' deposit insurance fund being used to finance these actions), with bankruptcy avoided as much as possible given the reputational damage to the sector.

As noted earlier, the FSS performs an annual review of the federations' supervision/examination function. Reviews are also conducted of federations' portfolio management plans, asset allocation methods, and risk management effectiveness, together with risk analyses of their portfolios. The FSS recommends changes in asset portfolios to address identified risks on the basis of those assessments, and informs the federations of any matters of particular interest or supervisory concern.[65] It also conducts on-site evaluation every two years of the risk levels of the federations and the effectiveness of their risk control systems, and follows up with supervisory actions on the basis of those evaluations.

Some of the same functions carried out by MCC federations are also performed by the federation for MSBs, the Korea Federation of Savings Banks (KFSB). The KFSB provides MSBs with services such as deposit acceptance, loans, guarantees, rediscount of bills, and call transactions, and provides an emergency fund as well as accepting/operating the reserves of MSBs. It also conducts Government-commissioned tasks, such as the approval of changes to the articles of association of MSBs. However, the KFSB is not involved in the supervision or examination of MSBs as these tasks are undertaken by the FSS.

Other authorities can also be involved in NBDI examinations. The main such authority is the KDIC, which conducts joint examinations with the FSS if deemed necessary for the prudential management of insured financial institutions (see Section 2).[66] The KDIC can also conduct

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[63] MCCs do not engage in inter-MCC borrowing or lending; instead, they use deposit and borrowing services from their federation. The federation manages excess liquidity – both by placing funds with MCCs and by investing them – and shares profits with its member entities.

[64] These include rules on deposit types, interest rates, account settlement methods, payout and redemption of principal and interest. According to the authorities, the MCC federations' manuals, guidelines and procedures mostly correspond to FSS examination manuals. When a national federation is seeking to adopt a new or amended rule in its operational guidelines, it must notify the FSS, which is responsible for reviewing the changes to ensure (a) consumers are protected and (b) an orderly financial market.

[65] As an example, the FSS required the National Credit Union Federation of Korea to invest in investment-grade debt, including government, public sector and corporate securities rated BBB- or higher. It also notified the MCC federations about asset management activities in the wake of higher global risk levels and uncertainties (January 2016) and inadequate computer system controls for unfair business conduct (June 2016).

[66] KDIC monitors on an ongoing basis the risk profiles of insured financial institutions, so as to prevent failures and hence curb losses of its Deposit Insurance Fund. For institutions that have been found to be in financial trouble as a result of ongoing risk surveillance or through its risk model analysis, the KDIC conducts examinations jointly with the FSS. The targets for the examinations are selected through an analysis of major financial indicators. After conducting joint examinations with the FSS, the KDIC can request the FSS to take

independent examinations, reporting its findings to the FSS for any corrective action. Likely reflecting the recent crisis in the MSB sector, the KDIC's joint as well as independent examinations have targeted MSBs in recent years. In 2016, out of the 10 institutions that the KDIC jointly examined with the FSS, 6 were large or financial group-affiliated MSBs (same number of joint examinations of MSBs as in 2015 and 2014). All of the KDIC's independent examinations in recent years have also been of MSBs, with 4 MSBs examined in 2016 (compared to 8 and 17 in 2015 and 2014 respectively). These independent examinations were prompted by breaches of certain triggers (e.g. a low capital adequacy ratio). The BOK can also request the FSS to conduct examinations of financial institutions or a joint examination, if deemed necessary for implementing monetary policy. However, while the BOK has been involved in bank examinations, to date it has not been involved in NBDI examinations – reflecting in part those entities' limited involvement in payments and settlement systems as well as the BOK's view that these entities pose limited risks to financial stability.

Cooperation among authorities: As noted in Section 2, there are various inter-agency mechanisms to facilitate coordination and information sharing, including on NBDIs. Of particular relevance for the NBDI sector is the MCC Policy Council, a non-statutory body that meets quarterly under the chairmanship of the FSC (see Annex 4). Its membership comprises the Government ministries and private MCC federations that are involved in regulating and supervising MCCs. The Council, established in 2013, aims to minimise differences in regulation among MCCs by bringing together senior officials on a regular basis to discuss and consult on prudential and other issues relating to MCCs. For example, the Council coordinated the October 2016 strengthening of loan-to-value (LTV) requirements on MCCs (see below).

Aligning prudential rules for NBDIs: The FSAP recommended that the authorities apply a regulatory framework consistent with that for banks to all NBDIs, with larger entities also subjected to stricter supervision. The authorities report that they adopt a 'same function-same regulation' principle to regulation, so that entities conducting similar functions (such as deposit-taking and extending credit) are regulated the same way. In that sense, the authorities report that the regulatory framework for banks broadly applies to MSBs and MCCs as well, and that recent steps – described below – have narrowed the differences in prudential treatment between these types of institutions. The FSC has taken the lead in developing recent measures, in cooperation with other authorities (especially the FSS) and the federations, to bring about greater consistency in regulation across banks and NBDIs, and also in response to emerging risks (such as those related to household debt).

In terms of capital requirements, the FSC raised the minimum capital adequacy ratio from 7% to 8% for MSBs with assets in excess of KRW 1 trillion, taking effect on 1 January 2018. This aligns the minimum ratio with that for banks, although the capital requirement for MSBs is still on a Basel I basis (as opposed to a Basel III definition for banks). As at end December 2016, 15 out of 79 MSBs (accounting for 55% of total MSB assets) met the threshold of KRW 1 trillion. In addition, the FSS reports that large MSBs (i.e. those with assets in excess of KRW 2 trillion) are now supervised more intensely, e.g. through more frequent 'fit and proper' tests

corrective action where necessary while issuing recommendations to the insured financial institutions about how to improve business management. In terms of its independent examinations, the KDIC notifies its findings to the FSS and the insured institution in order to induce an improvement in their management, including if necessary making a request for corrective action to the FSS.

for their controlling shareholders. As at end December 2016, four MSBs were above the KRW 2 trillion size threshold, accounting for 25% of all MSB assets.

The authorities have aligned other prudential rules for NBDIs in recent years (see Annex 2):

- As noted in the BCBS Core Principles assessment, differences in the definition of default for banks (90 days) and non-banks (120 days) had created the potential for arbitrage.[67] Asset classification criteria for MCCs and MSBs have been aligned to those currently applicable to banks. For MCCs this took effect from 1 July 2014, while for MSBs this took effect from 1 April 2017.
- MCC loan loss provisioning rules were aligned from 1 July 2015 to those for banks. The equivalent rules for MSBs will be tightened in a phased manner starting from 2018, so that they become the same by 2020 to those applicable to banks and MCCs.
- Uniform LTV and debt-to-income (DTI) limits for mortgage financing of 70% and 60% respectively have been in effect for all financial institutions since 1 August 2014, including MSBs and MCCs.[68]
- Since March 2013, MCCs with loans in excess of KRW 20 billion are subject to an 80% loan-to-deposit limit. The authorities intend to raise this limit to 100% (which is the current limit for banks) to ensure a level playing field.
- Enhanced credit screening guidelines in effect for banks have been applied to NBDIs as a step to further strengthen household debt oversight (see below).[69] The enhanced screening for NBDIs took effect on 13 March 2017, and covers areas such as ensuring accurate documentation of a borrower's debt service ability.

Enhancing the risk sensitivity of NBDI supervision: The FSAP recommended that the authorities enhance the risk-sensitivity of supervision via more flexible and frequent examinations that also provide sufficient coverage of the smaller supervised entities and enhancement to the judgmental component of the assessments.

The FSS reports that it is planning to raise the frequency of direct examinations of MSBs and MCCs in 2017 compared to 2016.[70] While the coverage of the former is high (nearly two-thirds of all MSBs will be examined in 2017), that of MCCs is very low (less than 2% of entities

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[67] See "Republic of Korea: Financial Sector Assessment Program: Detailed Assessment of Compliance on the Basel Core Principles for Effective Banking Supervision" (IMF Country Report No. 14/310, October 2014, available at http://www.imf.org/external/pubs/cat/longres.aspx?sk=42390.0).

[68] However, at the same time these LTV and DTI measures were actually, in broad terms, a *loosening* of requirements, as part of a Government policy at that time to stimulate the economy, including through boosting the housing market.

[69] The guidelines for banks, issued by the Korea Federation of Banks, are described in the FSC press release of 14 December 2015 on 'Policy Direction for Household Debt Management', available at http://www.fsc.go.kr/eng/new_press/releases.jsp?menu=01&bbsid=BBS0048&selYear=2015&nxPage=1. These include the use of more objective income references to accurately assess a borrower's repayment ability, and the application of a 'stress rate' or additional buffer to the interest rate in case of future rate increases.

[70] In particular, the FSS plans in 2017 to directly examine 43 MSBs and 31 MCCs (compared to 32 MSBs and 38 MCCs in 2016). The 2017 figure for MCCs excludes CCCs. The MoIS plans to examine 30 CCCs in 2017, with the FSS to join all of these examinations.

covered). This reflects the high number and small size of MCC entities as well as the fact that it is the national federations, rather than the FSS itself, which conduct the large majority of MCC examinations. As noted in Box 3, the FSS also plans to shift from full scope to targeted examinations for MSBs and MCCs, in keeping with the recent change in approach for banks and other financial institutions.[71]

Assessing risks to financial stability posed by NBDIs

Data collection and analysis: MCCs submit data to their respective federation, which are in turn passed onto the FSS; in the case of CCCs, the data collected by the federation are passed onto the MoIS (the regulator of CCCs) and, on an as-needed basis, to the FSC, FSS and BOK. In the case of MSBs, the FSS collects data directly from these entities. These datasets cover extensive business[72] and other prudential reporting (e.g. on capital, asset quality, liquidity and profitability) on a periodic basis. The BOK can access data on individual MSBs and MCCs (except CCCs) from the FSS's information sharing system in order to perform systemic risk monitoring and analysis; it also holds annual discussions with the FSS on its data needs.

Based on the data submitted and other sources of information (e.g. industry surveys), the FSS conducts off-site monitoring and analysis of the NBDIs' safety and soundness. This includes the use of indicators relating to asset quality (delinquency rate, SBL ratio), profitability (net profit, return on equity) and resilience (capital adequacy ratio). With respect to NBDI loans, the FSS also receives data from credit bureaus for analysis of borrower credit score distributions (including changes therein) and of borrowers with debt obligations from multiple lenders. Information on loans and asset classification is collected by the FSS for MSBs and by national federations of MCCs for early and pre-emptive detection of fraudulent loans and suspected unlawful financial practices. The information is also used in examination and off-site monitoring work.

The FSS shares its analysis of the submitted information with the FSC and related authorities for risk analysis, supervisory policy, examination activities, and other policy purposes. The authorities indicate that there is comprehensive exchange of information on entities between them based on MoUs (see Section 2).[73]

Stress tests: The Macroprudential Supervision Department of the FSS coordinates annual stress tests on MSBs using specific scenarios/shocks (e.g. historical loss rates, impact of an interest rate increase, or a major economic contraction) reflecting sectoral characteristics. The aim is to assess how the shocks affect individual MSB solvency. The stress tests are a recent feature of the FSS supervisory toolkit, beginning in 2011 for MSBs. For MCCs, stress tests began in

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[71] Pursuant to the *Measures on Reforming Examinations and Sanctions of Financial Institutions* announced by the authorities in April 2015 for banks and insurers, the FSS has shifted its focus from full on-site examinations to more targeted examinations, particularly for those institutions with regulatory or soundness issues.

[72] Business reports include monthly information on interest rates, major business indicators and compliance statistics, and quarterly data on general and financial status.

[73] For example, in 2009 the MoSF, FSC, FSS, BOK and KDIC signed an MoU on information sharing, covering the exchange of regulatory reports and other information received from financial institutions. However, under privacy laws in Korea, certain personal information of customers (such as the name of the account holder) is withheld when information is shared between authorities.

2015 and are conducted by their respective federations, except for CCCs where the tests are conducted by the MoIS. The stress tests for MCCs cover credit risk (based on the net worth ratio) and are top-down in nature, given that the small size and large number of MCCs do not make them amenable to a bottom-up stress test.[74]

The results of these stress tests are shared with the FSC but are not published. No contagion effects are included in these tests given the low interconnectedness between MSBs/MCCs and other financial sectors (see below), simple funding structures and the relatively small asset size of individual entities.[75] The results are an input in the examination process and the authorities may take supervisory measures based on the results of the stress test (e.g. asking for submission of monthly status reports, periodic communication with the management, restructuring, or requiring a recapitalisation).

Systemic risk analysis: The BOK, in accordance with its financial stability mandate, uses NBDI data to conduct systemic risk analysis, and to analyse interconnections and emerging risks between entities and sectors within the financial system, including via payments and settlement systems. The BOK's work involves taking a macro perspective by focusing on system-wide developments, which complements the micro-level analysis conducted by the FSS. In addition to sharing the results with other authorities, the BOK publishes its risk assessment in its six-monthly *Financial Stability Report* (FSR).[76] The FSR has a regular section on the non-bank financial institutions sector that covers recent trends in capital and non-performing loans, as well as current vulnerabilities. The BOK supplements regulatory reporting data from institutions with data from credit bureaus, to assess risks stemming from, for example, growing household debt and multi-loan borrowers.

In addition, the MCC Policy Council meets on a quarterly basis and, in addition to discussing the regulatory framework for MCCs, it assesses potential risks facing the sector. However, the BOK is not a member of the Council and does not attend these meetings.

Interconnectedness: Both MSBs and MCCs are funded largely by deposits, so they do not have significant other borrowings (e.g. from banks or capital markets). The aggregate ratio of deposits to total liabilities for MSBs and MCCs is 96% and 91% respectively.[77] Moreover, these entities do not engage in borrowing from or lending to each other; instead, as noted earlier, they use deposit and borrowing services from their national federation as applicable. Likewise, MSBs and MCCs do not borrow from the interbank market for any temporary funding requirements, nor do they have access to the BOK's normal borrowing window.

Similarly, the assets of these entities are mainly loans to households or SMEs, while they are subject to strict limits on investments and are not allowed to engage in derivative activities.

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[74] The BOK is preparing to undertake its own stress tests of non-bank financial institutions (including NBDIs).

[75] The average asset size as at December 2016 of banks reported by the authorities was KRW 153 trillion, while for MSBs and MCCs it was KRW 0.65 trillion and KRW 0.16 trillion respectively. The largest entity within each sector had the following asset size: MSBs KRW 5 trillion, credit unions KRW 1 trillion, agricultural cooperatives KRW 2.7 trillion, fisheries cooperatives KRW 1.1 trillion, forestry cooperatives KRW 160 billion, and CCCs KRW 3.6 trillion.

[76] See http://www.bok.or.kr/broadcast.action?menuNaviId=2578.

[77] MSBs are required to keep borrowings other than from customer deposits at below 300% of their capital.

Given their characteristics, and as noted earlier, the FSS does not conduct any analysis of contagion risks as it views the level of interconnectedness of NBDIs with banks and other financial sectors as not significant enough to be considered a risk factor.[78] As noted in the BOK's December 2016 FSR, around 10% of the total amount of net funding of domestic banks from other sectors as at June 2016 came from firms such as MSBs and MCCs.[79]

Household debt: A growing concern in Korea has been the growth in household debt and the increasing role played by non-bank credit in that context (see Annex 1). The IMF's 2016 Article IV report noted that this was particularly relevant as non-bank financial institutions cater to less creditworthy borrowers and thus face elevated risks. The strong growth of NBDI household loans compared to banks and other financial institutions suggests that borrowers may be attracted to NBDIs in spite of the higher interest rates they typically charge. In recent FSRs, the BOK has also drawn attention to rising risks in NBDI lending to more vulnerable households and to the growth of mortgage loans and especially bullet-payment loans, which present a particular mix of vulnerabilities should asset quality deteriorate in case of interest rate increases or a slowdown in the real estate market.

The authorities have been active in monitoring and responding to these developments. An informal Household Debt Management Council – comprising the BOK, FSC, FSS and relevant Government ministries – has met monthly to review developments, while the MEFM met ten times in 2016 (compared to the usual quarterly frequency) to discuss household debt.

In August and November 2016, the FSC announced measures targeting the non-bank lending sector, to ensure borrowers take loans that they can afford and repay. As noted, credit screening guidelines were extended to NBDIs from March 2017.[80] In addition, more stringent LTV rules apply to MCCs effective from 31 October 2016. Under the new rule, the LTV limit for MCCs' non-residential property lending has been reduced from 50-80% to 40-70%. MCCs have higher shares of non-residential mortgage loans than banks, so this particular measure was applied only to MCCs. Further, the additional amount that could be added to the value of the collateral in cases meeting certain conditions has been reduced from 10% to 5%. Also, the FSC stated it will set out a roadmap for improved standards for screening a borrower's creditworthiness, e.g.

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[78] MSBs that are affiliated entities within a business group face stricter standards such as group-wide credit limits and restrictions on holding securities. MSBs are also barred from extending credit to each other.

[79] See 'Analysis of Banking System Interconnectedness, and Measurement of Cross-sectional Systemic Risk' (http://www.bok.or.kr/contents/total/eng/boardView.action?boardBean.brdid=20097&boardBean.rnum=1&menuNaviId=2578&boardBean.menuid=737&boardBean.cPage=1&boardBean.categorycd=0&boardBean.sdt=&boardBean.edt=&boardBean.searchColumn=&boardBean.searchValue). In this analysis, the BOK used sector-wide flow of funds data (rather than entity-level data) to assess the degree of interconnectedness.

[80] These guidelines first entered into force for the banking sector in February 2016, then to the insurance sector in July 2016, and then to the MCC sector in March 2017. The guidelines were drafted by the respective association of each financial sector to ensure accurate documentation of borrowers' debt service ability and to encourage amortised repayment particularly of new, high-risk mortgage loans. Details of the guidelines were modified to reflect distinctive characteristics of each sector, resulting in some differences in the documentation method for verifying income, structure of amortising loans etc. See the 24 November 2016 FSC press release entitled "Follow-ups on the Household Debt Management Measures Announced on Aug. 25" (available at http://www.fsc.go.kr/eng/new_press/releases.jsp?menu=01&bbsid=BBS0048&selYear=2016&nxPage=1).

through the gradual introduction of a debt service ratio (DSR) to assess a borrower's debt repayment ability.[81]

In addition, the FSC announced enhanced provisioning requirements for MCC and MSB high-risk loans that went into effect in June 2017 (Tables 6 and 7). For MSBs that experience a sharp rise in such lending, the FSS is meeting with management and conducting onsite examinations to ensure effective oversight.

Table 6: Additional requirements on high-risk loans by MCCs

Current Rule	Revised Rule
● High risk loan: bullet payment loan (amortising loan in deferment period) that is no less than KRW 300mn, or precautionary or below loan taken by a multiple loan borrower (who has loans from five or more financial institutions) ● Subject to additional 20% provisioning	● High risk loan: bullet payment loan (amortising loan in deferment period) that is no less than KRW 200mn, or normal or below loan taken by a multiple loan borrower (who has loans from 5 or more financial institutions) ● Subject to additional 30% provisioning

Table 7: Additional requirements on high-risk loans by MSBs

Current Rule	Revised Rule
● High risk loans: loans with annual interest rate exceeding 20% ● Subject to additional 20% provisioning	● High risk loans: loans with annual interest rate exceeding 20% ● Subject to additional 50% provisioning

Lessons learned and issues to be addressed

The authorities have taken important steps in recent years to strengthen the regulatory and supervisory framework for NBDIs. In particular, the asset classification requirements, LTV and DTI limits as well as loan loss provisioning rules for MSBs and MCCs have been largely aligned with those for banks; a higher capital requirement (on a Basel I basis) will be imposed on larger MSBs from 2018; and large MSBs are now supervised more intensely. These measures help bring MSBs and MCCs more in line with the regulatory/supervisory framework for banks, address regulatory arbitrage and mitigate the risks from NBDI lending. More broadly, the establishment of the MCC Policy Council in 2013 has strengthened regulatory cooperation on MCC-related issues, and has enhanced the consistency of prudential standards both across MCC entity types as well as between MCCs and banks. Recent measures relating to household debt (e.g. enhanced credit screening guidelines, tighter LTV limits for non-residential property lending by MCCs, and higher provisioning requirements for high-risk

[81] Unlike in the case of DTI, the DSR takes into account the principal and interest of a borrower's total outstanding loans. At this stage, the authorities plan to allow firms to use the DSR ratio without setting a regulatory requirement. See the 5 January 2017 FSC press release entitled "Financial Policy Direction for 2017".

loans by MCCs and MSBs), indicate the authorities' pro-active stance in identifying emerging risks and enhancing regulation and supervision to address them.

In spite of these steps to enhance NBDI regulation and supervision by bringing them more in line with banks, there remain certain differences in approach (see Table 8). Such differences are not necessarily undesirable, as they may reflect differences in the business model and the risks posed by these entities. It is indeed the case that in several other countries banking regulations are applied in a proportionate way.[82] Moreover, any changes to regulatory arrangements would need to recognise the public policy role of MCCs/MSBs and the fact that they mostly cater to segments of the population other than those targeted by banks.

Table 8: Key differences in regulation and supervision across banks and NBDIs

Area of difference	Framework used	Banks	MSBs	MCCs	
				MCCs (excl. CCCs)	CCCs
Restrictions on activities & geographical presence	N/A		✓	✓	✓
Capital requirements	Net worth ratio			✓	✓
	Basel I		✓		
	Basel III	✓			
Liquidity requirements	Basic liquidity ratio		✓	✓	✓
	Basel III LCR	✓			
Deposit insurance	Public (KDIC)	✓	✓		
	Private (national federations)			✓	✓
100% ownership by single shareholder	N/A		✓		
Government ministries involved in examinations	N/A				✓
Private industry bodies (national federations) involved in examinations	N/A			✓	✓

Notwithstanding these caveats, further steps can be taken to strengthen the framework for regulation and supervision of NBDIs in a number of areas – namely: strengthening the role of the FSC/FSS in the regulation and supervision of MCCs; enhancing MCC/MSB prudential

[82] For example, in Australia and the United States (US) the LCR is applied to larger, more complex or internationally active banks, while smaller institutions are subject to a simple liquidity ratio requirement (Australia) or a less stringent modified LCR (US). For Australia, see http://www.apra.gov.au/MediaReleases/Pages/13_39.aspx; for the US, see https://www.federalreserve.gov/newsevents/pressreleases/bcreg20131024a.htm. See also the FSB's August 2016 peer review of India, which compared the regulation and supervision of non-bank finance companies vis-à-vis banks (http://www.fsb.org/2016/08/peer-review-of-india/).

standards; increasing the focus on MCC federations; and developing measures to manage the orderly consolidation of the MCC/MSB sectors.

Strengthen role of FSC/FSS in regulation and supervision of MCCs: One of the difficulties in promoting robust and consistent regulation and supervision across the MCC sector is the multitude of entity types and their distinct operating frameworks, including with respect to the role played by the FSC/FSS (see Table 4). In particular, the regulatory and supervisory responsibility for credit unions and cooperatives in the agricultural, fisheries and forestry sectors rests with the FSC/FSS (although they rely largely on the respective national federation for regulatory reporting and on-site examinations). However, for historical reasons, it is the MoIS that is responsible for regulating and supervising CCCs (albeit with input from the FSC/FSS), by relying largely on the CCC federation to conduct examinations and collect data.

The authorities point out that the CCCs' history and regional development mission aligns with the role of the MoIS, which is responsible for management of local government and regional civil services; that a dedicated bureau within the MoIS is tasked with supervising these entities; that there is close consultation with the FSC on credit-related matters, including through the MCC Policy Council; and that the current supervisory system was set up by law after relevant stakeholder consultations. Nevertheless, in order to enhance the consistency of approach and as a matter of good practice, the regulation and supervision of CCCs should be assigned to the relevant prudential authorities and be aligned with the other MCCs. This means that the FSC should become responsible for the prudential regulation of CCCs' credit business and of their national federation, while CCCs and their federation should be subject to FSS supervision and examination (with scope for delegating individual CCC examination to the federation, as is the case for other MCC types). This would also enhance transparency by enabling granular data on CCCs to be made available on the FSS website, as is the case for the other MCC types.

Currently, the FSS devotes about the same number of examiners for the MCC sector (except CCCs) as it does for the MSB sector (i.e. about 30 examiners each), even though the former is around eight times larger in terms of assets and over eight times larger in terms of the share of deposits. In 2016, the FSS conducted direct examinations of 43 MSBs (out of 79), compared to only 38 examinations of MCCs (out of more than 2,000 MCCs, if CCCs are excluded) over the same time period. Notwithstanding reliance on the federations for examinations of MCCs, this seems an imbalance in the FSS's focus and resources, perhaps reflecting a legacy from the 2011 MSB crisis. Given the greater importance of the MCC sector, the FSS should expand the resources devoted to the MCC sector, including by redeploying examiners where possible. This adjustment in FSS supervisory focus should be implemented as part of overall human resource, budget and supervisory policy planning.

While federations are the frontline examiners of MCCs, the FSS still conducts general examinations on a small subset (around 2%) of MCCs annually. The selection of these MCCs is based on factors such as size, likelihood of becoming distressed, the presence of directors from those entities in the federation (to minimise conflicts of interest), and any compliance weaknesses identified in off-site surveillance. As is already the case with other financial institutions, the FSS should adopt a more forward-looking, risk-based approach to supervision of MCCs, for example by targeting those that exhibit materially higher (than the sector average) deposit or loan growth, or that conduct more risky business (e.g. bullet or unsecured loans). The FSS could also undertake thematic examinations on issues that require particular attention

– as it has already done recently in relation to household debt – such as property lending (which is more exposed to cyclical fluctuations) and fit-and-proper requirements (particularly for larger MCCs and those whose managers are involved with the federations).

- ***Recommendation 3*: The authorities should strengthen the role of the FSC/FSS in MCC regulation and supervision by: (a) assigning regulatory and supervisory responsibilities for community credit cooperatives to the FSC/FSS, as is the case for other MCC types; (b) expanding (including by redeploying) FSS resources to MCC examinations; and (c) adopting a risk-based supervisory approach for MCCs (e.g. targeted examinations on high-risk loans and fit-and-proper requirements).**

Enhance prudential standards for MSBs/MCCs: As noted above, the strengthening of the regulatory and supervisory framework for MSBs and MCCs in recent years has helped bring it more in line with the framework applying to banks, and to mitigate MSB/MCC lending risks. While these entities are not active internationally or permitted to engage in certain riskier activities as in the case of banks (e.g. derivatives or FX transactions), they face other business risks. In particular, the concentration in their geographical presence and customer type mean that they are more exposed to common shocks (whether sectoral or regional), while the fact that they cater to less creditworthy borrowers implies that they are more heavily exposed to credit losses in case of a cyclical downturn. It is therefore important that the prudential standards applicable to MCCs and MSBs are sufficiently robust to reflect these risks.

First, as noted earlier, an 8% capital requirement will apply for MSBs with assets greater than KRW 1 trillion from January 2018. However, the remaining 64 MSBs (accounting for 45% of total MSB assets) will continue to be subject to a 7% capital requirement. In order to enhance resilience and align with international practice, the authorities should consider expanding the list of MSBs subject to the 8% capital requirement after they monitor how implementation of this requirement affects MSBs with assets greater than KRW 1 trillion. The authorities note that the regulatory restrictions already imposed on MSBs reduce their risks vis-à-vis banks; that an 8% capital requirement could put MSBs under pressure given heightened market competition and the tighter prudential requirements being phased in; and that this could lead some small and medium-sized MSBs to reduce lending to less creditworthy borrowers. On the other hand, the high Basel capital adequacy ratio for the MSB sector suggests that the overall impact of such a measure may be limited.[83]

Second, MSBs at present may be wholly owned by a single shareholder – either a natural or a legal person – with FSC authorisation. The largest MSB owned by a single shareholder (a financial company) has around KRW 2 trillion in assets, while the largest MSB owned by a single person has KRW 130 billion in assets. The authorities state that they do not have plans to change the ownership rules for MSBs, which are largely due to historical factors and may be subject to legal challenge; that tightening the rules may hinder the possibility of restructuring troubled MSBs through sales and mergers; and that the risks of single ownership are mitigated

[83] As stated in the FSS press release of 2 June 2017, 'Savings Banks' Earnings, First Quarter 2017' (available at http://english.fss.or.kr/fss/eng/p/news/pr_list.jsp?bbsid=1289277491315), MSBs had an overall capital adequacy ratio of 13.88% as at end March 2017.

by 'fit and proper' requirements[84] and by the fact that the FSC/FSS has the power to remove unqualified managers/directors and to issue an order to dispose the equity of large shareholders. Despite these measures, the fact that a single shareholder – particularly an individual – is allowed 100% ownership of an MSB raises concerns about effective corporate governance, particularly given that the 2011 crisis in the MSB sector was partly due to management and shareholder misconduct. This also differs from the policy applying to banks, where individual share ownership is limited (with exceptions) to 10%.[85] Given that 'fit and proper' tests and related measures only mitigate – but not eliminate – the possibility that a single shareholder creates the potential for the misuse of power and less-than-effective risk management controls, the authorities may want to reconsider the rule allowing 100% ownership of an MSB, reflecting international good practice.

Third, more than 85% of the liabilities of the MCCs and MSBs are made up of (typically short-term) deposits, while around 65% and 80% respectively of their assets are loans and advances, many of which have longer maturities or floating rates. MSBs/MCCs are currently subject to a basic liquidity ratio requirement, which does not accurately reflect the extent to which an institution engages in asset-liability mismatch and liquidity/maturity transformation. Since deposits could be subject to a run and the inflows from loans depend on prevailing interest rates and their maturity profile, it is important for institutions to be able to monitor those risks on an ongoing basis. The 2011 crisis in the MSB sector is a case in point, where the liquidity ratio applicable at the time may not have been sufficient to mitigate the incidence of a depositor run. In other countries, asset-liability management (ALM) systems are typically used by financial institutions to manage liquidity and interest rate risks,[86] supplemented by prudential limits for gaps in certain time buckets (e.g. up to one year). Drawing on the experience in other countries,[87] the FSC/FSS should require MCCs to develop an ALM system to assess the liquidity and asset-liability mismatches of MCCs, at least for entities above a certain threshold size. Such a system could build on ALM systems currently in use by the federations, but would need to apply a consistent set of minimum standards across the MCC types. The FSC and FSS

[84] The FSS conducts regular assessments of whether large shareholders of MSBs remain compliant with 'fit and proper' rules. Should certain shareholders be deemed unfit, the FSC can issue share disposal orders to remove these shareholders. Examinations of fit and proper rules for controlling shareholders differ depending on the size of the MSB: for MSBs with assets in excess of KRW 2 trillion (currently four MSBs) it is carried out every year, while for smaller MSBs it is conducted every two years.

[85] As noted on the FSS website, "ownership of financial services companies is regulated in accordance with the principle of the separation of banking and commerce to prevent financial services companies from operating under the undue influence of a select few individuals, companies, or business groups" and that "restrictions on bank share ownership were first instituted in … 1982… as safeguards against large shareholders that may seek to profit from influencing the bank's credit decisions." For NBDIs, the FSS notes that "small-scale depository institutions such as mutual savings banks and credit unions that are not particularly susceptible to abuse by the controlling shareholders are also subject to less stringent ownership regulations." See http://english.fss.or.kr/fss/eng/wpge/eng2122.jsp.

[86] ALM systems focus on an entity's cash inflows and outflows during specific time buckets and determine: i) whether the entity is in a position to manage cash shortfalls in periods where outflows exceed inflows (a negative gap or mismatch is one where outflows exceed inflows) and ii) whether changing interest rate scenarios affects the inflows and outflows in a manner that is detrimental to the entity.

[87] For example, the Reserve Bank of India has a requirement for relevant financial institutions that a negative asset-liability mismatch in the shorter term maturity buckets should not exceed 15%.

could also consider introducing prudential limits on the percentage of mismatches allowable on various maturity buckets, as an additional measure to strengthen the sector's resilience.

Finally, there are differences in minimum capital requirements (i.e. net worth ratio) across the five MCC types. The current requirements are: 2% for credit unions as well as fisheries and forestry cooperatives; 4% for CCCs; and 5% for agricultural cooperatives. Without lowering the overall resilience of the sector, the authorities should improve the consistency of capital requirements across the five MCC types so as to help level the playing field given the similar activities and borrower types of these entities, as well as the risks to which they are exposed. Over the longer term, the authorities should also consider applying a risk-based capital requirement to MCCs, as is the case in other countries, in the interests of enhancing resilience, adhering to international good practice and promoting a level playing field.[88]

- ***Recommendation 4*: The FSC should enhance MSB/MCC prudential requirements, in line with international standards, to reflect the risks to which these entities are exposed. This includes developing an asset-liability management framework for MCCs above a minimum threshold size.**

Increase focus on MCC federations: The national federations carry out important public functions with respect to their respective MCC types. They are involved in the examination of their credit business; manage excess liquidity on behalf of their member entities, including by redistributing it to other MCCs; deal with MCCs experiencing financial difficulties; and operate the deposit insurance system for their respective MCCs. The operations of these federations, which are specified in different legislative acts and Government regulations, can give rise to differences in supervisory approach, rigour and outcomes. Given the importance of their public functions, the size of their operations and the potential for conflicts of interest, it is important that the national federations themselves are effectively regulated and supervised, and that any risks stemming from their operations are appropriately assessed.

The first area of focus involves supervisory and examination practices. The authorities report that they are working to improve consistency in examinations conducted by different national federations and ensure fairness for enforcement actions. Moreover, uniform guidelines are applied to all national federations to eliminate any discrepancy that may arise for common issues such as internal controls and household debt. Furthermore, the authorities note that the MCC Policy Council has had a positive effect in reducing regulatory differences and promoting sound supervision practices.

While reliance on private bodies to supervise private financial institutions is not uncommon in other countries, it can give rise to challenges relating to those bodies' capacity constraints, operational independence and the ability to apply a uniform approach across the sector or to detect emerging (systemic) risks.[89] Given this, the FSC/FSS should enhance their oversight of MCC federations in order to strengthen the quality and consistency of federation supervision

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[88] For example, credit unions in some jurisdictions (such as Australia and the European Union) are subject to Basel capital requirements. In the United States, the National Credit Union Administration has adopted the Basel III-derived "Risk-Based Capital 2" (RBC2) regulation for its credit union sector.

[89] As an example of issues stemming from similar arrangements in other countries, see the "Report for the Minister of Finance on the operation of the prudential regime for Non-bank Deposit Takers" by the Reserve Bank of New Zealand (September 2013, http://www.rbnz.govt.nz/-/media/ReserveBank/Files/regulation-and-supervision/non-bank-deposit-takers/5475890.pdf?la=en).

and examination of MCCs. This process could involve the commissioning of a stocktake of supervisory and examination practices across the federations to help determine best practice. Depending on the results of the stocktake, and any identified material differences and deficiencies, the FSC/FSS could develop uniform guidance across all five MCC types on their supervisory and examination functions as well to clarify the authorities' expectations (including benchmarks and quality assurance processes) of federations' performance vis-à-vis MCC examinations. While some of these areas are covered in different legislative Acts or in regulations issued by different Government ministries, there could be, depending on the findings of the stocktake, grounds to have these consolidated in a uniform set of requirements issued by the FSC for all five MCC federations, whose compliance is then assessed by the FSS.

The second area involves rules and oversight mechanisms to clearly and unambiguously separate the business activities of the federations from their public policy functions, particularly supervisory activities. For example, the federations engage in financial activities on their own account, including by managing the excess liquidity of their members and by investing in a range of assets such as government bonds, corporate bonds, real estate, loans to corporates and the equity of publicly-listed firms. As a result, they act as asset managers and have substantial investment portfolios.[90] For issues concerning conflicts of interest, the authorities report that the federations are working to strengthen internal controls using measures such as the appointment of non-MCC directors to fill a certain proportion of the Board of Directors, and to ensure compliance with standards in laws and internal regulations on asset management. The authorities also report that they analyse and review the risks of each federation on a regular basis. Risk factors related to asset management (e.g. asset management plans, asset allocation strategies and risk management status) are analysed for each federation, and based on the analysis, guidance is provided. The current guidance includes encouraging the federations to focus on the management of safe assets.[91]

At the same time, however, each MCC federation is subject to different laws and regulations on lending rules, list of eligible investment securities as well as limits on particular investment types. In addition, most Directors in a federation are typically drawn from the MCCs that the federation supervises. The FSC/FSS should therefore consider whether and how to strengthen existing corporate governance rules (e.g. with respect to fit-and-proper requirements and firewalls between activities) to ensure that potential conflicts of interest within a federation are managed. Relatedly, the FSS should expand the scope of its on-site examinations of federations' activities to assess how potential conflicts of interest are addressed (as part of broader governance arrangements) and consider moving to an annual (as opposed to biennial) frequency of those examinations.[92]

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[90] The total assets under management for each of the five federations as at end 2016 were as follows: KRW 10.9 trillion for credit unions; KRW 53.9 trillion for agricultural cooperatives; KRW 3.2 trillion for fisheries cooperatives; KRW 1.6 trillion for forestry cooperatives; and KRW 27.8 trillion for CCCs.

[91] For example, the federation of credit unions can invest only in public bonds, special bonds and BBB- or higher-rated corporate bonds.

[92] The FSS conducts on-site examination of the federations biennially on their overall operational status (e.g. the level of risks and the adequacy of risk management systems). It also performs annual examinations on the adequacy of the federations' examination and supervision of member cooperatives.

Third, the financial activities of (at least some) federations should be included in systemic risk analysis conducted by the BOK and FSS, and relevant data on the federations' functioning should be provided to those authorities for this purpose. In that context, it may also be useful for the BOK to attend, either as an observer or invitee, MCC Policy Council meetings in order to exchange views on risks in the MCC sector, including with respect to the MCC federations and their activities. The authorities point out that even under crisis situations, there has been no case in which losses incurred by the federations (and passed on to their member cooperatives) developed into systemic risk. Nevertheless, as a matter of good practice, it would be important to ensure that these entities are monitored from a macroprudential standpoint given their size, range of activities and interconnections with MCCs and other financial institutions.

The final area of focus involves deposit insurance. Deposits with banks, MSBs and the merchant bank are covered by the KDIC, while deposits with MCCs are covered by schemes run by the national federations. The retail clientele and small average size of deposits in MCCs means that the deposit coverage ratio for MCCs is much higher (80%-98%) than for banks (around 30%). As noted earlier, MCCs account for a sizeable share (around 25%) of total financial system deposits in Korea. While the federations' schemes are aligned with the KDIC in terms of deposit coverage (KRW 50 million), they vary in other important aspects such as deposit insurance premiums and public policy objectives.[93] Nor is it clear that the private deposit insurance funds have the operational independence required under the International Association of Deposit Insurers (IADI) Core Principles.[94] Unlike in the case of KDIC, there is limited publicly available information and data on the operations of these schemes. To ensure that the deposit insurance schemes of the five MCC federations operate in a sound manner and in accordance with international good practice, the authorities should assess their functioning against the international standard issued by IADI and address material deficiencies.

- ***Recommendation 5**: The authorities should increase their focus on MCC federations by: (a) conducting a stocktake of the supervisory and examination practices of the federations, with a view to develop uniform guidelines for federations to perform those functions; (b) reviewing corporate governance rules to ensure that potential conflicts of interest within a federation are managed, and undertaking more in-depth examinations of federation operations; and (c) including the financial activities of federations in systemic risk analysis. In addition, the deposit insurance arrangements of federations*

[93] In particular, the Depositor Protection Act specifies the KDIC's purpose as depositor protection and the maintenance of financial system stability. In contrast, Article 80-2 of the *Credit Unions Act* (http://www.fsc.go.kr/eng/new_financial/non_banking.jsp?menu=0205&bbsid=BBS0089) states that "The National Federation shall establish and manage the Credit Union Depositors Protection Fund… to guarantee the refund of deposits", but does not mention a financial stability objective. Similarly, the KFCC website (https://www.kfcc.co.kr/english/kfcc/kfcc0400_1.do) states that the KFCC "guarantees refund of deposits and savings by its protection scheme. The depositor protection system is a safety measure through which KFCC covers the loss of deposits and instalment deposits in the event of CC's insolvency. It is designed to protect depositors and enable customers to maintain their business with financial institutions with confidence".

[94] Principle 1 of the IADI's "Core Principles for Effective Deposit Insurance Systems" (November 2014, http://www.iadi.org/en/assets/File/Core%20Principles/cprevised2014nov.pdf) states that "The principal public policy objectives for deposit insurance systems are to protect depositors and contribute to financial stability. These objectives should be formally specified and publicly disclosed." Principle 3 states that "The deposit insurer should be operationally independent, well-governed, transparent, accountable, and insulated from external interference."

should be assessed against the international standard (IADI Core Principles), so that any material deficiencies can be identified and addressed.

Manage the orderly consolidation of the MCC/MSB sectors: A key feature of the MCC sector is the structural decline in the number of entities over past decades, reflecting both the ongoing consolidation in the sector and the very low number of new licenses issued. Nonetheless, there remain in excess of 3,500 MCCs in operation at present. Similarly, MSBs dropped from 93 in 2012 to 79 in 2016, primarily as a result of the 2011 crisis in that sector. To date, MCCs (and to a lesser extent, MSBs) have continued, as a whole, to operate on a profitable basis. However, they face intensified pressures from low economic growth and interest rates, competition from banks and financial technology (FinTech) firms, as well as increasingly tighter regulations on their activities to align them with those for banks. This raises the possibility that in competing for loans and deposits, MCCs and MSBs could loosen lending standards or expand into riskier assets in a 'search for yield'; the risk of non-bank financial institutions expanding into risky assets was highlighted recently by the BOK.[95]

The authorities are aware of the relatively high number of MCCs, and the geographical and other restrictions imposed on their activities (as well as on new licenses) in part reflects a desire to limit their business and hence reduce their scope to become systemic. Still, the high number of MCCs makes Korea an international outlier relative to its population, and raises two issues for authorities. First, it is not clear how much of this sector is viable over the medium term given that these entities tend to serve less creditworthy borrowers.[96] Second, the large number of MCCs means that the authorities rely on the federations for supervision and examinations in this sector – which, as discussed above, brings up its own set of challenges. These issues would likely come to the fore during a credit downturn.

Continued consolidation within the MCC and MSB sectors through, for instance, mergers could help on both of these fronts by building more resilient entities that are able to achieve economies of scale and cost savings. Having fewer, albeit larger, entities would also allow the FSS to conduct more examinations of individual MCCs itself, so that the role played by national federations declines over time. While consolidation is already taking place organically within the MCC sector, the authorities could be proactive on that front, to reap longer-term benefits in terms of reduced risks and improved supervisory outcomes while ensuring financial access to particular segments of the market, such as low income households.

The Australian experience can be instructive here. As with Korea, Australia also has non-bank deposit-taking institutions – credit unions and building societies (CUBS) – that are member-owned. Over recent decades, CUBS in Australia saw a trend decline in numbers (from 188 in September 2004 to 62 as at December 2016), as well as a decline in their share of the financial system (from around 4% in 1990 to less than 1% in 2016). CUBS faced difficulties in remaining competitive given the dominance of banks with their extensive branch networks, cheaper access to capital and funding, and public perceptions that banks are more safe and sound. CUBS

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[95] The BOK noted in its December 2016 FSR (ibid, p. 86) that "in some non-bank financial sectors, however, institutions are expanding their investments in risky assets for purposes of improving profitability, and it should be borne in mind that this can become a factor causing resilience to weaken in the future".

[96] The relatively high, albeit declining, number of MCCs undergoing prompt corrective action in recent years (around 8% of the total as of 2016) indicates that the sector has been under some stress.

responded in several ways to maintain profitability in these circumstances, including through mergers within the industry and alliances with larger banks. Following Government reforms in 2010 to enhance competition within the banking system, CUBS also began converting to bank status and, since then, over 15 CUBS have converted to 'mutual banks'.[97]

The authorities should develop measures to proactively manage the orderly consolidation of the MCC and MSB sectors – such as, for example, encouraging entities in those sectors to share costs (e.g. through common technology platforms, credit scoring systems and back office infrastructures); and fostering innovative ways to expand those entities' capital base while retaining their mutual status.

- ***Recommendation 6*: The authorities should develop measures to pro-actively manage the ongoing consolidation in the MCC and MSB sectors, in order to promote long-term sustainability while ensuring financial access with minimal disruption.**

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[97] In the May 2017 Federal Budget, the Australian Government announced it will lift the prohibition on the use of the term 'bank' by smaller banking institutions, such as credit unions, with less than A$50 million in capital. This will allow smaller banking entities to benefit from the reputational advantages of being called a 'bank'. See the "Backing Innovation and FinTech" fact sheet in the Australian Government Budget 2017, available at http://budget.gov.au/2017-18/content/glossies/factsheets/html/FS_innovation.htm.

Annex 1: Overview of the financial system in Korea[98]

From 2012 to 2016, financial sector assets increased by KRW 948 trillion (32%) to stand at KRW 3,920 trillion, having exceeded nominal GDP growth (19%) over the same period. The ratio of non-financial sector financial assets to nominal GDP rose by 75% to stand at 950%. The outstanding balance of listed bonds in Korean financial markets has grown more rapidly than stock market capitalisation since 2012, as bond maturities have lengthened and issuances have expanded, particularly of government bonds and financial debentures. As of end-2016, stock market capitalisation stood at KRW 1,510 trillion, while the outstanding balance of listed bonds increased during the same period to KRW 1,597 trillion. The size of the bond market is hence greater than that of the stock market.

Table 1: Size of Korean financial system

(KRW trillion, unless otherwise noted)

	2012	2016	Change
Stock market capitalisation	1,263	1,510	+247%
Outstanding balance of listed bonds	1,292	1,597	+305%
Financial sector assets	2,972	3,920	+948%
Financial assets[1)] to GDP	875%	950%	+75%

Note: 1) Total financial assets of non-financial sectors (Flow of Funds).
Source: Korean authorities.

According to flow of funds data, the volume of financial assets held by households was the largest at KRW 3,389 trillion, followed by corporations at KRW 2,433 trillion and the government at KRW 1,457 trillion. Concerning financial liabilities, the volume held by corporations was the largest at KRW 4,542 trillion, while that held by households and by the government were KRW 1,566 and KRW 937 trillion respectively. In terms of net financial assets, households act as users of funds (i.e. their fund use exceeds fund raising), while corporations act as raisers of funds (i.e. their fund raising exceeds fund use).

Table 2: Financial assets and liabilities by sector of the Korean economy (end-2016)

(KRW trillion)

	Financial assets	Financial liabilities	Net financial assets
Household	3,389	1,566	1,823
Corporate	2,433	4,542	-2,109
Government	1,457	937	520
Total	7,279	7,044	234

Source: BOK (Flow of Funds).

98 Based on information provided by the Korean authorities.

The assets of banks and non-bank depository institutions (NBDIs) account for approximately two-thirds of the total assets held by Korea's financial institutions.

Table 3: Korea – Financial system structure and size (end-2016)

	Number	**Assets** (KRW trillion)	**Share of total** (%)	**Assets** (% of GDP)
Banks	59	2,648	52.6	162
NBDIs	3,663	696	13.8	43
- Mutual savings banks (MSBs)	79	52	1.0	3
- Mutual credit cooperatives (MCCs)	3,582	574	11.4	35
- o/w credit unions	904	74	1.5	5
- o/w cooperatives	1,357	362	7.2	22
- o/w community credit cooperatives (CCCs)	1,321	138	2.8	8
- Merchant bank	1	2	0.0	0
- Korea Post	1	69	1.4	4
Credit-specialised financial companies	86	222	4.4	14
Securities companies	53	374	7.4	23
Futures companies	5	4	0.1	0
Asset management companies	165	7	0.1	0
Life insurance companies	25	826	16.4	50
Non-life insurance companies	32	252	5.0	15
Total	4,088	5,030	100	307

Source: Korean authorities.

Banks are divided into commercial banks established and operated based upon the Banking Act, and specialised banks established and operated in accordance with their respective acts to provide stable funding to specific sectors of the economy. Commercial banks can be further broken down into nationwide banks, local banks and foreign bank branches. The five specialised banks currently in operation are the Korea Development Bank, Korea Eximbank, Industrial Bank of Korea, NH Bank and Suhyup Bank.

NBDIs include MSBs, MCCs, Korea Post and a single merchant bank. MSBs are local financial institutions established to offer financial services to residents and small-sized enterprises located in a specific administrative district. MCCs, which include credit unions, cooperatives in the agricultural, fisheries and forestry sectors and CCCs, are aimed at promoting the common interests of members by providing them with savings services and loans. Postal savings, operated by Korea Post, are managed by the government using post offices nationwide to provide a means of savings to farming and fishing communities, which tend to be underserved with respect to private financial services. Merchant banks providing a wide range of financial services were established in 1975 to facilitate private sector financing of foreign funds; currently only one remains in operation.

Credit-specialised financial companies handle leases, credit cards, instalment financing and new technology business investment. Securities companies carry out brokerage, issuance and underwriting, and proprietary trading of stocks and bonds, and provide asset management services such as cash management accounts, funds and hybrid securities. Futures companies engage in investment trading and brokerage of domestic and overseas exchange-traded derivatives. Asset management companies' main line of business is managing the funds of collective investment business entities established or designated as investment trusts or investment companies.

Banks account for a high portion of deposit-taking institutions' lending, but their lending has shown a lower rate of growth than that of NBDIs. In particular, the pace of bank lending growth in 2016 slowed compared to the previous year, driven by corporate restructuring in vulnerable industries. Among NBDIs, MCCs' lending rose 16.2% in 2016, greatly outpacing its increase the previous year (8.9%).

Table 4: Loans and deposits for banks and NBDIs

	Loans			Deposits		
	Amount (KRW billion)	**Growth** (%, during period)		**Amount** (KRW billion)	**Growth** (%, during period)	
	2016	**2015**	**2016**	**2016**	**2015**	**2016**
Banks	1,739,367	6.8	5.7	1,461,855	7.8	6.7
MSBs	41,330	21.3	23.4	45,070	16.2	19.7
MCCs	373,130	8.9	16.2	489,335	6.5	7.8
Merchant bank	644	30.8	56.3	1,263	27.5	29.8
Korea Post	na[1)]	na[1)]	na[1)]	60,778	1.5	0.8

Note: 1) Korea Post does not engage in lending.

Source: Korean authorities.

Banks take up the highest share of deposits among deposit-taking institutions at 71%, followed by MCCs at 23.7%. Compared to banks or MSBs, the loan-to-deposit ratio of MCCs remains at a low level.

Table 5: Loan and deposit metrics for banks and NBDIs (end-2016)

	Banks	MSBs	MCCs	Merchant bank	Korea Post
Share of total deposits (%)	71.0	2.2	23.7	0.1	3.0
Loan-to-deposit ratio[1)]	119.0	91.8	77.6	51.0	na[2)]

Note: 1) The ratio is not regulatory. It is based on the loans and deposits reported in the end-2016 balance sheets.
2) A loan-to-deposit ratio is not applicable for Korea Post as it does not engage in lending.

Source: Korean authorities.

The capital adequacy ratio of deposit-taking institutions exceeds the regulatory requirement. Banks' capital ratio inched down in 2015, reflecting a decline in profitability from continuing low interest rates and increasing loan losses, but rose in 2016 on account of the measures taken

by the supervisory authorities to recognise loan loss reserves as common equity and the reduction in risk-weighted assets. As of end-2016, banks' total capital adequacy ratio under Basel III stood at 14.8%. The end-2016 capital adequacy ratio of MSBs was 13.9%, of MCCs (excluding CCCs) at 7.7% and of CCCs at 9.4%, all of which exceeded the supervisory requirement (7%, 2-5% and 4% respectively).

Table 6: Financial soundness indicators of banks and NBDIs (%)

		2014	2015	2016
Capital ratio[1] (net worth ratio for MCCs and CCCs)	Banks	14.0	13.9	14.8
	MSBs	14.0	14.1	13.9
	MCCs[2]	7.7	7.8	7.7
	CCCs	8.9	9.3	9.4
Substandard-or-below loan (SBL) ratio	Banks	1.6	1.8	1.4
	MSBs	15.7	10.2	7.1
	MCCs[2]	2.5	1.8	1.4
	CCCs	2.0	1.4	1.5
Delinquency ratio	Banks	0.6	0.6	0.5
	MSBs	14.7	9.2	5.8
	MCCs[2]	2.6	1.6	1.2
	CCCs	2.3	1.6	1.1
Liquidity ratio[3]	Banks	118.6	104.6	108.2
	MSBs	135.2	119.3	120.0
	MCCs[2]	58.4	56.7	51.6
	CCCs	120.4	120.9	101.5

Note: 1) The minimum capital adequacy ratio is 8% (banks), 7% (MSBs), 2%-5% (MCCs, excluding CCCs) and 4% (CCCs). Larger MSBs (i.e. those whose assets total more than KRW 1 trillion) will be subject to an 8% minimum capital adequacy requirement from 2018.
2) Excluding CCCs.
3) Banks: 2014 figures are liquidity ratios (assets with remaining maturities of one month or less / liabilities with remaining maturities of 1 month or less) and those of 2015 and 2016 are liquidity coverage ratios (LCR; high quality liquid assets/total net cash outflows over 30 calendar days). MSBs, MCCs and CCCs: assets with remaining maturities of three months or less/liabilities with remaining maturities of three months or less.

Source: Korean authorities.

Asset soundness has shown a general trend of improvement as well. Although banks' substandard-or-below loan (SBL) ratios went up temporarily in 2015 due to the non-performing loans (NPLs) of large corporations in vulnerable sectors, they declined in 2016 due to banks' efforts to strengthen risk management of corporate loans, reduce new toxic assets, and actively resolve NPLs. MSBs and MCCs (excluding CCCs) also saw their SBL ratios and delinquency ratios continue to decline. As for CCCs, their delinquency ratio continued to fall, but their SBL ratio rose slightly due to an increase in the share of vulnerable borrowers (e.g. low-income groups and multiple debt holders) in the process of expanding household lending.

Banks' liquidity coverage ratio (LCR), which indicates banks' ability to cover short-term net cash outflows, exceeded the regulatory requirement and showed improvement at end-2016 compared to the previous year. The liquidity ratio of MSBs dropped at end-2015, owing to a steep rise in low liquid assets, but remained at levels far exceeding the regulatory requirement.

The liquidity ratios of MCCs also saw a general decline, as the share of household loans in their total assets continued to increase.

Profitability varied somewhat by type of institution. For banks, the return on assets (ROA) and return on equity (ROE) fell slightly in 2016, attributable to the increase during corporate restructuring in their losses for some loans to large corporations.

Table 7: Profitability indicators of banks, MSBs and MCCs (%)

		2014	2015	2016
Return on assets	Banks	0.4	0.4	0.3
	MSBs	0.2	1.7	1.7
	MCCs	0.4	0.4	0.4
Return on equity	Banks	4.6	4.4	3.7
	MSBs	2.9	15.4	15.0
	MCCs	5.7	5.4	5.0
Net interest margin	Banks	1.8	1.6	1.6
	MSBs	6.2	6.7	7.0
	MCCs	na	na	na

Source: Korean authorities.

With regard to MSBs, their ROA and ROE recorded low levels in the aftermath of their financial distress in 2011, but they have improved since 2015, boosted by an increase in interest income following an expansion of loans and by a decrease in their loan losses with a reduction in NPLs. For MCCs, the ROA and ROE have remained stable at 0.4% and around the 5% range respectively since 2014, despite the continued low interest rate environment. As for the net interest margin, it has remained low for banks since 2015 affected by the ongoing low interest rate environment, while it has widened for MSBs due to increased demand for household loans in 2016, particularly for credit loans.

Annex 2: Comparison of prudential standards for banks, mutual savings banks and mutual credit cooperatives

	Banks	Mutual savings banks (MSBs)	Mutual credit cooperatives (MCCs)
Minimum capital adequacy ratio	8%, Basel III definition	7%, Basel I definition (8% beginning 1 January 2018 for MSBs with assets in excess of KRW1 trillion)	Net worth ratio: 2% for credit unions, fisheries cooperatives and forestry cooperatives 4% for community credit cooperatives 5% for agricultural cooperatives
Exposure limit	Single borrower: Less than 20% of bank capital for the same individual borrower and company	Less than 20% of capital (KRW10 billion for a company, KRW5 billion for an individual business owner, and KRW800 million for an individual)	Larger of either 20% of capital or 1% of total assets (for individual borrower)
	Same borrower (borrower and related parties as a whole): Less than 25% of bank capital	Same as banks	
	Limit on large exposures: Less than 500% of bank capital	Same as banks	
Credit extension limit	None	Real estate project finance (PF): Less than 20% of total credit extension limit Construction, real estate/rental business: Less than 30% of total credit extension limit Sum of real estate PF and real estate/rental business: Less than 45% of total credit extension limit	None
Reserves for deposit withdrawals	• Held by the BOK <Reserve ratio> • For deposits, instalment savings and CD: 2% • Other deposits: 7%	• Deposited with the federations <Reserve ratio> • Instalment savings: 10% • Other deposits: 5% of the total amount of deposits other than instalment savings deducted by the capital	<Reserve ratio> • Deposits: more than 10% (unified across MCCs)
Liquidity	The ratio of liquid assets to liquid liabilities should be more than 100%	Same as banks	Cooperatives should maintain an appropriate level of liquidity to qualify the liquidity criteria for the supervisory rating
Securities investment	Less than 100% of bank capital	Less than 100% of capital	Credit unions

		(Stocks: Less than 50%) (Stocks and bonds of same company: Less than 20%) (Stocks of same company: Less than 15%)	investment limit regulated, more restrictive than bank limits Stocks: 100% Bonds: smaller of either 30% of assets or 60% of available funds • Securities of the same company: the higher of either 20% of the capital or 20% of available funds Agricultural, fishery and forestry cooperatives • Upon determination of the respective national federations Community credit cooperatives • Bonds of the same industry/sector: up to 10% of available funds
Asset classification	• Divided into five groups: normal, precautionary, substandard, doubtful and presumed loss	Same as banks	Same as banks
Loan loss provisions	Household loans • Normal: 1% • Precautionary: 10% • Substandard: 20% • Doubtful: 55% • Presumed loss: 100% Corporate loans • Normal: 0.85% • Precautionary: 7% • Substandard: 20% • Doubtful: 50% • Presumed loss: 100%	Household and corporate loans* • Normal: 0.5% (2% for PF) • Precautionary: 2% (7-10% for PF) • Substandard: 20% (30% for PF) • Doubtful: 75% • Presumed loss: 100% * The provisioning requirements for household and corporate loans will be progressively aligned, starting in 2018, to those of banks by 2020.	Same as banks
LTV ratio for mortgage financing	70%	Same as banks	Same as banks
DTI ratio for mortgage financing	60%	Same as banks	Same as banks
Loan-to-deposit limit	100%	Not applicable	MCCs with loans in excess of KRW 20 billion: 80%

Annex 3: Korea Post's deposit-taking operations and regulatory framework

The deposit-taking business of Korea Post supports the public policy aim of providing access through its nationwide branch network[99] to financial services, especially in rural areas and low-income households. Korea Post offers a range of deposit types (including time and term deposits), as well as debit cards, money transfer services and ATM facilities. Unlike banks and other NBDIs, deposits with Korea Post are not covered by an explicit deposit insurance scheme, but are, implicitly at least, fully protected by the Government (compared to the KRW 50 million coverage limit for deposits in banks and other NBDIs).[100] Korea Post's financial activities are not explicitly profit-oriented, with any profits transferred to the Government budget.

The regulatory framework for Korea Post differs from that for banks and MSBs/MCCs due to a number of factors. First, deposit-taking is a historically-based function that is secondary to its core role as a national postal service. Korea Post's recent deposit growth has been flat, consistent with its strategy to maintain the current level of deposit funding – hence it does not actively promote its deposit-taking business and has kept deposit rates at levels similar to (or below) those of banks. Second, Korea Post does not engage in lending and operates under strict criteria to invest in 'safe assets'. It invests primarily in domestic (particularly public sector) bonds, as well as in bank deposits, money market funds and listed equities. Third, Korea Post is not under the direct regulation and supervision of the FSC, nor under the direct examination of the FSS. Instead, Korea Post is part of the Ministry of Science, ICT and Future Planning (MSIP), and is subject to the prudential oversight of the MSIP, in consultation with the FSC. For example, there is a separate account specifically for Korea Post's deposit-taking business, which operates under the Basel III capital requirements (with a capital adequacy ratio as at May 2017 of around 14.5%). Korea Post submits regular prudential reports to the FSC covering financial soundness and safety as well as the results of its external accounting audit, and also provides data to the National Assembly and to the MSIP's Audit Office.

The MSIP introduced a regulation in December 2015 to enable efficient implementation of financial examinations of Korea Post. Under that regulation, developed in consultation with the FSC, the FSC/FSS may conduct examinations of Korea Post for its financial activities both on a regular and ad-hoc basis. An ad hoc on-site examination is initiated upon the occurrence of a 'major financial incident' (such as embezzlements or investments performing poorly). To date, the FSS has not conducted an on-site examination of Korea Post since, according to the authorities, there have not been any major incidents. As a national organisation, Korea Post is also subject to oversight by the National Assembly, and the Board of Audit and Inspection of Korea. The latter conducts an examination of Korea Post's deposit-taking business (with staff seconded from the FSS) every two years, including prudential aspects of its activities.

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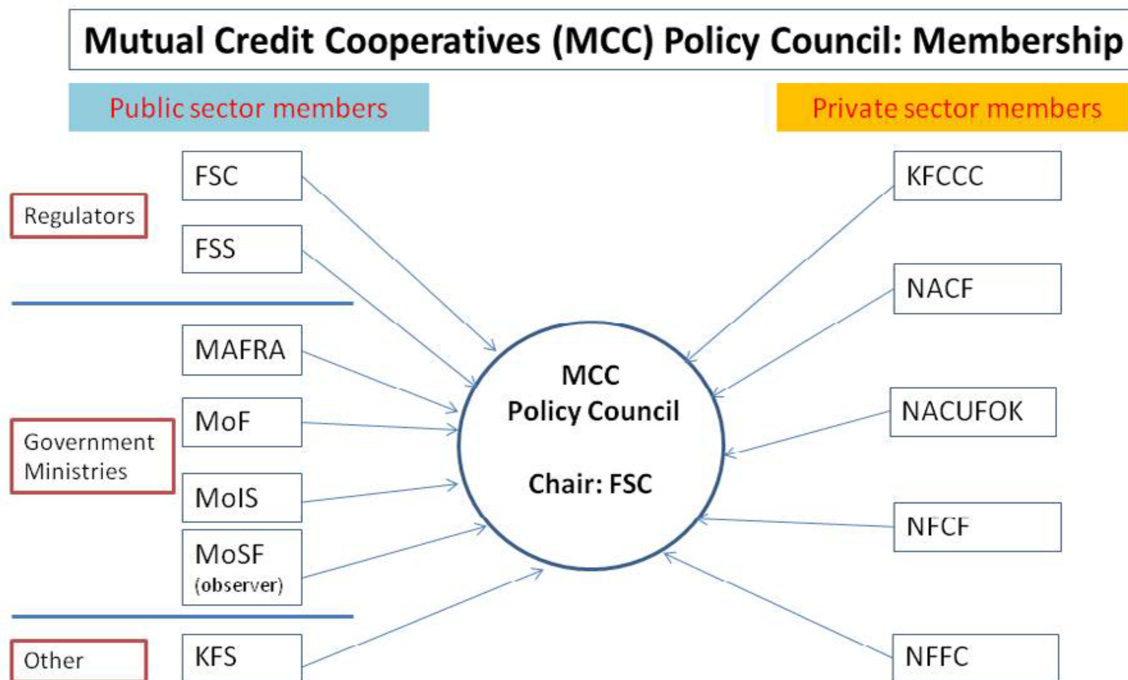
[99] Korea Post had around 2,600 deposit-taking offices nationwide as of May 2017, compared to the largest bank's network of around 1,900 branches.

[100] According to the MSIP, the average deposit balance in Korea Post is less than KRW 3 million, compared to an average bank deposit balance of around KRW 5 million.

Annex 4: The MCC Policy Council

To ensure effective coordination between the Korean authorities and other bodies involved in the regulation and supervision of NBDIs, the authorities established in 2013 a Mutual Credit Cooperatives (MCC) Policy Council (see Figure 1). The Council is a non-statutory body comprised of senior officials from prudential authorities and Government ministries, as well as senior executives from the industry associations/national federations of the various cooperative sectors. The Council is chaired by the FSC's Vice Chairman, and meets quarterly. Every six months (or if there are major issues to discuss), the Deputy Governor or Chairman of each authority attends, while departmental heads typically attend the other meetings. After each meeting, the Council issues a press release on its deliberations and outcomes.

Figure 1: Membership of the MCC Policy Council



FSC = Financial Services Commission; FSS = Financial Supervisory Service; MAFRA = Ministry of Agriculture, Food and Rural Affairs; MoF = Ministry of Oceans and Fisheries; MoIS = Ministry of the Interior and Safety; MoSF = Ministry of Strategy and Finance; KFS = Korea Forest Service; KFCCC = Korean Federation of Community Credit Cooperatives; NACF = National Agricultural Cooperative Federation; NACUFOK = National Credit Union Federation of Korea; NFCF = National Forestry Cooperative Federation; NFFC = National Federation of Fisheries Cooperatives

While it does not have an explicit Charter, the aims of the Council are to ensure close cooperation among relevant authorities and other bodies, so as to enhance consistency in MCC prudential regulation and supervision and minimise regulatory gaps between the five different types of MCCs as well as between MCCs and banks; and to assess potential risks facing the sector. The Council conducts a quarterly review of business conditions and risk factors by different types of MCCs and introduces joint response measures if necessary. Major ongoing issues for the Council include: reducing regulatory gaps between MCCs; strengthening risk management systems; introducing measures to boost business competitiveness; and monitoring

and managing household debts of MCCs. The Council also engages in work to protect consumers from unfair business practices.

The Council functions on the basis of mutual trust and cooperation, and has no authority to force any policy measure on specific NBDIs on its own. While the FSC chairs the Council, the member Government agencies for each NBDI type are responsible for enforcing decisions made by the Council. For example, when new loan application screening guidelines for MCCs were introduced, the broad policy direction was set by the FSC and specific policy details were drafted by the Council following inter-agency consultations and discussions with the national federations. There is a strong emphasis placed on cooperating with the private sector, reflected in the Council's membership as well as in consultation with the industry on policy proposals.

Recent actions coordinated by the Council include: strengthened LTV standards on non-residential mortgage loans (October 2016); the implementation of Guidance on Credit Assessment for MCCs (December 2016); and strengthened regulation on unfair credit transactions to the same level applied in the banking sector.

Annex 5: Follow-up of other key FSAP recommendations

This Annex presents the follow-up actions reported by the Korean authorities to key FSAP recommendations that are not covered in sections 2 and 3. The actions mentioned below have not been evaluated as part of the peer review and are presented solely for purposes of transparency and completeness.

Recommendations	*Steps taken to date and actions planned (including timeframes)*
Overall Financial Sector Oversight and Coordination	
Establish a dedicated and formal macroprudential council, with a stronger role for the BOK, the power to recommend regulatory action from other bodies, and transparency over policy deliberations.	We are operating Macroeconomic Finance Meeting which convenes on a regular basis with the Vice-Minister of Strategy and Finance serving as the Chair. Organisations responsible for macro-prudential management participate in the meeting, including MoSF, BOK, FSC and FSS. All participating organisations have the rights to submit agenda to set relevant measures. The BOK is of the view that it is desirable to establish a formal macroprudential council in Korea, as recommended in the IMF/WB FSAP, in the mid-to-long term.
Strengthen the independence of the FSC and FSS and increase transparency of the allocation of decision-making responsibilities among the two authorities.	Independence of FSC and FSS is protected pursuant to the Establishment Act, and their responsibilities and powers are explicitly stipulated. - FSC: make financial policies; make policies and regulations for supervision, examination and sanctions. - FSS: carries out financial supervision pursuant to rules and regulations set by FSC, for example conduct examination and impose sanctions.
Enhance enforcement effectiveness by broadening the range of administrative and civil penalties and increasing the amount of administrative fines and civil penalties.	Eleven representative laws governing the financial sector were amended, which include the expanded scope of imposing monetary penalties and fines as well as the increased amount of levies (went into effect on 19 October 2017).
Financial Stability Analysis, Stress Tests, and Financial Supervision	
Enhance coordination among agencies involved in stress testing (FSS and BOK).	To implement the recommendations of the FSAP, the BOK and the FSS set up the 'BOK-FSS Stress Test Working-level Council' in March 2015 as a constant channel for discussion related to stress testing, with the participation of the relevant department heads of the two institutions. Through this working-level council, the BOK and the FSS jointly conducted stress tests on the capital adequacy and

	foreign currency liquidity of domestic banks during 2015 to 2016. The two organisations designed a joint stress test scenario in consultation with each other and carried out their own top-down and bottom-up tests using their respective methods. The two institutions then compared and cross-checked their respective results. In the 2016 joint stress test, in particular, the FSS cross-checked the scenario to be used for the foreign currency liquidity stress tests of banks from 2017, by applying it to the BOK's test model.
FSS should carry out a comprehensive validation of banks' stress testing exercise.	The assessment on stress test implementation has been regularly conducted since 2014. In 2017, it was carried out in July. Going forward, we plan to increase the level of assessment on stress test implementation.
Disclose to the public the results of the stress tests conducted by the authorities.	The BOK frequently conducts macro stress tests on various potential risk factors to effectively carry out its duty of financial stability, and publishes its test results through the Financial Stability Report. A total of 12 stress test results since 2010 are available in the Financial Stability Reports. Going forward, the BOK plans to continually conduct stress tests on potential risks at home and abroad and release its test results in the Financial Stability Report.
Empower supervisors to set capital ratios above the Basel II minimum, implement all principles of Pillar-2 of Basel II, and extend calculation of Basel II capital to group holding companies.	Pillar 2 implementation on bank holding companies: entered into force in Jan. 2016 (introduced additional capital buffer) Basel II and III implementation on bank holding companies: entered into force in Dec. 2013 (introduced minimum capital requirement)
Implement a risk-based approach to Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) supervision, and expand supervisory activities to all deposit-taking institutions, and the designated non-financial businesses and professions	**In progress** We are implementing a risk-based approach to AML/CFT supervision. - Korea Financial Intelligence Unit (KoFIU) recommends vendors to implement a risk-based approach to AML/CFT supervision. - We have already implemented risk-based approach (RBA) to banking, securities and insurance sectors. - We are expanding RBA in the cooperatives sector as well.

	We are carrying out AML/CFT supervision on all deposit taking institutions. - With respect to designated non-financial businesses and professions (DNFBPs), we apply AML/CFT framework to casino businesses. - For other DNFBPs, we are taking steps to implement AML/CFT framework.
Ensure sufficiently comprehensive audit oversight and introduce minimum standards for appointing external auditors of banks over and above existing requirements, reflecting expectations of experience and expertise.	Promulgated the accounting reform act[101] to enhance accounting transparency. The accounting reform act includes the following: - Regular rotation of an auditor for listed corporations[102] - Introduction of an auditor registration scheme - Enhancing internal accounting control within businesses - Expanding the limit on non-audit services by an auditor - Reinforcing punishment on window dressing settlement.
Systemic Liquidity Management and Financial Market Infrastructures (FMIs)	
Put in place a Memorandum of Understanding to ensure effective coordination between BOK and FSC in FMI matters, and provide BOK with more enforcement tools.	The FSC and the BOK have been engaging in stronger cooperation for FMI-related matters, through information and staff exchange. There was no discussion on legislating laws and regulations to provide BOK with more tools for FMI oversight. The BOK Senior Deputy Governor serves as an ex-officio member of the FSC and in this capacity participates in the decision-making process for various FMI issues, including amending regulations and drafting measures. The Korean regulatory framework provides that the BOK may assess and make recommendation on FMIs in Korea.
Reform the credit risk and management framework for the securities market, and increase the number of Korea Exchange (KRX) staff managing companywide and CCP-related matters.	**Implementation completed** **1. Introduction of maintenance margin** Adopted an exchange margin scheme to address price volatility in stocks and securities products (exchange-traded funds, equity-linked warrants etc.). Revised (Dec. 2016, Sep. 2017) and implemented (Sep. 2017) regulations on the Korea Exchange. **2. Restructuring Collateral Management System**

[101] Act on External Audit of Stock Companies, Certified Public Accountant Act and Financial Investment Services and Capital Markets Act.

[102] Among nine years, six years are for a free designation system and the remaining three years are for a mandatory designation by the Korean government.

	Restructured a calculation method for margin assessment ratio in the derivatives and securities market. Introduced conditions on qualified collateral and collateral concentration limit. Revised (Dec. 2016, Sep. 2017) and implemented (Sep. 2017) regulations on the Korea Exchange. **3. Revamping Joint Compensation Fund scheme for exchange-traded securities and derivatives market** We have repealed cap for Joint Compensation Fund (KRW 200bn each for securities and derivatives). The amount of Joint Compensation Fund is set based on the risk exposure calculated by stress test. Sequence of the use of settlement resources in case of a default (default waterfall) has been revised: in case of member default, CCP uses a portion of settlement reserve, which is its retained earnings set aside, before using the Joint Compensation Fund. These changes were reflected in the amended Financial Investment Services and Capital Markets Act (entered into force in July 2015), its Enforcement Decree (October 2015) and KRX Regulation. **4. Strengthened standards for selecting settlement banks** We are applying more stringent capital requirement as a standard for selecting settlement banks. Starting from May 2014, the new rule requires settlement banks to have more than 120% of the minimum capital requirement stipulated in the Banking Act, whereas more than 8% of equity capital ratio was required before. Also, new standards have been introduced since the FSAP, such as AA or above credit rating (May 2014) and 110% or higher liquidity coverage ratio (August 2015). **5. Introduction of intraday margins to the derivatives market and a margin scheme for credit risk trading** When necessary, impose additional intraday margins on the clearing members to reduce settlement risks that may arise from sudden price fluctuations and other adverse developments (June 2015). Implement a scheme to manage credit risks, which levies additional margins for credit risk if net risk margin exceeds credit risk limit (three times the net capital) of each members.

	6. Verification of margin calculation model by external expert KIS has completed verifying margin calculation model in Feb. 2016. **7. Enhanced independence of Risk Management Committee** The Risk Management Committee for Clearing and Settlement was expanded and restructured to the Deliberation Committee (a pool of members) to increase its independence. To ensure a higher level of independence, the Committee appoints the Chair from a pool of clearing and settlement members (7) and a pool of risk management members (7); and clearly separates one pool from another. The Working-level Committee for CCP Risk Management was newly formed to strengthen CCP risk management. (Sep. 2017) The Committee is comprised of 10 working-level employees from securities and futures companies. **8. Set up a team dedicated to CCP risk management** A new FSS team that includes two newly hired risk management professionals is dedicated to managing CCP risks. This team was set up in February 2015.