INTERNATIONAL MONETARY FUND

IMF Country Report No. 17/390

INDIA

December 2017

FINANCIAL SYSTEM STABILITY ASSESSMENT—PRESS RELEASE AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR INDIA

In the context of the India Financial Sector Assessment Program, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its November 17, 2017 consideration of the FSSA.
- The **Financial System Stability Assessment** (FSSA) for India, prepared by a staff team of the IMF for the Executive Board's consideration November 17, 2017. This report is based on the work of an Joint IMF/WB Financial Sector Assessment Program (FSAP) mission to India during June and July 2017. The FSSA report was completed on October 27, 2017.
- A **Staff Supplement** updating information on recent developments.
- A **Statement by the Executive Director** for India.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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Price: $18.00 per printed copy

International Monetary Fund
Washington, D.C.

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Press Release No. 17/518
FOR IMMEDIATE RELEASE
December 21, 2017

International Monetary Fund
Washington, D.C. 20431 USA

IMF Executive Board Approves India's 2017 Financial System Stability Assessment

On November 17, 2017, the Executive Board of the International Monetary Fund (IMF) discussed the Financial System Stability Assessment (FSSA) of India.[1]

Since the 2011 Financial Sector Assessment Program (FSAP), India has recorded strong growth in both economic activity and financial assets, supported by important structural reforms and terms of trade gains. Increased diversification, commercial orientation, and technology-driven inclusion have supported growth in the financial industry, backed by improved legal, regulatory, and supervisory frameworks. Yet, the financial sector is facing considerable challenges, and economic growth has recently slowed down. High nonperforming assets (NPAs) and slow deleveraging and repair of corporate balance sheets are testing the resilience of the banking system, and holding back investment and growth.

The Indian financial system is undergoing a gradual structural shift, with a greater role for nonbank intermediaries and higher recourse to market funding for large corporates. Financial system assets equal about 136 percent of GDP, close to 60 percent of which reflect banks' assets. The state retains an important footprint in the system via ownership of large financial institutions, captive government financing, and directed credit to priority sectors.

India's key banks appear resilient, but the system is subject to considerable vulnerabilities. Stress tests show that the while largest banks are sufficiently capitalized and profitable to withstand a deterioration in economic conditions, a group of public sector banks (PSBs) are highly vulnerable to further declines in asset quality and higher provisioning needs. Capital

[1] The Financial Sector Assessment Program (FSAP), established in 1999, is a comprehensive and in-depth assessment of a country's financial sector. FSAPs provide input for Article IV consultations and thus enhance Fund surveillance. FSAPs are mandatory for the 29 jurisdictions with systemically important financial sectors and otherwise conducted upon request from member countries. The key findings of an FSAP are summarized in a Financial System Stability Assessment (FSSA), which is discussed by the IMF Executive Board. In cases where the FSSA is discussed separately from the Article IV consultation, at the conclusion of the discussion, the Chairperson of the Board summarizes the views of Executive Directors and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in a summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

needs range from 0.75 percent of GDP in the baseline to 1.5 percent of GDP in the severe adverse scenario.

The authorities have been pursuing policies to accelerate the process of NPA resolution. The 2016 Insolvency and Bankruptcy Code introduced a modern framework that aims at reorganization and insolvency resolution in a time-bound manner, and the Reserve Bank of India (RBI) was empowered with directing restructuring cases to the insolvency process. This approach shows promise to deliver progress in NPA resolution, particularly if accompanied by sufficient upfront provisioning and capital buffers in the PSBs; broader restructuring of the PSB sector, including improvements in governance; more flexible out-of-court debt restructuring mechanisms; and increased capacity and resources for the insolvency courts. The authorities recently announced a recapitalization plan for the PSBs amounting to approximately 1.3 percent of GDP, as well as the establishment of a mechanism to seek consolidation across these banks.

The FSAP took stock of the considerable progress made in strengthening financial sector oversight, and identified areas where scope for further improvement remains. Notably, these include strengthening the RBI’s de jure independence as well as its powers over the PSBs; expanding other financial regulators’ resources; introducing a risk-based solvency regime and extending risk-based supervision for insurers; and unifying the oversight of commodities markets. Other gaps include risks from politically exposed persons and the gold sector. In the area of crisis management, the planned introduction of a special resolution regime for financial institutions is an important step toward aligning the financial safety net with international standards, although there is duplication of supervisory responsibility for going-concern institutions between supervisor and resolution authority; also, the proposed new framework does not ensure equal treatment of domestic and foreign liability holders in resolution. There is scope to enhance other elements of the safety net, including deposit insurance, emergency liquidity assistance, and crisis preparedness.

Executive Board Assessment[2]

Executive Directors broadly agreed with the findings and recommendations of the Financial System Stability Assessment (FSSA). They welcomed the important progress made by the authorities in strengthening financial sector oversight, deepening markets, and fostering financial inclusion. Directors commended the authorities for the major reforms undertaken since the 2011 FSAP, notably in introducing Basel III standards and risk-based supervision of banks and securities firms, improving interagency cooperation under the auspices of the Financial Stability and Development Council, and introducing a modern insolvency framework for companies.

[2] At the conclusion of the discussion, the Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

Directors encouraged the authorities to implement the recommendations of the FSSA to accelerate the resolution of nonperforming assets and the repair of corporate balance sheets. The recently announced measures to recapitalize the public-sector banks (PSBs), including through government contributions, will foster consolidation in the sector and support effective resolution of nonperforming assets. They encouraged a broad-based restructuring of PSBs, including improvements in governance, to avoid a resurgence of asset quality problems. Going forward, greater participation of the private sector in bank capital, a smaller footprint of the public sector in the financial system, a cautious reduction in statutory liquidity requirements, and assessing the effectiveness of directed lending, would boost the system's capacity to support credit to the economy, while reducing moral hazard and contingent fiscal liabilities.

Directors underscored the importance of adequate resources, de jure independence, and a full set of supervisory powers—including over PSBs—in underpinning the Reserve Bank of India's effective supervision and regulation of financial institutions. There is also a need to introduce risk-based solvency and supervision of insurers, and to continue moving toward a market-based environment for the sector. Unifying the oversight of all commodities markets would promote more efficient market functioning, in line with the authorities' intention to modernize the sector.

Directors welcomed the planned introduction of a special resolution regime for financial institutions, which will improve incentives and reduce the potential risks to public resources that could arise from the failure of financial institutions. They urged the authorities to continue with efforts to further align the proposed resolution framework and other components of the safety net with international standards and best practices.

Directors welcomed the important progress in enhancing the framework for anti-money laundering and combating the financing of terrorism, and called on the authorities to overcome the remaining gaps.

INTERNATIONAL MONETARY FUND

INDIA

FINANCIAL SYSTEM STABILITY ASSESSMENT

October 27, 2017

Approved By
James Morsink and Kenneth Kang

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited India in March 2017 and June-July 2017. The report is to be discussed at the IMF Executive Board on a standalone basis in November 2017.

- The FSAP team was led by Marina Moretti (International Monetary Fund, IMF) and Aurora Ferrari (World Bank, WB), and included deputy mission chiefs, Oana Croitoru Nedelescu (IMF) and Marius Vismantas (WB); Hee Kyong Chon, Sonali Das, José Garrido, Silvia Iorgova, Suchitra Kumarapathy, Fabian Lipinsky, Dermot Monaghan, Diarmuid Murphy, Kristel Poh, and Yasushi Sugayama (all IMF); Loic Chiquier, Massimo Cirasino, Harish Natarajan, Emile van der Does de Willebois, Anuradha Ray, Meghna Raghunath, Ines Gonzalez Del Mazo, and Igor Zuccardi Huertas (all WB); and external experts, Jonathan Fiechter, Janne Harjunpää, David Hoelscher, Jonathan Katz, Lalit Raina, Charles Taylor, Ian Tower, and Jan Willem van der Vossen.

- The mission met with senior leaders and officials from the Reserve Bank of India (RBI); Securities and Exchange Board of India (SEBI); Insurance Regulatory and Development Authority of India (IRDAI); Ministry of Finance (MoF); Ministry of Commerce and Industry; Ministry of Corporate Affairs; Ministry of Law and Justice; Insolvency and Bankruptcy Board of India; and with private sector representatives.

- FSAPs assess the stability of the financial system and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

- India is deemed by the Fund to have a systemically important financial sector according to SM/13/304 (11/18/2013), and the stability assessment under this FSAP is part of bilateral surveillance under Article IV of the Fund's Articles of Agreement.

- This report was prepared by Marina Moretti and Oana Croitoru Nedelescu, with contributions from the members of the FSAP team.

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Glossary

AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
AQR	Asset quality review
BBB	Banks Board Bureau
BCP	Basel Core Principles
BRICS	Brazil, Russia, India, China, and South Africa
CAR	Capital adequacy ratio
CBLO	Collateralized borrowing and lending obligation
CCIL	Clearing Corporation of India
CCP	Central counterparty
CET 1	Common equity Tier 1 capital
CP	Core Principle
CPMI	Committee on Payments and Market Infrastructures
DICGC	Deposit Insurance and Credit Guarantee Corporation of India
ELA	Emergency liquidity assistance
FDMC	Financial Data Management Center
FMI	Financial market infrastructure
FSAP	Financial Sector Assessment Program
FSDC	Financial Stability and Development Council
FSDC-SC	Financial Stability and Development Council Subcommittee
FSLRC	Financial Sector Legislative Reforms Commission
FX	Foreign currency
GDP	Gross domestic product
IFRS	International Financial Reporting Standards
IOSCO	International Organization of Securities Commissions
IRDAI	Insurance Regulatory and Development Authority of India
LCR	Liquidity coverage ratio
MoF	Ministry of Finance
NBFC	Nonbanking financial company
NPA	Nonperforming Asset
OTC	Over the counter
PDO	Public Debt Office
PFMI	Principles for Financial Market Infrastructures
PSBs	Public Sector Banks
PSL	Priority Sector Lending
RBI	Reserve Bank of India
RTGS	Real time gross settlement
SARFAESI	Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest
SEBI	Securities and Exchange Board of India
SLR	Statutory Liquidity Requirements
SPARC	Supervisory Program for Assessment of Risk and Capital
WEO	World Economic Outlook

EXECUTIVE SUMMARY

1. Against the backdrop of important structural reforms and terms of trade gains, India recorded strong growth in recent years in both economic activity and financial assets. Increased diversification, commercial orientation, and technology-driven inclusion have supported growth in the financial industry, backed by improved legal, regulatory, and supervisory frameworks. Yet, the financial sector is grappling with significant challenges, and growth has recently slowed. High nonperforming assets (NPAs) and slow deleveraging and repair of corporate balance sheets are testing the resilience of the banking system and holding back investment and growth.

2. Stress tests show that while key banks appear resilient, significant vulnerabilities remain. The largest banks appear sufficiently capitalized and profitable to withstand a deterioration in economic conditions, reflecting relatively solid capital buffers and, particularly for the private banks, core profitability that is strong enough to cover credit costs. There is a group of public sector banks (PSBs) where vulnerabilities seem highest; these banks would require additional capital under the baseline scenario and some would almost deplete capital buffers due to growing NPAs and provisioning needs if stress intensifies. Capital needs are manageable in the aggregate, ranging between 0.75 percent of GDP in the baseline to 1.5 percent of GDP in the severe adverse scenario.

3. Much needed efforts are now underway to accelerate the process of NPA resolution. The various debt restructuring schemes introduced over the past years have had limited uptake, and agreement among lenders has been hampered by their uneven capacity to withstand losses. The RBI was recently empowered to direct restructuring cases to the insolvency process, with the potential for insolvency used to exert pressure on creditors to finalize debt restructuring agreements outside the court process. This new approach shows promise of further progress, but more needs to be done to ensure that the debt restructuring process gains traction:

- ***Banks need additional provisions and capital buffers:*** RBI's drive to increase provisioning and bank capital is welcome and should continue decisively to incentivize NPA resolution. This should be underpinned by granular assessments of capital needs on a forward-looking basis.

- ***Corporates need to undergo sustainable financial and operational restructuring:*** This will be critical for a successful turnaround of weak corporates. The long-term viability of large firms should be determined based on credible valuations, including via independent business reviews.

- ***Infrastructure for debt restructuring needs to be improved:*** Debt restructuring mechanisms should be revamped to allow for more flexible solutions; obstacles to the development of distressed asset markets should be removed; and courts should increase capacity and resources.

4. Further recapitalization and restructuring of PSBs, together with firm actions to improve their governance, are needed to support these efforts. Recapitalization should focus on attracting fresh private capital, reducing the share of the state (and state-owned entities) in PSBs to the mandated minimum of 52 percent—which is already the authorities' intention. Beyond that, a clear plan should be developed to deal with PSBs that will not be able to attract private capital.

Provision of public capital should be contingent upon meaningful restructuring of PSBs, and exit of weak banks (via sale of viable assets and liabilities to stronger public and private banks) should be considered, as consolidating weak PSBs into stronger ones risks undermining the viability of the acquirer. Improving PSBs governance, as set out in the Indradhanush Plan, needs to be firmly pursued to enable qualified senior management and Board members to be appointed for extended mandates, strengthen risk management, and limit the scope for government interference.

5. The steps above should be part of a broader strategy to reduce the role of the public sector in the financial system. The state footprint needs to be rebalanced away from large ownership and directed lending toward better leveraging of public capital. A mix of greater participation of the private sector in capitalizing the PSBs and full privatizations would boost the banking sector's capacity to support credit and reduce moral hazard and fiscal contingencies. Gradually reducing the statutory liquidity requirement (SLR) and priority sector lending (PSL) would also help intermediate funds more efficiently toward productive activities.

6. Financial oversight continues to be strengthened. The supervisory agencies have developed thorough supervisory processes, supported by good information systems and highly experienced and committed staff. Going forward, regulators' roles in collecting firm-level data should be maintained. Further efforts would be desirable in the following areas:

- ***Independence and resources*:** To enable the RBI to be fully effective in exercising its supervisory mandate, the legal framework should be amended to strengthen the RBI's powers over PSBs and its *de jure* independence. Supervisory resources should be increased in the case of IRDAI, to support new supervisory programs, and, in the case of SEBI, to enhance the oversight of capital markets and financial market infrastructures (FMIs).

- ***Risk-based supervision and enforcement*:** Risk-based supervision of banks and securities intermediaries has progressed well, and efforts need to focus now on insurers. The external validation of the RBI's supervisory assessment system needs to be expedited to enable its full enforcement. SEBI should develop a system for the review of listed companies' reports based on a risk-based methodology. There is also scope to enhance FMI's liquidity stress tests.

- ***Keeping up with market developments:*** Loan classification and provisioning rules should be reviewed to ensure they reflect observed losses, and to reduce special loan categories. Other priorities include introducing a risk-based solvency regime for insurers; unifying the oversight of commodities markets; and addressing risks from politically exposed persons and the gold sector.

7. The planned introduction of a special resolution regime for financial institutions is an important step toward aligning the safety net with international standards. Efforts need to focus on avoiding duplication of supervisory responsibility by the RBI and the proposed Resolution Corporation for going-concern institutions, and on ensuring equal treatment of domestic and foreign liability holders. There is scope to enhance other elements of the safety net, including deposit insurance, emergency liquidity assistance (ELA), and crisis preparedness.

MAIN RECOMMENDATIONS

Recommendations	Authority	Time frame
Policies to address vulnerabilities		
Improve the governance and financial operations of PSBs and develop a strategic plan for their consolidation, divestment, and privatization.	MoF	S
Conduct granular assessments of banks' capital needs and require additional provisions and swift recapitalization and restructuring.	RBI, MoF	S
Redesign the corporate debt restructuring mechanisms to make them more flexible.	RBI	S
Financial sector oversight framework		
System-wide oversight and macroprudential policies		
– Retain regulators' role in collecting firm-level data.	MoF	M
Banking supervision		
– Review loan classification and provisioning rules in the context of IFRS, and with respect to special loan categories.	RBI	S
– Amend the legal framework to provide RBI with full supervisory powers over PSBs and clarify its legal independence.	Government	M
Insurance supervision		
– Introduce a risk-based solvency regime and risk-based supervision.	IRDAI	S
Securities regulation		
– Transfer legal authority over public listed company reporting to SEBI and introduce a risk-based review of company disclosures.	Government, SEBI	M
– Adopt a strategy to unify regulation of commodities trading markets.		S
Financial markets infrastructure oversight		
– Improve stress testing scenarios and methodologies.	CCIL	S
Crisis management framework		
– Resolution legislation should preserve RBI's full supervisory authority over going concern banks, and promote equal treatment of domestic and foreign creditors.	Government	S
– Improve the frameworks for emergency liquidity assistance, deposit insurance, and crisis preparedness.	RBI, Government	M
Market integrity		
– Subject domestic politically exposed persons to adequate due diligence and qualify domestic tax evasion as a predicate offense to money laundering.	MoF	S
Market development		
Progressively reduce the SLR to help deepen markets and encourage lending.	RBI	S
Undertake a cost-benefit and gap diagnostic of the PSL program and develop a plan to reduce its scope and ensure it targets underserved segments.	RBI, MoF	M

* *S = short term, M = medium term.*

MACROFINANCIAL CONTEXT

A. The Indian Financial Sector

8. **The Indian financial system is undergoing a gradual structural shift**. The size of the financial system has remained broadly stable in terms of GDP (136 percent) since the 2011 FSAP, nearly doubling in nominal terms (Figure 1, Table 1). The financial system is diversifying, with market shares of nonbank intermediaries (notably, mutual funds and nonbank financial companies—NBFCs) and private sector players increasing gradually—albeit from a low base. Banks' share in credit flows fell from 50 percent during FY2015/16 to 38 percent in FY2016/17, as corporates increased private debt placements and issued commercial paper, replacing bank funding with market sources.

9. **Despite these trends, banks and the state continue to dominate the financial system**. Banks account for 60 percent of financial system assets, with 70 percent of banking assets held by PSBs. The state-owned Life Insurance Corporation and the Employees' Provident Fund dominate insurance and pensions and are key providers of funds in debt markets. Four development banks hold small market shares. All banks must hold 20 percent of assets in government securities, partly crowding out private credit, which at 52 percent of GDP lags peer countries (Figure 2). Banks must also allocate 40 percent of net credit to "priority sector lending" (PSL); at least 15 percent of investments by both life and non-life insurers must be in infrastructure or housing (but may be met by investments in central and state government securities).

10. **Interconnectedness is high domestically and limited across borders** (Box 1). The banking system has a tiered structure, with a few large banks at the core dealing mostly with each other, and smaller banks with minimal exposures to each other. Twelve financial conglomerates create potential for spillovers via ownership linkages. Cross-border lending and borrowing by Indian banks are small, at 10 percent and 14 percent of GDP, respectively, in 2016. The dominant role of the state has discouraged foreign entry, although some foreign banks have found market niches—foreign exchange (FX), wealth management—while reinsurers have increased their branch presence.

11. **Financial markets are characterized by liquid short-term money markets; a large government bond market; and a small but growing corporate bond market**. Money markets are dominated by centrally cleared collateralized borrowing and lending obligations (CBLO), reflecting the strong presence of mutual funds as investors; term markets (beyond overnight) are not very deep. The government debt market is well developed (42 percent of GDP at end-2016). The corporate bond market is growing rapidly, but remains small (15 percent of GDP) and is dominated by private placements and financial sector issuers. Equity markets reached a market capitalization of 73 percent of GDP at end-September 2016, similar to peer countries.

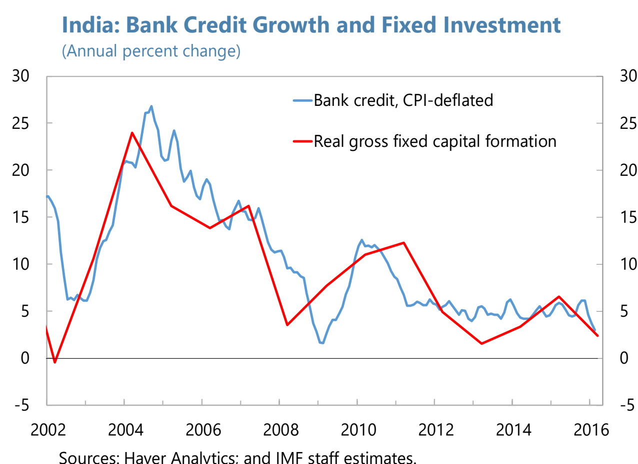
12. **Policy initiatives to foster access to bank accounts for individuals are bearing fruit**. Several initiatives, such as the establishment of "no frills" accounts, digitalization of some government payments, and the introduction of a unique biometric identification number, have been instrumental in increasing the transaction accounts penetration to 65 percent of adults in 2015, from 48 percent in 2013. This progress has also benefited traditionally underserved segments (Figure 3).

B. Macrofinancial Conditions and Risks

13. India's growth has slowed recently, but its economic outlook remains positive. Following a period of sustained strong performance, growth slowed to 7.1 percent in FY2016/17, and decelerated to 5.7 percent in the first quarter of FY2017/18. Structural weaknesses related to the twin balance sheet problems in the corporate and banking sectors, as well as transitory shocks from the November 2016 currency exchange initiative[1] and the July 2017 Goods and Services Tax rollout contributed to the slowdown. Real GDP growth is projected for 6.7 percent in FY2017/18 and 7.4 percent in FY2018/19. Low oil and energy prices have helped improve the current account and fiscal positions, and reduced inflation, which remained within the medium-term target band. Gradual fiscal consolidation continues, with a budget deficit targeted at 3.2 percent of GDP (authorities' definition) in FY2017/18, down from 3.5 percent a year earlier. Going forward, significant economic and structural reforms, particularly productivity improvements benefiting from the Goods and Services Tax, are expected to help raise India's medium-term growth to above 8 percent.

14. Slow deleveraging and repair of corporate balance sheets is the main domestic source of risks (Appendix I and Figure 4). The build-up of high corporate leverage to support infrastructure investments in the 2000s was largely financed by PSBs. Deteriorating global and domestic conditions in FY2013/14 and structural bottlenecks (e.g., delays in environmental clearances and land acquisition permits) took a toll on firms' debt repayment capacity, particularly in metals, engineering, and transportation infrastructure (Figure 5), and led to a marked deterioration in banks' asset quality. Further shocks to corporate health (such as weaker demand or higher interest rates) could magnify bank losses, which, if coupled with slow progress with decisively addressing problems in the PSBs, would undermine lending, recovery of private investment, and economic growth. Household debt has been expanding but, at about 10 percent of GDP, it is not a material source of risk.

India: Bank Credit Growth and Fixed Investment
(Annual percent change)



Sources: Haver Analytics; and IMF staff estimates.

15. Key external risks arise from intensified global financial volatility and slower global growth. A global risk re-pricing and surge in financial markets volatility could lead to disruptive capital outflows and an increase in the cost of funding of corporates. A slowdown in the economic growth of India's major trading partners would compress exports and firms' profits, and put further downward pressures on their debt-servicing capacity and on banks' asset quality.

[1] In an effort to curb corruption, black money (tax evasion), counterfeit currency, and terrorism financing, the authorities withdrew the legal tender status of Rs 500 and Rs 1,000 banknotes in November 2016 (equivalent to 86 percent of the value of currency in circulation) and gradually introduced new Rs 500 and Rs 2,000 banknotes.

RISK ASSESSMENT

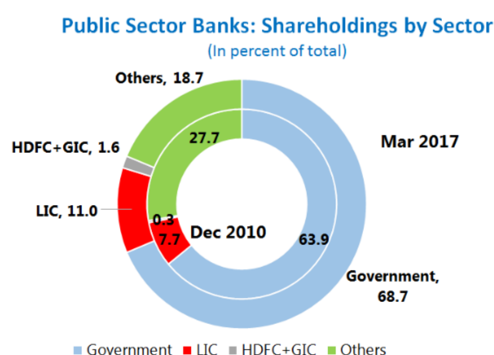
A. Financial Sector Conditions

16. Vulnerabilities in banks have risen in tandem with those in the corporate sector. Deteriorating economic conditions have led to increased loan restructurings, which benefited for a while from lenient prudential treatment and kept NPAs at relatively low levels. Important steps taken by the RBI in FY2015/16, including a tightening of prudential regulations and an asset quality review (AQR), resulted in a large migration of restructured loans into NPAs and new NPA formation. The PSBs' stressed assets reached 15.6 percent of gross loans by end-March 2017, with high levels of distress in metals, cement, construction, and textiles. Stressed assets were 4.6 percent for private banks at end-March 2017. NPAs are also highly concentrated, with the top 12 cases accounting for 25 percent of total NPA exposure and the top 40 cases accounting for about 60 percent.[2]

17. The deterioration in asset quality has weighed considerably on PSBs' profitability (Figure 6). Following the AQR, provisioning needs in PSBs increased substantially, while NPA provisioning coverage dropped to about 40 percent. PSBs' net interest margins also fell, due to the loss of interest income from NPAs (as interest income is appropriately recognized on a cash basis). Compounded with high overhead costs (e.g., labor costs are significantly higher than in private sector banks), PSBs experienced substantial losses in FY2015/16. The situation is particularly severe in some smaller banks (three PSBs and two private banks) struggling with high NPAs and weak capital positions, which raises questions about their viability.

18. Lingering asset quality issues and weak earnings continue to undermine PSBs' lending capacity. The government's injection of Rs 500 billion (0.3 percent of GDP) in FY 2016/17 plus Rs 348 billion (0.2 percent of GDP) raised by PSBs since March 2016, including from the Life Insurance Corporation, helped rebuild capital buffers. However, PSBs remain less capitalized than private banks (capital adequacy ratio of 12 percent and 15.5 percent, respectively). Also, measures put in place to support NPA resolution have had limited uptake (Box 2). As a result, credit growth in PSBs has decelerated sharply, reaching 0.8 percent a year in March 2017. Private sector banks only compensated part of the PSBs' credit decline, while fragile corporate balance sheets continue to weigh on credit demand.

Public Sector Banks: Shareholdings by Sector
(In percent of total)



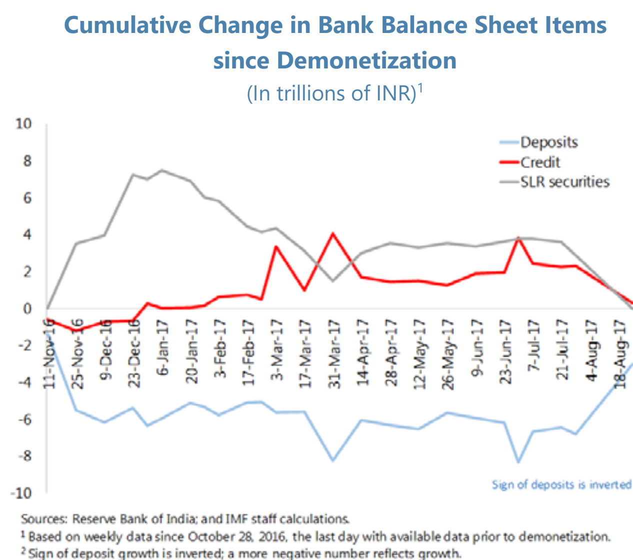
Note: Includes 24 public sector banks. 2010 data for Oriental Bank of Commerce as of Dec-2010; end-FY2017 data for banks of the SBI group, other than SBI, are the latest available for 2016. For SBI, the data is latest available (post-merger). HDFC and GIC holdings of SBI assumed identical to Mar-2017.
Sources: Reserve Bank of India; Banks' shareholding pattern reports; annual reports and other investor presentations; moneycontrol.com; and IMF staff calculations.

[2] Continued farm loan waivers also risk undermining credit culture and could have lasting effects on banks' asset quality and willingness to lend to farmers. The overall waivers announced so far account for 0.6 percent of GDP.

19. The currency exchange initiative provided impetus to use bank services and boosted bank liquidity, but this has subsided. Bank deposits (80 percent of bank liabilities) increased by Rs 8.3 trillion (8.3 percent) by end-March 2017. The rise in liquidity triggered a welcome decline in bank funding costs and lending rates—by end-January 2017, the weighted-average lending rate on new loans had declined by 56 basis points. Deposits declined by Rs 5.2 trillion after restrictions were lifted, suggesting that the successful retention of funds may partly depend on the ability to spur greater use of digital transactions in a cash-dominated economy.

Cumulative Change in Bank Balance Sheet Items since Demonetization

(In trillions of INR)[1]



Sources: Reserve Bank of India; and IMF staff calculations.

1 Based on weekly data since October 28, 2016, the last day with available data prior to demonetization.

2 Sign of deposit growth is inverted; a more negative number reflects growth.

20. Risks in other financial subsectors appear contained but warrant close monitoring.

- ***Risks in the life insurance sector are well diversified, while risks in non-life are mainly short-term***. Solvency ratios remain strong overall (Figure 7). Major risks in life insurance are market risk and mortality. Exposure to changes in interest rates is contained, as business has not been written with high guaranteed rates and the duration of liabilities and investment assets are largely matching. Insurers are not permitted to invest policyholders' funds outside India. The non-life insurance business is limited, except motor third-party liability, which is loss-making as premiums are fixed by regulator. Investment risk is low, but poor underwriting may reduce returns. Risks from weather-related events (floods) are increasing.

- ***Risks from NBFCs are limited, but concentrations and growing reliance on debt financing should be monitored closely***. High concentration in lending to infrastructure (half of total NBFC credit) and stricter prudential rules (as NBFCs will shift to a 90-day NPA recognition norm after March 2018, from 120 days currently) will likely lead to an increase in NPAs. Debt financing, mainly from mutual funds and insurance companies, has risen to 38 percent of total liabilities, and is highly sensitive to market sentiment.

B. Bank Resilience

21. The analysis of financial sector resilience focused on banks, given their dominant role, and was underpinned by two adverse scenarios (Appendix II, Figure 8, and Table 3). In the medium and severe adverse scenarios, domestic and external risks materialize as capital is withdrawn from major emerging markets and potential growth of India's major trading partners slows down in the face of weak corporate and bank balance sheets (Appendix I). GDP declines by one and two standard deviations, leading to an uptick in NPAs.

22. Indian domestic banks can be grouped into three groups, based on analysis of profitability and asset quality, and the results of stress tests (Figure 9).

- ***Stable Banks*** (G1—64 percent of assets of the top 15 banks) comprises banks with high pre-provisioning profits (return on assets averaging 2 percent). Within G1, PSBs have the highest stressed loans and the lowest profits.

- ***Vulnerable Banks*** (G2 —18 percent of assets of the top 15 banks) comprises PSBs that have a larger stock of stressed loans (21 versus 18 percent) and lower provisions and profits compared to stable G1 PSBs. Their operational profits are absorbed by provisioning costs.

- ***Stressed Banks*** (G3—18 percent of assets of the top 15 banks) have the highest stock of stressed loans in the system, averaging 27 percent of banks' total loans. Provisioning costs of G3 banks exceed profits, and their pre-provisioning profits are the lowest of all banks.[3]

23. The IMF stress tests applied to the 15 largest banks suggest the following (Figure 10):

- ***G1 banks are resilient***. Although asset quality deteriorates significantly for some G1-private banks under the highly severe scenario, core profitability is strong enough to cover credit costs. The G1-PSBs also withstand adverse shocks throughout all three scenarios, in one case touching hurdle rates.

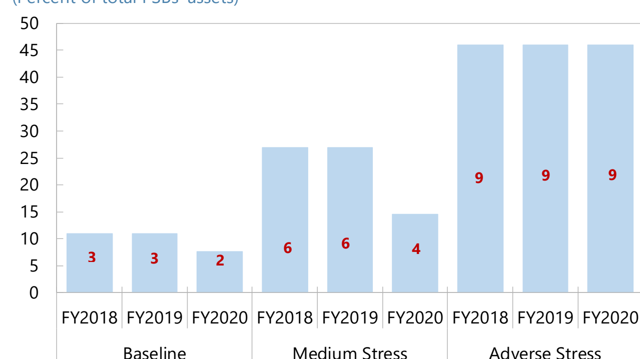
- ***Vulnerable and stressed banks (G2 and G3) require capital in the baseline scenario***. Stress test results indicate that capital adequacy of some G2 and G3 banks fall below the hurdle rate in the baseline, while the other banks' capital buffers above minima are almost entirely depleted.

- ***Additional capital is needed in the severe scenarios***. Capital shortfalls widen to 3 percent and 4.5 percent of risk-weighted assets in the severe adverse scenario in March 2020 for G2 and G3 banks, respectively. Nine out of 12 PSBs (45 percent of PSB assets) breach hurdle rates, with aggregate Tier 1, CET1, and total capital adequacy ratios (CAR) below regulatory norms.

- ***Capital needs are manageable in the aggregate, though bank-sovereign links should be monitored carefully***. Recapitalization needs range between 0.75 percent of GDP in the baseline and 1.5 percent of GDP in the severe adverse scenario, with results driven by the relatively small size of PSBs' loan books relative to GDP (34 percent). These capital injections will impact the finances of the government—PSBs' principal shareholder. Also, large holdings of government securities, if they were marked to market, would also expose banks to losses in case of yield increases. A 100 bps increase in yields would increase the capital shortfall on average by 1.3 percent of risk-weighted assets or about 0.5 percent of GDP based on sensitivity tests.

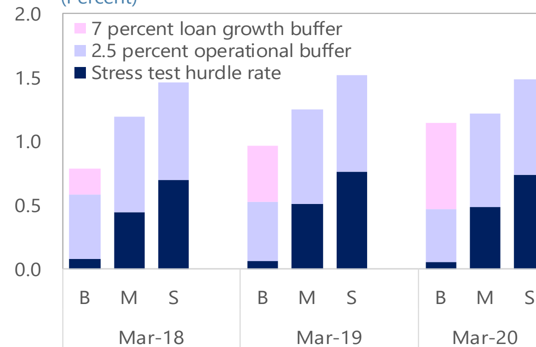
[3] Analysis covering 23 smaller banks revealed that 6 of them (4 PSBs) are stressed and fall into G3, while the other 17 additional banks (4 PSBs) were stable, joining G1.

Failing Banks 'Assets and Number of Failing Banks
(Percent of total PSBs' assets)



Note. The numbers in red denotes the number of banks' with CAR falling below 9 percent in a sample of the 12 largest public sector banks.

Capital Shortfall/GDP
(Percent)



Note: B, M, and S denote baseline, medium adverse, and severe adverse scenario, respectively.

Source: Reserve Bank of India and; IMF staff estimates.

24. Several banks are vulnerable to the extreme event of a simultaneous default of their three largest individual exposures (Figure 11). Credit concentration tests conducted on 59 banks and assuming the default of the three largest corporate borrowers at an increased provisioning rate of 75 percent—admittedly, an extreme event—led to a decline in the system-wide CAR by 274 basis points and under-capitalization of 16 banks relative to the 9 percent CAR hurdle rate, with a capital shortfall of 0.2 percent of GDP.

25. Banks could generally withstand liquidity shocks. Liquidity coverage ratio (LCR)-based tests examined banks' short-term resilience to large withdrawals of retail and wholesale funding. The tests were based on the 80 percent ratio imposed in 2017 and the 100 percent binding level in 2019. The tests reveal that short-term liquidity risks are limited, owing partly to high government securities holdings required by the SLR. The high retail deposit base makes banks more vulnerable to adverse retail funding shocks, although the stable nature of these deposits mitigates this risk. Cash flow-based analysis also suggests that banks could cover cash outflows for a range of maturity buckets.

26. A sensitivity analysis of corporate vulnerabilities confirm that banks remain exposed to considerable debt repayment risks. In case of confluence of heightened external and domestic risks, the corporate sector's debt-at-risk would rise from 21 percent to more than 40 percent in the more severe scenario. Domestic risks—including downward profitability pressures and an upward shift in domestic interest rates—are key risks for Indian corporates. In aggregate, Indian firms are now less exposed to a sharp FX depreciation or a rise in LIBOR rates, in part reflecting a decline in external commercial borrowing over the past two years.

C. Policies to Address Vulnerabilities

27. The authorities have intensified their efforts to address the high level of NPAs. The policy response to the NPA buildup in the banking system has evolved over time. Since forbearance was eliminated for debt restructuring in 2015, the RBI has promoted different debt restructuring schemes (Box 2) to facilitate resolution of the largest cases. The restructuring schemes have had

limited uptake, given lack of agreement among creditors with uneven loss-absorption capacities, perceived risks of personal legal liability for PSB staff, and rigid parameters for debt restructuring. Recently, the RBI was empowered to direct restructuring cases to the insolvency process, and a new Oversight Committee at the RBI was tasked with providing directions and revising restructuring plans. By end-June 2017, 12 borrowers representing 25 percent of PSBs' aggregate NPA exposure had been referred to the insolvency courts, with the other large cases to be resolved within a six-month period, or be referred to the insolvency court too. The potential for insolvency is used to put pressure on creditors to finalize debt restructuring agreements outside the court process.

28. Successful deployment of the authorities' strategy to resolve NPAs and kick-start lending to the economy requires urgent focus in several areas. The first two will be most critical:

- ***Addressing upfront bank capital needs***. The RBI's drive to enhance bank provisions and capital is welcome and needs to continue, providing PSBs incentives to decisively tackle NPAs and restart lending. The calibration of capital needs should be underpinned by granular assessments of asset values, including such elements as detailed valuations of collateral and estimations of loss based on recent empirical workout evidence. Identification of capital needs could also be supported by independent business reviews of large borrowers, with banks required to fully provision against the losses identified in the restructuring scenario, and to hold contingent capital buffers in case liquidation occurs.

- ***Ensuring sustainable debt restructuring and meaningful business turnaround***. Credible valuations need to underpin the return of weak corporates to viability through financial and operational restructuring. Business viability could be assessed for the largest cases by undertaking independent business reviews (using, for instance, the valuation framework proposed by the Ministry of Corporate Affairs), commissioned by the Joint Lenders Forum or by the Creditors' Committee. Valuations to identify sustainable debt, including fresh financing, should be based on prudent cash-flow projections, while maturities of the restructured debt should follow arms-length market practice. Banks could be encouraged to enter arrangements with specialized investors providing management know-how and fresh capital.

- ***Implementing the new insolvency and bankruptcy regime***. The newly created regime is comprehensive and aims at restructuring companies within ambitious timelines. Its institutional infrastructure, comprising of the National Company Law Tribunals, the Insolvency and Bankruptcy Board of India, and insolvency professionals will need to build capacity over time. The courts will generate case law in deciding some of the most complex cases. In addition, some technical improvements to the law and regulation may be necessary, such as new rules for the insolvency of corporate groups and for the treatment of executory contracts.

- ***Enhancing out-of-court restructuring***. There is scope to recast existing debt restructuring mechanisms and establish a new corporate out-of-court debt restructuring mechanism, allowing for flexible solutions to be adopted by creditors within strict time limits, and supported by penalties for uncooperative creditors. If necessary, restructuring plans can be made binding on nonparticipating creditors using the insolvency process or the company law instruments.

- ***Oversight of banks' NPA management***. International good practice suggests that banks should have formal strategies to tackle NPAs, including ambitious targets to reduce NPAs over the medium term. The RBI should consider issuing guidance on NPA management practices and requiring the development of a full suite of tools, including use of joint ventures with NPA investors and fully delegated outsourcing contracts with NPA servicing and workout firms.

- ***Deepening the market for distressed assets***.[4] Efforts should focus on further promoting private asset reconstruction companies, which could help infuse fresh capital as well as expertise in collections, business turnaround, and workout. The entry of foreign capital could be enhanced by allowing the application of the SARFAESI regime to all investors acquiring secured claims. Loosening the NBFCs' concentration limit on investment into one target would support future investment. Tax rules and practices could also be enhanced to ensure tax neutral treatment of NPA restructuring.

29. Recapitalization and restructuring of PSBs should go hand in hand. Efforts should remain focused on attracting private capital and reducing the share of the state (and state-owned entities) in PSB capital to the mandated minimum of 52 percent. The recapitalization and restructuring strategy should support the authorities' aim toward further consolidation of the banking industry, while avoiding mergers that could undermine the viability of the stronger PSBs. Exit of the weakest (small) banks should be considered, with voluntary transfer of liabilities and good assets to stronger market participants, leaving bad assets behind in liquidation. Consideration should also be given to further reducing the state's ownership stake, including full privatization of some of the banks and access to international bond markets. A blueprint for restructuring and privatization, with clear timeframes, could usefully guide these efforts.

30. Attracting private capital and improving the operations of PSBs will require sustained efforts to strengthen governance. The Indradhanush Plan introduced critical governance innovations in the PSBs, such as the creation of the Banks Board Bureau (BBB) to improve the quality of Board candidates, splitting the executive director position from that of the (nonexecutive) chairman, and attracting qualified private sector candidates for top positions. These measures need to be implemented. Going further, the BBB should be empowered to appoint and remove senior management of PSBs, drawing from a broad roster of qualified professionals. Ultimately, as it has been proposed, the BBB should become a holding company to manage the state's equity interest in banks on an arms-length basis. Other priorities are the removal of RBI officials from PSB Boards, which creates potential conflicts of interests with supervisory objectives; adopting model Board charters that would better define the terms of reference for Board members; and improving incentives for attracting high-caliber private sector candidates. Over the medium term, all PSBs should be fully subject to the banking law and the companies law.

[4] Staff believe that the creation of a public asset management company is not advisable at this juncture, given the heterogeneity of cases; difficulties in setting transfer prices; challenges related to governance and expertise; and the fact that the largest cases are already being directed into a timebound insolvency process. The authorities also do not support the creation of a public asset management company at this time.

FINANCIAL SECTOR OVERSIGHT FRAMEWORK

A. System-wide Oversight

31. Interagency cooperation has improved markedly since the establishments of the Financial Stability and Development Council (FSDC) in 2010. All financial regulators participate in the FSDC—a non-statutory body chaired by the Minister of Finance and covering financial stability, development, and inclusion. The adoption of an inter-agency Memorandum of Understanding among the regulatory authorities in 2013 has boosted cooperation and information sharing on financial stability matters. Cross-sectoral financial stability issues are discussed in an FSDC subcommittee (FSDC-SC), which is supported by four technical groups.

32. Some further institutional reforms are in motion. A high-level Financial Sector Legislative Reforms Commission (FSLRC) concluded that the Indian regulatory architecture was fragmented and, in 2013, proposed an overhaul of financial sector laws and oversight, including, among others, the establishment of a Unified Financial Agency for securities and insurance, a new centralized agency for data management (Financial Data Management Center, FDMC), and a Resolution Corporation subsuming the Deposit Insurance and Credit Guarantee Corporation of India (DICGC), and an enhanced resolution function. It also recommended that the FSDC be granted statutory powers for inter-regulatory macroprudential policy coordination. Among these reforms, the FDMC and the Resolution Corporation are moving forward, while others remain under consideration.

33. The development of a fully operational framework for macroprudential policy remains a work in progress. The FSDC-SC (led by the RBI governor), the executive arm of the FSDC, is the main forum for interagency coordination on financial stability; implementation of macroprudential policies rests with individual regulators. The FSDC-SC has worked well to date, and much progress has been made on enhancing the RBI's systemic risk monitoring capacity. Expanding the scope of data collection for systemic risk analyses via the proposed FDMC is a step in the right direction, but regulators should continue to collect data directly from financial institutions; the RBI should also have full access to systemic risk data to fully leverage its analytical capacity.

34. There is scope for improving the current macroprudential policy framework.

- ***A formal review process of the macroprudential policy stance would be desirable***. This would help systemic risk analyses be carried out on an ongoing basis and be tailored more closely to macroprudential policymaking to ensure that decisions are timely and consistent.

- ***The RBI's toolkit for systemic risks analysis could be further enhanced***. The RBI could develop dashboards of systemic risk indicators to facilitate ongoing monitoring of broader financial sector risks and support FSDC-SC discussions; develop and monitor maps of flow-of-fund exposures across sectors; enhance analysis of linkages between corporate and bank balance sheets, and interconnectedness across banks and nonbanks; and deepen analysis of corporates' foreign currency mismatches, including hedging positions.

B. Supervision and Regulation

Banking supervision

35. The RBI has made substantial progress in strengthening banking supervision (Annex I). A key achievement was the introduction in 2013 of risk-based supervision through a comprehensive and forward-looking Supervisory Program for Assessment of Risk and Capital (SPARC). The Basel III framework and other international guidance were implemented or are being phased in, including stricter regulations on large exposures. Domestic and cross-border cooperation arrangements are now firmly in place. The AQR and the strengthening of regulations in 2015 have improved distressed asset recognition. In April 2017, the RBI established a new Enforcement Department and revised its prompt corrective action framework to incorporate more prudent risk-tolerance thresholds.

36. Effective supervision requires stronger *de jure* independence and enforcement powers as well as a proactive supervisory stance. The current gaps in the RBI's supervisory powers over the PSBs (i.e., the RBI cannot remove government-appointed PSB directors or management, force a merger, revoke a license, or trigger liquidation of PSBs), as well as extensive powers of the government to override RBI decisions should be addressed through legal amendments. Effective use of the enhanced supervisory tools and methodologies will require continued efforts to ensure a proactive supervisory attitude and willingness to "lean against the wind." To address conflicts of interest, ownership of the National Housing Bank should be transferred from the RBI to the MoF, and supervision of housing finance companies placed under the RBI.

37. The RBI is reviewing loan classification and provisioning rules in the context of implementation of International Financial Reporting Standards (IFRS). It is important that regulatory parameters be reviewed to ensure they are in line with actual losses and cure rates; and that special loan categories be reduced.[5] The RBI should also consider a prudential filter as a regulatory floor after the introduction of expected loan loss provisioning (IFRS 9) in April 2018.

Insurance supervision

38. Insurance legislation and supervision have been upgraded significantly. Legislative changes adopted in 2015 improved the IRDAI's supervisory and regulatory powers and further opened the insurance market to foreign participation. The IRDAI strengthened policyholder protection and introduced solvency control levels and stronger nonlife reserving requirements. Insurance supervision is now more closely integrated into broader financial sector supervision, both domestically (supervision of financial conglomerates) and internationally (through participation in supervisory colleges). Investment regulations remain generally conservative.

[5] Special categories include loans for projects where commencement of commercial operation has been delayed for reasons beyond the control of the promoters; infrastructure projects involving delays in government approvals, etc.

39. The introduction of risk-based solvency and supervision should be given priority. The IRDAI needs to formulate and communicate a strategy, a plan, and a timetable for introduction of a risk-based capital adequacy framework. This should initially follow a standardized approach (not internal models), cover all types of risks, and require insurers to develop own risk-and-solvency assessments. The IRDAI should also develop a risk-based supervisory cycle, using impact and risk assessments to determine supervisory focus. Skills and expertise should be upgraded to this end.

40. In the medium term, an increasingly market-based environment should help develop the sector in a more sustainable manner. Mandatory minimum investments in infrastructure and housing should be reviewed to ensure that they are fully aligned with the IRDAI's primary objectives. The IRDAI and the government should also continue the ongoing reforms of the motor insurance market and undertake measures to eliminate policy support for public sector insurers (e.g., government guarantees for the liabilities of the Life Insurance Corporation, and General Insurance Corporation preferences over private reinsurers in the reinsurance business).

Securities regulation

41. SEBI has made significant efforts to address the recommendations of the previous FSAP. Amendments to the SEBI Act have granted SEBI additional investigative powers, created a special court that handles criminal cases filed by SEBI, and gave SEBI full authority to regulate pooled investment schemes exceeding Rs 1 billion. SEBI has also expanded its staff and the scope of its regulatory programs, and developed a risk-based assessment matrix. The two major registered securities exchanges, the Bombay Stock Exchange and the National Stock Exchange, have been successfully demutualized. The deregistration of the 21 regional exchanges is almost complete, and companies meeting the new listing standards were transferred to a "Dissemination Platform."

42. Compliance with listing requirements could be further enhanced. There is scope to improve the ongoing compliance and enforcement reviews of listed companies' annual and periodic reports. Specifically, SEBI should develop a risk-based system for selective reviews of listed companies' reports. The transfer of legal authority on public listed company reporting from the Ministry of Corporate Affairs to SEBI would greatly facilitate this process.

43. The regulatory and supervisory framework for commodities markets should be unified. The current regulatory set-up is complex, with SEBI having responsibility on commodity derivatives markets, while central and state governments regulate commodity spot markets. Unifying the regulatory and supervisory framework for all commodities markets should be given priority as part of the authorities' intention to develop a modernization plan for regional commodity spot markets.

C. Oversight of Financial Market Infrastructures

44. The RBI's regulation and oversight of the securities and derivatives clearing and settlement systems are broadly effective (Annex II)**.** The Clearing Corporation of India (CCIL) plays a critical role in all money market segments and acts as a central counterparty (CCP) for the government securities repo and secondary markets. The RBI has designated CCIL as a Qualified CCP

and has authorized it to offer financial market infrastructures (FMI) services to several money market segments. CCIL has a prudent risk management framework and high operational reliability.

45. CCIL's operating rules and procedures, liquidity risk management, segregation and portability, and tiered participation could be improved further. Specifically, legal ambiguity with respect to point of irrevocability and settlement finality for contested trades should be resolved. CCIL should further enhance its stress testing scenarios and methodologies, and could consider instituting mechanisms to monitor risks arising from the tiered arrangements in the government securities segment. Finally, the oversight framework of the capital markets FMIs could be further enhanced by increasing supervisory resources at SEBI, completing self-assessments and disclosure framework for all FMIs, and formalizing cooperation arrangements between the RBI and SEBI.

D. Crisis Management Arrangements

46. The Financial Resolution and Deposit Insurance Bill addresses many of the limitations of the current framework. At present, India does not have a comprehensive administrative resolution regime for banks or other financial institutions. Resolution powers and tools for banks are limited and nonbanks can be liquidated under the Company Law. The proposed Bill establishes a single Resolution Corporation and a comprehensive resolution regime for banks (and holding companies), insurance companies, FMIs, pension funds, and other financial market intermediaries. It formalizes a series of resolution tools, including purchase and assumption transactions, bridge bank, and bail-in, and establishes recovery and resolution planning. It also shifts the deposit insurance functions from the DICGC into the Resolution Corporation.

47. Further improvements are necessary to ensure the effective implementation of the new resolution regime and its alignment with international standards:

- ***Duplication of supervisory authority in the pre-resolution phase should be avoided***. The Bill proposes that the Resolution Corporation is allowed to override supervisory decisions on the risk assessment of an institution at material risk of failure. This risks undermining RBI's authority at a point when corrective actions are being implemented. Typically, supervisors have the sole responsibility of determining whether an institution is failing or likely to fail, while resolution authorities decide on the initiation of resolution proceedings and the design of the resolution strategy.

- ***Further strengthening of resolution tools and safeguards is warranted***. The Bill remains unclear on whether bail-in is limited to contractual write-down of securities with explicit conversion clauses as opposed to broader statutory powers. The preferential treatment of creditors of the domestic branch of a foreign financial institution over other creditors should be eliminated. Also, clear standards are needed for initiating resolution, allowing for the timely deployment of resolution powers, and principles for selecting the mix of resolution methods, such as a least-cost test, should be introduced.

- ***Recovery and resolution plans should be proportionate***. Recovery plans are recommended for all institutions, and resolution plans should be mandatory for SIFIs; for smaller institutions, the onus of their preparation should be weighed against the risk of a systemic impact of the failure.

- ***The deposit insurance framework needs to be strengthened***. As part of the proposed reform, the deposit insurance function within the Resolution Corporation should be enhanced, including more robust back-up funding and shorter payout periods, supported by a single customer view.

48. There is scope to enhance other elements of the financial safety net, including crisis preparedness and ELA. The policy coordinating role of the FSDC could be expanded to include systemic crisis preparedness, such as crisis response procedures and coordination. With regards to ELA, while the RBI values the constructive ambiguity and flexibility currently available, further clarity with regards to the framework (e.g., eligibility conditions, collateralization, penalty rates) would help safeguard the RBI balance sheet and help condition market behavior. It is also international good practice that lenders of last resort have an explicit financial stability mandate and that government guarantees be made available to central banks when the solvency of an ELA recipient is in doubt. Finally, the crisis preparedness and the ELA frameworks should be regularly tested.

E. Market Integrity

49. The AML/CFT framework was recently strengthened, but money laundering (ML) risks related to corruption, domestic tax evasion, and the gold market need further mitigation. Measures to address the shadow economy—including the recent currency exchange and the Goods and Services Tax—have the potential to increase transparency and contain ML and terrorist financing (TF) risks. AML/CFT measures imposed on financial institutions were strengthened, except with respect to domestic politically exposed persons, a notable deficiency given the level of perceived corruption. Other critical shortcomings remain to be addressed: domestic tax evasion is not a predicate offense to ML; the risk model used for supervision of banks does not give ML/TF risks adequate consideration; the identification by banks of beneficial ownership of assets is undermined by insufficiently adequate understanding; and India's gold market is vulnerable to ML/TF, although the authorities are planning to introduce preventive and regulatory regimes.

PRIORITIES FOR MARKET DEVELOPMENT

A. Long-term Finance

50. Fostering infrastructure finance is a key policy priority for the authorities. Several new institutions have recently entered the landscape. The National Infrastructure Investment Fund, a fund of funds, was created in 2015 to invest in infrastructure through equity or quasi-equity. The soon-to-be-created Credit Enhancement Fund will aim at easing access to corporate bond markets. Six infrastructure debt funds and a regulatory framework for infrastructure investment trusts were also established, and the authorities have allowed the issuance of Municipal Bonds by selected Urban Local Bodies to finance local infrastructure.

51. Participation of domestic institutional investors in infrastructure finance should be further fostered. The nonbanking sector plays a central role internationally in the sustainable development of infrastructure finance markets. The domestic institutional investor base has been growing steadily—through mutual funds, State Provident Fund, insurers, and pension funds—but it has not participated much in infrastructure finance. A review of the existing prudential framework for institutional investors should be undertaken to allow for more balanced risk-return investments so that institutional investors could take on somewhat higher risks than currently allowed. As efforts to stimulate infrastructure finance intensify, it would be useful to perform a comprehensive diagnostic to identify financing gaps, reform requirements, or sector-specific risk mitigation needs.

52. Several measures have been taken to quicken the pace of bond market development. Many of the proposals drafted by the H R Khan Committee have been adopted, including introduction of trading on electronic trading platforms in primary markets; creation of an information repository; adoption of standards for the methodologies used by rating agencies; recognition of brokers as market makers; and sanctioning of investment by foreign portfolio investors in unlisted bonds. Banks may now also provide partial credit guarantees, and the insolvency and bankruptcy framework should enhance the position of corporate bond investors. A new RBI regulation which was adopted in 2016 is inducing large corporates to use corporate bonds over incremental bank lending, above a certain limit of bank loans. SEBI has recently issued specifications on International Securities Identification Number rationalization for debt securities.

B. RBI Liquidity Management and Market Development

53. Adjustments to the RBI's operational framework could help RBI liquidity management and market development. To help facilitate banks' management of short-term liquidity shocks, the RBI should consider moving toward full reserve averaging and calibrating its liquidity providing operations based on forecasted liquidity needs (which will also require improved government cashflow forecasts), as opposed to net liability metrics as a measure of liquidity demand. Other areas where there is scope for improvement include; (i) permitting remuneration of rupee reserves; (ii) removing ceilings around the use of government instruments for sterilization; (iii) establishing a clear investment framework for government deposits, distinct from monetary policy auctions of liquidity; (iv) ceasing liquidity lines to the government and states; and (v) excluding nonbank primary dealers' access to RBI standard facilities, which would be assisted by the establishment of an independent debt management office.

54. The RBI should continue phasing out the SLR requirement, with a view to eventually discontinuing it. Government bond market liquidity recently improved, helped by a progressive reduction in the SLR requirement and the held-to-maturity classification; a calendar of further reductions could usefully be announced. A carve-out within the SLR is available for LCR purposes through the RBI's 'Facility to Avail Liquidity for LCR', and the RBI should review its structure to ensure it encourages monetization of high-quality liquid assets in the market, with any privileged RBI support structured considering term premia and the cost of liquefying those assets in the market.

C. Fostering Financial Inclusion and Digitalization

55. While the number of bank accounts held by individuals has increased sharply, account usage and product diversification remain low. About 280 million no-frills accounts were opened since August 2014 under the National Financial Inclusion Program (PMJDY scheme), and two new categories of financial institutions (payment and small finance banks) were established. However, modest penetration of electronic payments led to limited account usage and product diversification (Figure 3). The currency exchange initiative increased electronic transactions, albeit temporarily. Only 13 percent of Indian adults borrow through formal channels as many lack collateral, and the use of alternative data (e.g., on electronic transactions) has not yet been fully exploited.

56. Some key measures could help increase digital payments. The Business Correspondent model and complex commission structure remain impediments. Similarly, when designing and promoting digitization initiatives, it is important to promote both incumbent payment instruments, such as traditional payment cards, and new innovative mechanisms (such as Unique Identity-enabled payments). The adoption of digital payments could be supported through tax rebates to payer, payee, or both. A National Payments Council should be established to facilitate public and private sector dialogue and inform policy formulation by the government and the RBI.

57. An impact and gap analysis of the PSL program should be conducted. The PSL scheme is meant to promote credit allocation to underserved segments, but an analysis of PSL at the state level seems to indicate that lower-income states and rural areas remain largely underserved. The upcoming financial inclusion strategy presents a unique opportunity to conduct impact and gap analyses of PSL, differentiating among sectors and geographical areas. The scope of PSL for commercial banks should be reduced, and new incentive-based programs designed to substitute directed lending in the long run. Sectoral lending targets could be retained for specialized institutions, such as regional rural banks, small finance banks, and development finance institutions.

58. Improving the effectiveness of gold mobilization schemes could help increase access to accounts and diversify financial products. The Gold Monetization Scheme and the Sovereign Gold Bond, introduced in 2015 and modified in 2016, have had limited uptake, largely due to a deeply-rooted cultural aversion to disposing of gold, which is considered a safe asset. So far, only modest quantities of gold have been mobilized under the schemes—about 18 tons, compared to 22,000 tons of gold estimated to be held by the public. Measure to increase the uptake of the Gold Monetization Scheme would include: (i) enhancing public awareness and monitoring of the schemes via broader financial literacy efforts and regular reports on mobilization and end-use of gold; and (ii) standardizing gold quality and pricing in India and expanding infrastructure, including faster accreditation of refineries by the Bureau of Indian Standards. Also, an expansion of tripartite agreements among banks, collection and purity testing centers, and refineries, and the development of an India-wide gold standard would play an important role. Curbing banks' transaction costs—e.g., by permitting direct contracts with large refineries—could also boost returns and incentivize scheme participation.

Box 1. Interconnectedness and Risk Amplification Channels

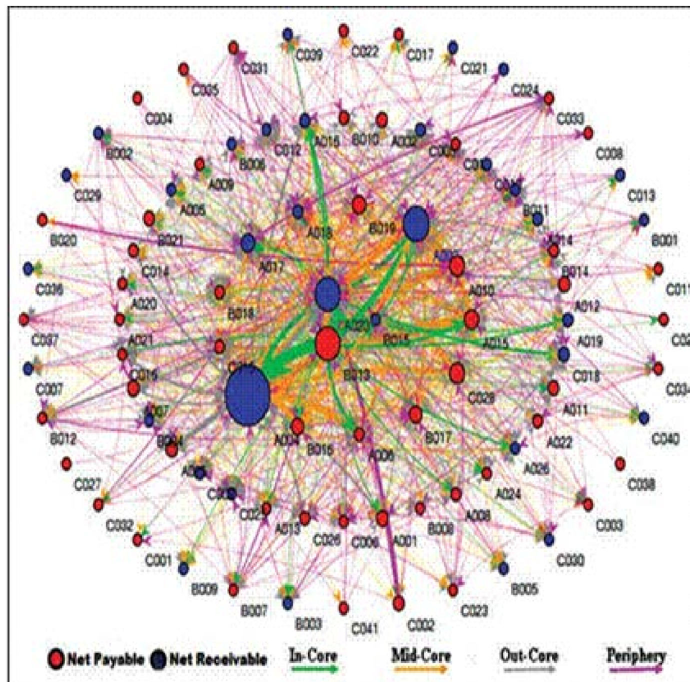
Domestic interconnectedness is high, both among banks and with the rest of the financial system.

- A few large banks are at the core of the interbank network. These banks lend primarily to each other, while banks at the periphery have minimal exposure to each other. The RBI network model analyzes the impact of the failure of each of the five largest and most interconnected banks on the sector's capital and liquidity. It shows that under extreme scenarios, the banking sector could experience loss up to 11 percent of Tier 1 capital and 33 percent of liquidity.
- Banks' interconnections with the rest of the financial system are also high. They account for nearly 51 percent of the bilateral exposures within the system, followed by NBFCs at 13 percent, mutual funds at 12 percent, and insurance companies and development banks at about 8 percent each. On a net basis, mutual funds and insurance companies are the largest providers of short- and long-term funds, respectively, while the NBFCs and banks are the largest borrowers. Among banks, private and foreign banks are net borrowers while PSBs are net lenders. The NBFCs receive funds mainly from banks, (41 percent), and mutual funds (35 percent), and insurers (20 percent).

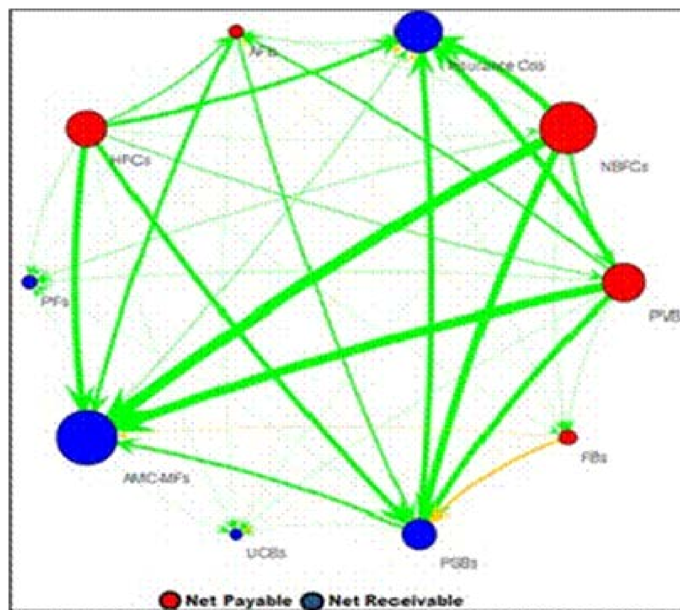
The potential impact of cross-border banking spillovers is moderate. Vulnerability to international banking spillovers was analyzed using BIS data on cross-border banking claims.

- India's downstream vulnerability (from banks' cross-border lending, directly and through subsidiaries and branches) is relatively low at about 6 percent of GDP. For example, assuming a full loss of its on-balance sheet exposure to North America would lead to a decline of the banking system's CET1 capital ratio to 9.2 percent, or a decline of the Tier 1 capital to 9.8 percent.

Interbank Market Network Structure



Financial System Network

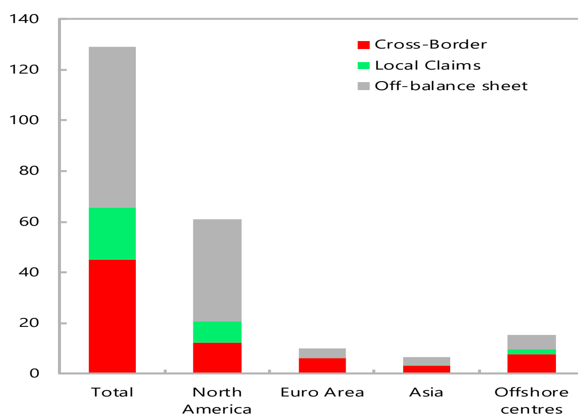


Source: Reseve Bank of India, Financial Stability Report, June 2017.

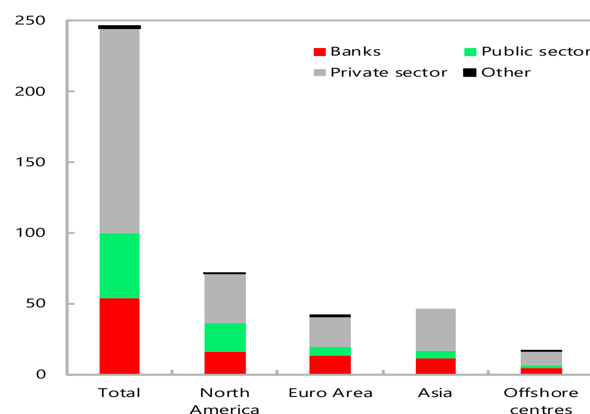
Box 1. Interconnectedness and Risk Amplification Channels (concluded)

- India's upstream vulnerability (from banks' cross-border borrowing) is larger, at about 14 percent of GDP. The bulk of borrowing from international banks is by the nonfinancial private sectors, in part reflecting limits on banks' external borrowing.[1] Direct cross-border borrowing makes up 60 percent of the upstream exposure. Of these direct cross-border liabilities, about 55 percent are short-term, with a maturity of less than one year, and almost all are denominated in foreign currencies. India's international borrowing in foreign currencies is relatively low, at about 7 percent of banking system assets.

Downstream Vulnerability



Upstream Vulnerability



Sources: BIS Consolidated Banking Statistics, IMF staff calculations.

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[1] Banks are subject to a ceiling on overall external borrowing (100 percent of Tier 1 capital). Corporates can borrow abroad, but risks are moderated by regulatory limits on borrowing; minimum permissible maturities; and ceilings on funding rate spreads.

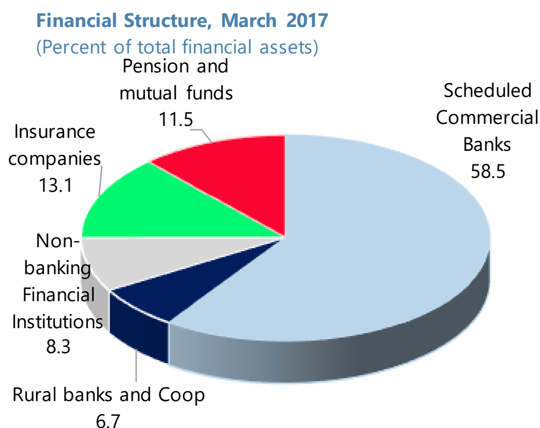
Box 2. Policy Initiatives to Address Problems in the Banking System

The authorities took several important measures to address problems in the banking system:

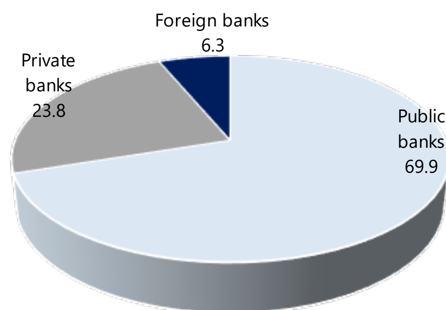
- ***More accurate recognition of risks***. The RBI strengthened its asset classification and provisioning rules in 2015. It also performed an AQR in 2016, which covered the major 36 banks (including all PSBs) and 93 percent of total gross loans. A significant part of the large corporate borrower accounts was examined, and information from the Central Repository of Information on Large Credits was used to ensure consistency in classifying exposures of the same borrower across banks.
- ***Corporate debt restructuring schemes***. The RBI introduced in 2015 and 2016 three new schemes to facilitate loan restructuring—the 5:25 scheme to reschedule long-term financing for large projects; the strategic debt restructuring (SDR) scheme, to facilitate a debt/equity swap with a change of management; and the Scheme for Sustainable Structuring of Stressed Assets (S4A), to divide debt into sustainable and unsustainable portions. These schemes have had a limited take-up by lenders for several reasons: first, they provide rigid solutions that do not allow customization to the needs of specific cases; second, lenders have uneven capacity to withstand losses, making it hard to strike agreement on debt restructuring solutions; third, there are perceived risks of personal criminal liability of PSB staff with respect to asset disposal. Some concerns were supposed to be addressed by the establishment of the Oversight Committee with a mandate to monitor compliance with regulations and procedures.
- ***Insolvency and creditor rights***. The 2016 Insolvency and Bankruptcy Code introduces a modern framework regulating the insolvency of companies, partnerships and individuals. For companies, there is a corporate resolution procedure that aims at the approval of a restructuring agreement within 180-270 days. In the absence of agreement, the company is subject to liquidation. The RBI Oversight Committee was granted additional powers to push the largest NPA cases into insolvency. The 2016 Enforcement of Security Interests and Recovery of Debts Act has strengthened the rights of secured creditors for out-of-court enforcement (SARFAESI) and, generally, the rights of financial creditors at the debt recovery courts. The reforms provide for a liberalization of foreign investment in asset reconstruction companies, and the minimum capital and cash component requirements of asset reconstruction companies were strengthened to encourage increased NPA purchases from banks.
- ***Banking sector revitalization***. The government's Indradhanush Plan, introduced in 2015, aims at revitalizing the PSBs by strengthening capital and improving their governance, autonomy, risk controls, and capacity to deal with stressed assets. Greater consolidation of the 27 PSBs is also being considered as a way to strengthen the banking system. As part of this effort, the PSBs were encouraged to increase private sector participation in bank equity, with a view to decreasing government ownership to the legal minimum of 52 percent.
- ***Development of corporate funding alternatives***. The RBI liberalized regulations on external commercial borrowings by corporates in 2015, including fewer end-use restrictions and higher debt ceilings, and in 2016 allowed infrastructure companies and certain NBFCs to tap external borrowing. Also, a new framework introduced in 2015 sanctions the issuance of rupee-denominated (Masala) bonds overseas.

Figure 1. India: Structure of the Financial System

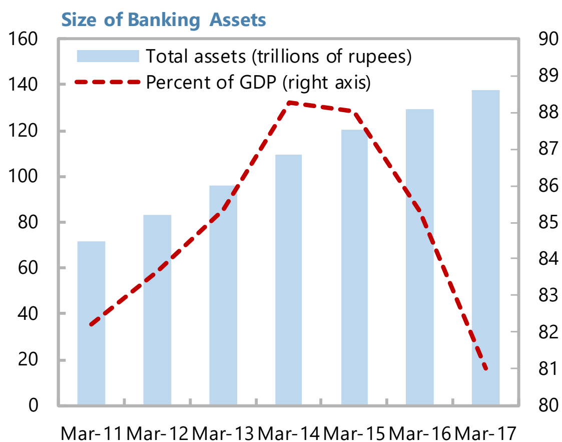
Financial system is dominated by banks...



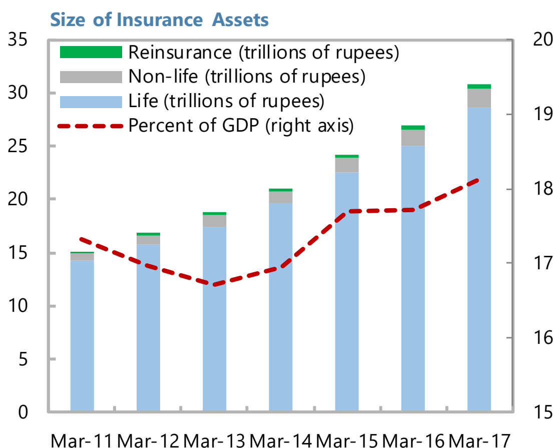
...and PSBs remain the most important players.



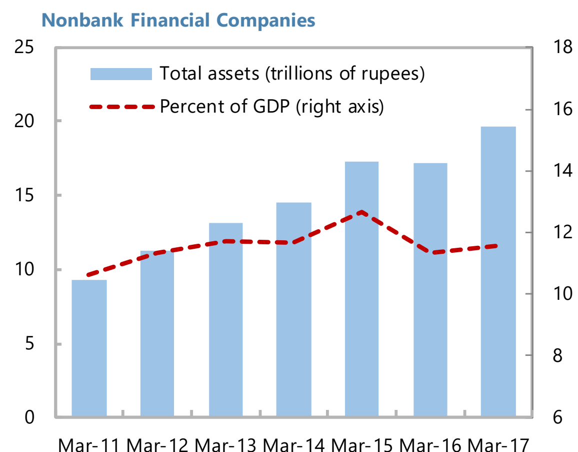
Bank assets grew in nominal terms, but growth has significantly decelerated over the past years.



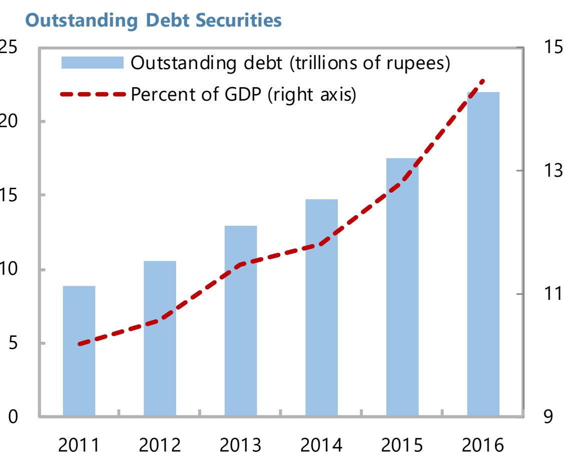
Life insurance remains the largest nonbank market.



NBFCs have doubled in absolute size, but are small.



Debt markets remain shallow yet deepening briskly.

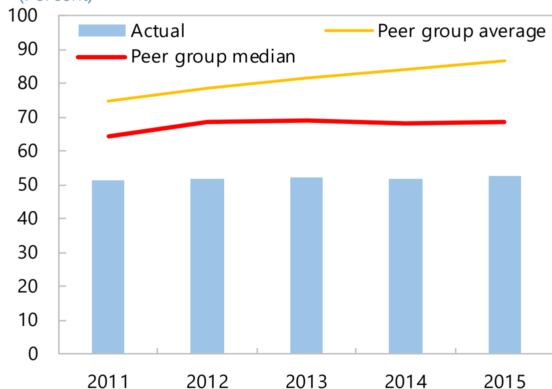


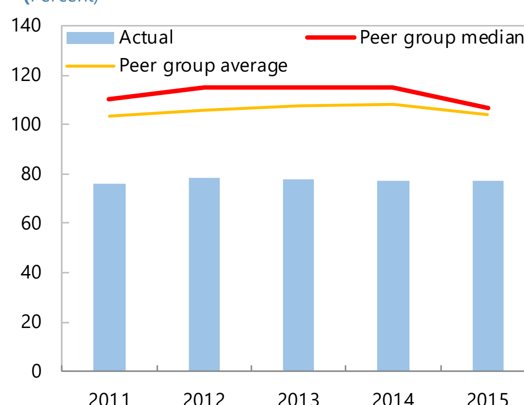
Sources: Reserve Bank of India; and; IMF World Economic Outlook.

Figure 2. India: Financial Development Benchmarks, 2011–16

Bank intermediation is lower than in comparator countries…

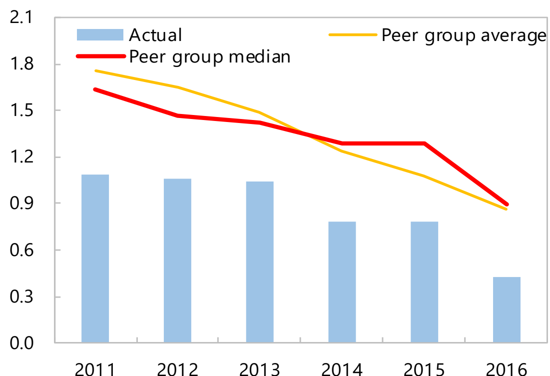
… and statutory requirements crowd out private credit.

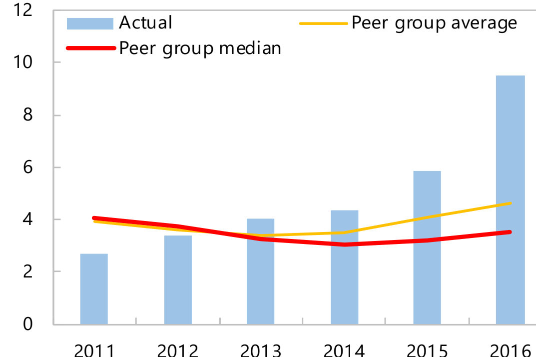




Bank efficiency indicators lag peers….

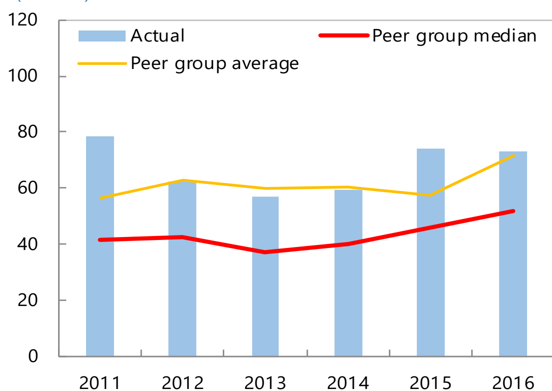
…and asset quality is weaker.

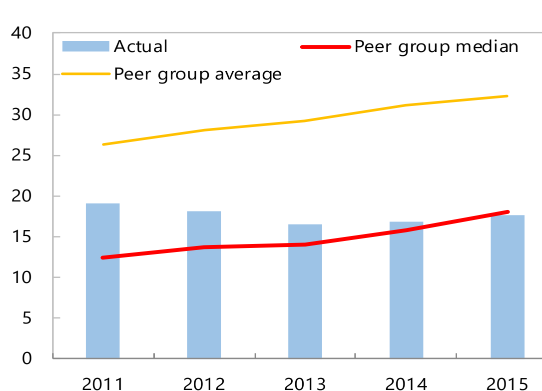




India's equity market is matching up with the peer group…

…but the insurance sector is still significantly smaller.

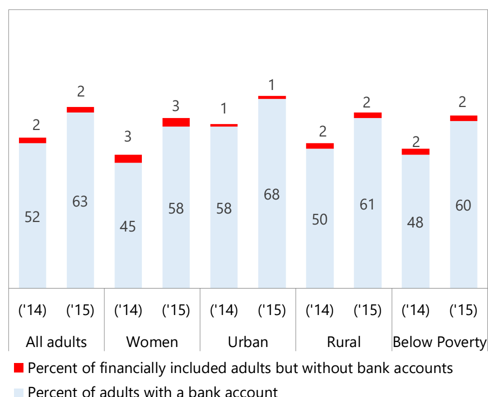




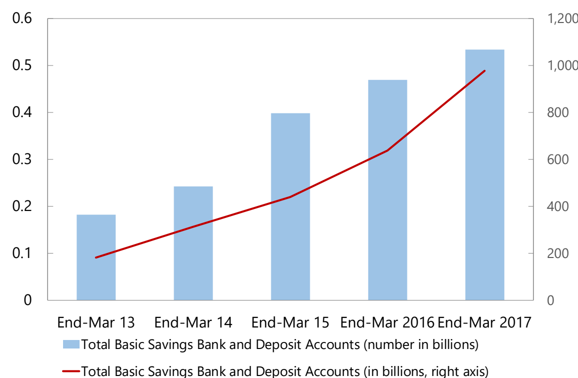
Sources: FinStats Dashboard 2017, World Bank Group; and IMF Financial Soundness Indicators.
Note. Peer group of countries consist of Brazil, Russia, China, and South Africa.

Figure 3. India: Financial Inclusion and Digitization

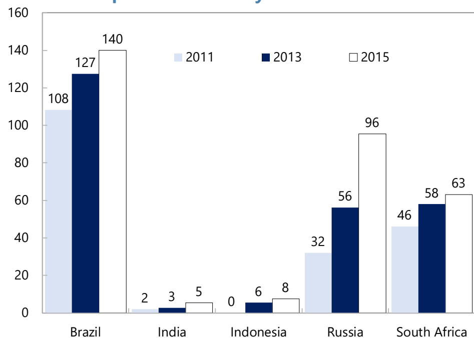
Between 2014 and 2015 financial inclusion has grown substantially across all demographics…



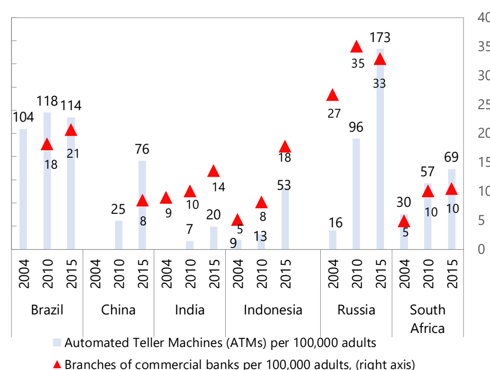
…and account numbers and balances are steadily increasing from a low base.



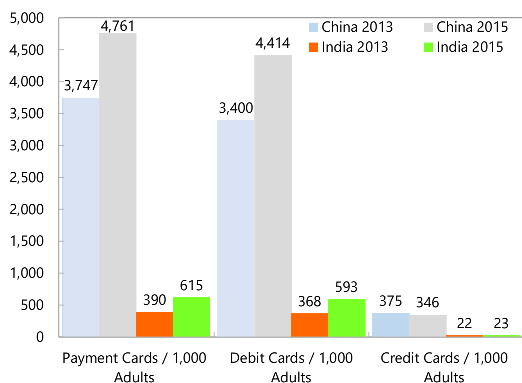
Similarly, the volume of electronic transactions has increased. However, the percent of per capita cashless transactions is still limited in comparison to peer economies.



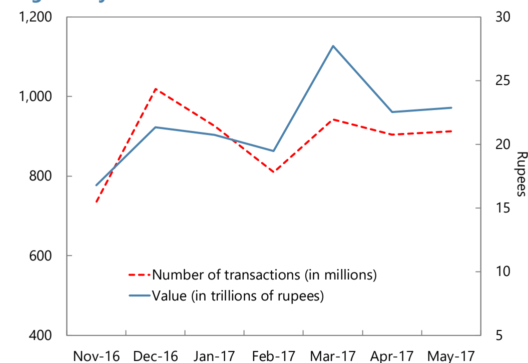
While targets of financial inclusion plans (in terms of access points) have almost been reached, India lags behind peer economies in terms of access points…



… and number of electronic payment instruments.

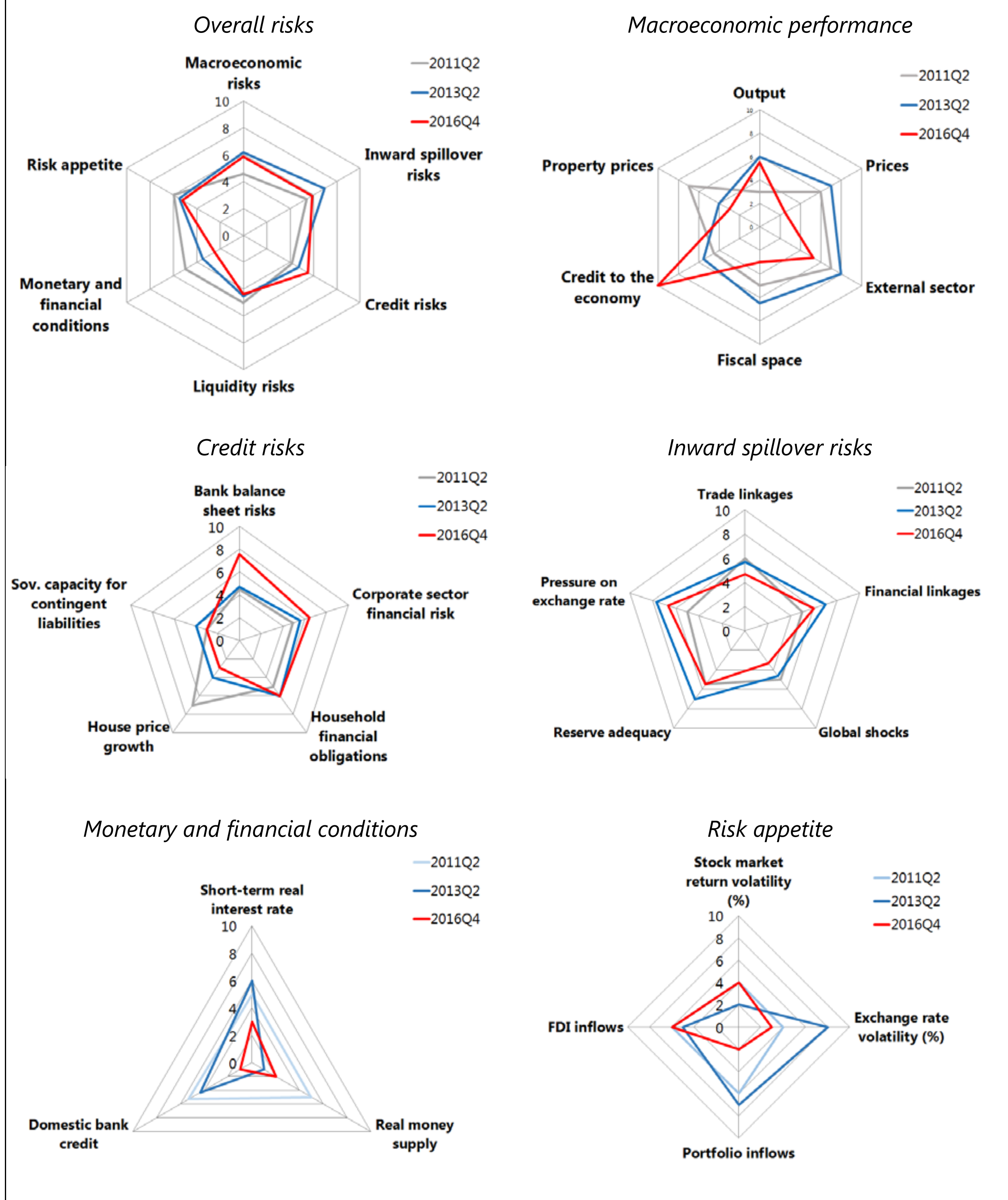


The currency exchange initiative contributed to a rise in digital payments, but recent data shows that it was not sustained.



Sources: Intermedia Survey (2015); RBI; IMF Financial Access Survey; GPSS 2015; and WEF Study (2016).

Figure 4. India: Macrofinancial Maps



Sources: Reserve Bank of India; IMF, *World Economic Outlook;* Bloomberg; Bank for International Settlements; CEIC; CapitalIQ; Dealogic; and IMF staff calculations.

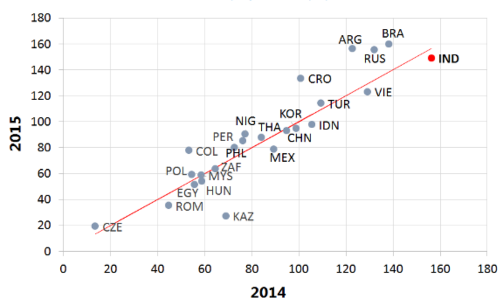
Note: Values away from center denote higher risks, easier monetary and financial conditions, or higher risk appetite. Values close to 10 indicate extreme risks. Higher risk of credit to the economy under macroeconomic performance captures credit slowdown. Household obligations in India are low and thus absolute risks are low.

Figure 5. India: Corporate and Banking Sector Vulnerabilities

Indian corporate leverage is among the highest across emerging markets…

Corporate Leverage, Selected EMs

(Debt-to-Equity Ratio, top quartile)

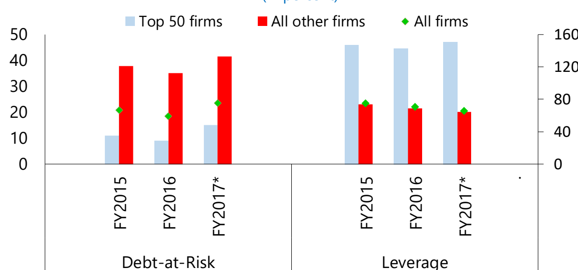


Source: IMF, Corporate Vulnerability Utility.

… with leverage particularly high across the largest corporates, and debt-at-risk levels edging up.

Corporate Sector Vulnerabilities

(In percent)



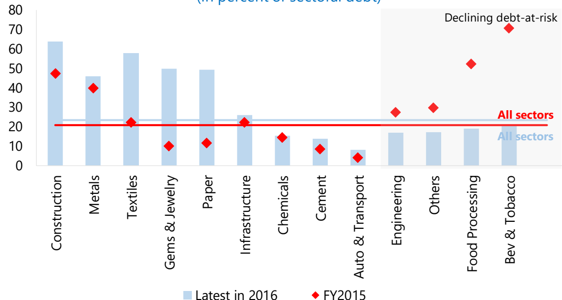
Sources: CapitalIQ; and IMF staff estimates.

Note: Based on a sample of 1,826 firms. 2017 estimates reflect each firm's latest available quarter. Top firms determined based on latest total assets. Leverage is median debt-to-equity ratio in each group (no firms with negative equity). Debt-at-risk is the share of debt of firms with interest coverage ratio less than 1.

Vulnerabilities remain elevated….

Corporate Sector Debt-at-Risk

(In percent of sectoral debt)



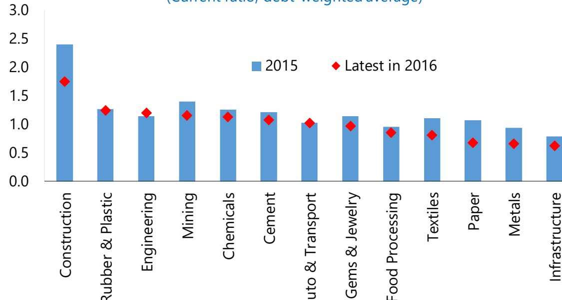
Sources: CapitalIQ; and IMF staff estimates.

Note: Debt-at-risk is debt of firms with interest coverage ratio—multiple of earnings before interest, taxes, depreciation and amortization (EBITDA) relative to interest expenses—below one

…and liquidity pressures in certain sectors, including infrastructure, metals and textiles have risen.

Corporate Sector Liquidity [1/]

(Current ratio; debt-weighted average)



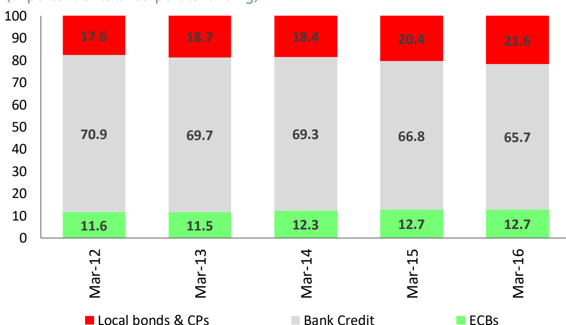
Sources: CapitalIQ; and IMF staff estimates.

[1/] Current ratio: measure of liqudiity calculated as current assets/current liabilities.

Corporates are exposed to external shocks through external commercial borrowings…

Outstanding Corporate Debt in India [1/]

(In percent of total corporate funding)

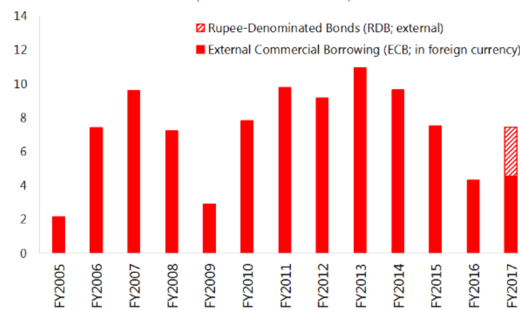


1/ Other local securities include commercial paper (CP) and syndicated loans.

… but dependence on external foreign-currency funding has declined considerably.

Overseas Borrowing of Indian Corporates

(In billions of U.S. Dollars)

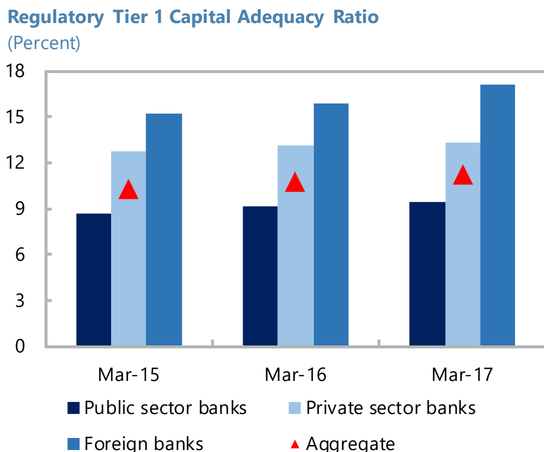


Sources: Reserve Bank of India; and IMF staff calculations.

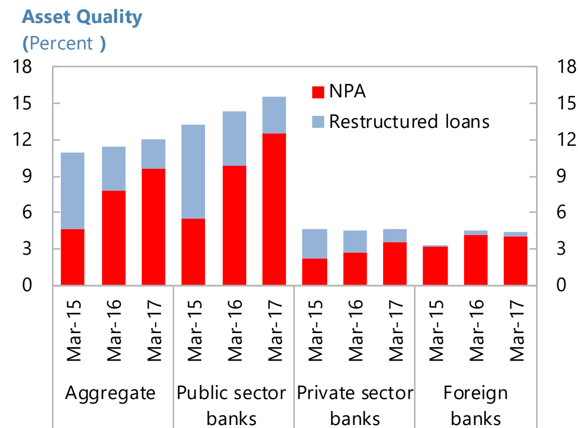
Sources: Bank for International Settlements; Banks' annual reports; Bankscope; CapitalIQ; Dealogic; Reserve Bank of India; IMF, *Financial Soundness Indicators*; IMF, *Corporate Vulnerability Utility*; and IMF staff estimates.

Figure 6. India: Banking Resilience

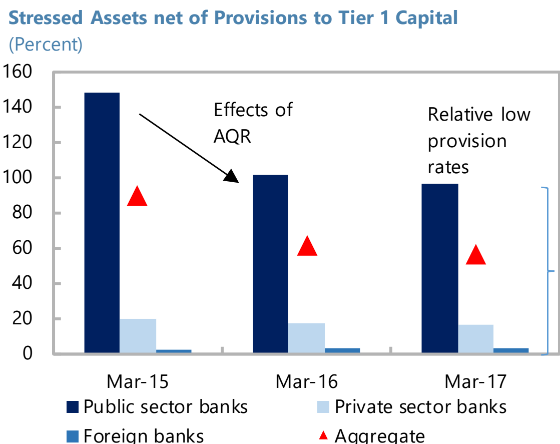
Capital adequacy remained stable overall...



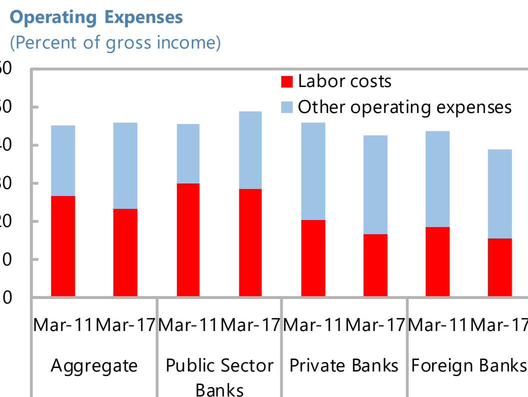
... although asset quality has significantly deteriorated.



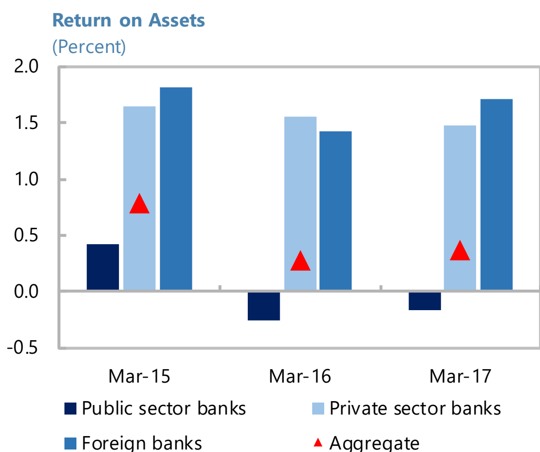
RBI's AQR forced additional recognition of losses in PSBs...



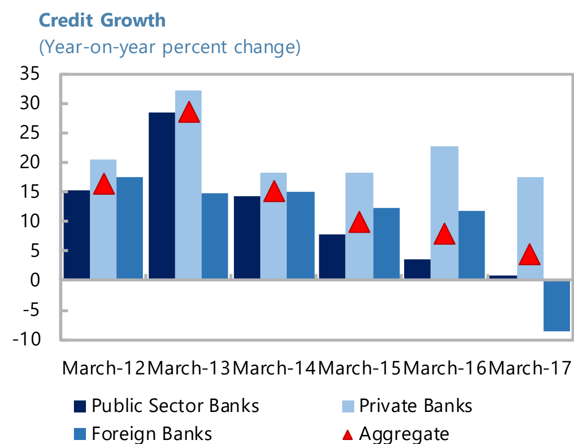
...which together with their high operating expenses...



... put pressure on profitability...



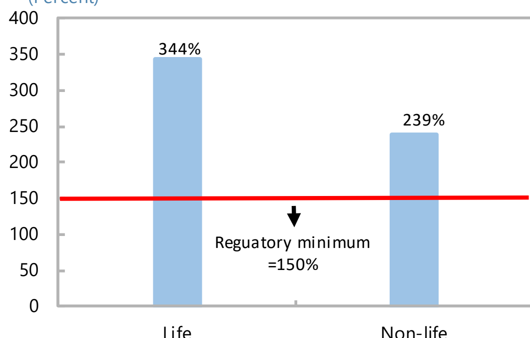
... and negatively impacted credit growth.



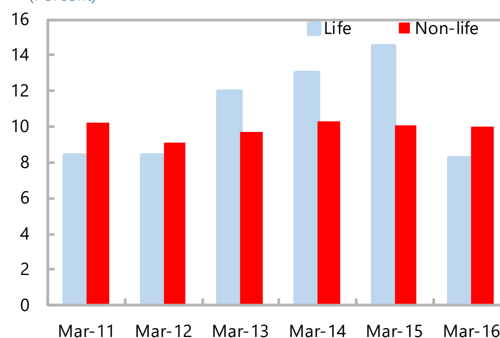
Sources: Reserve Bank of India; and IMF staff estimates.

Figure 7. India: Nonbank Financial Companies

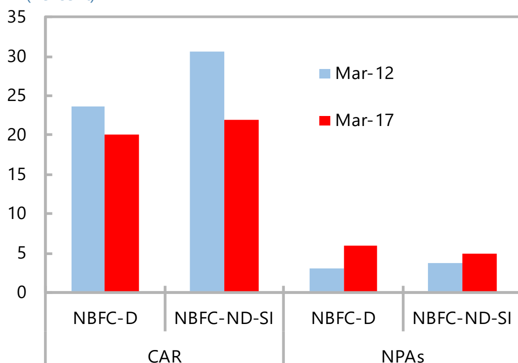
Insurance companies have high solvency ratios[1]...



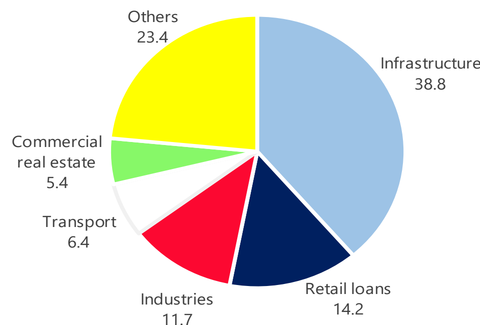
...but profitability is modest.



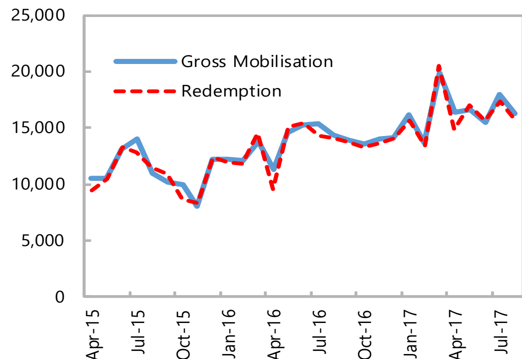
NBFCs have strong capital and asset quality...



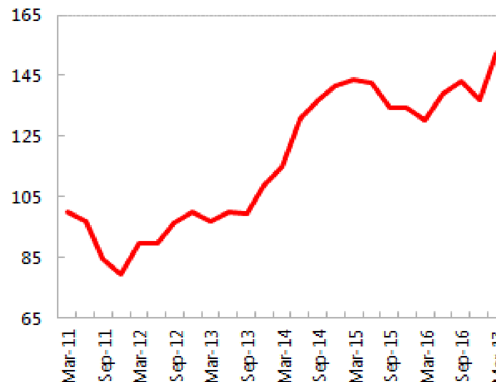
... and concentration in lending to infrastructure is high.



Mutual funds trends seem to indicate high exposure to the risk of a sudden and sizable redemption ...



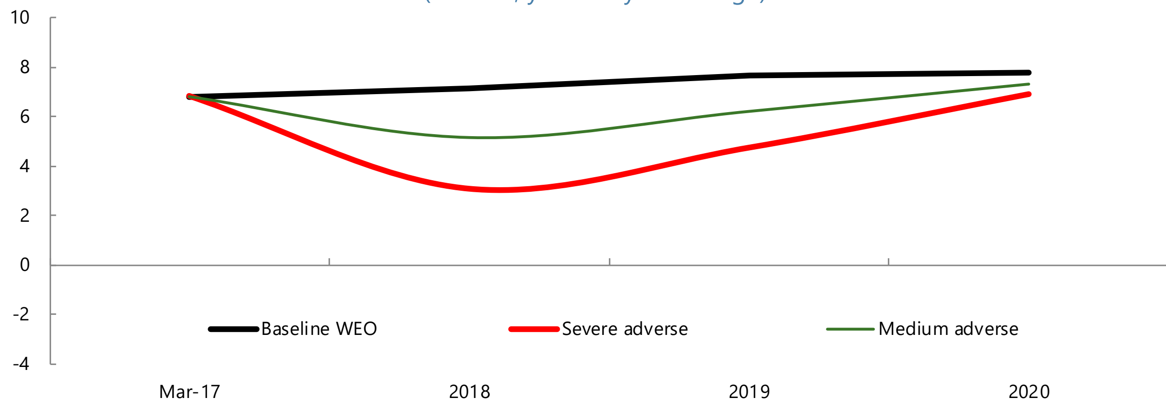
... and equity prices are rising strongly.

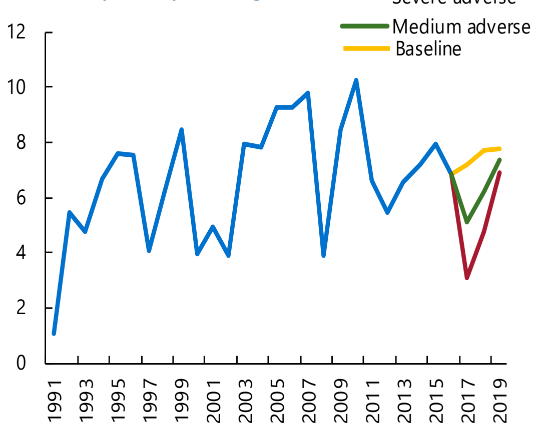


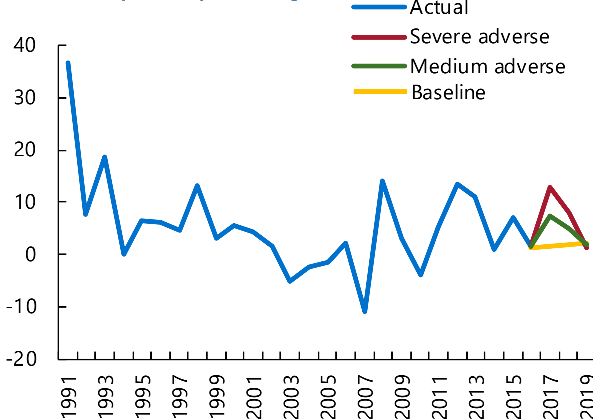
Sources: Bloomberg; Reserve Bank of India; Insurance Regulatory and Development Authority of India and Securities Exchange Board of India

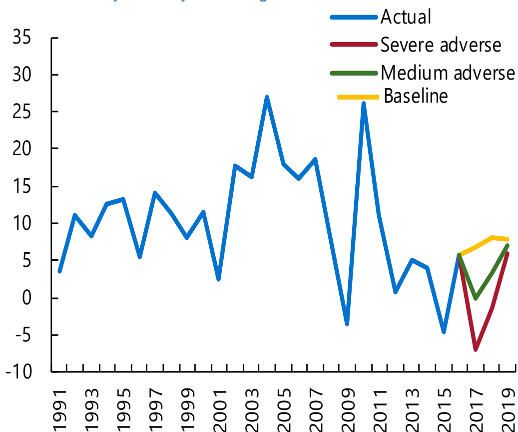
[1] Simple average.

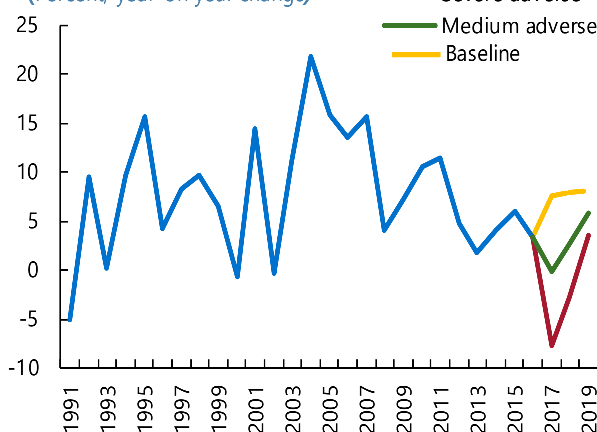
Figure 8. India: Macroeconomic Scenarios
(Percent, year-on-year change)



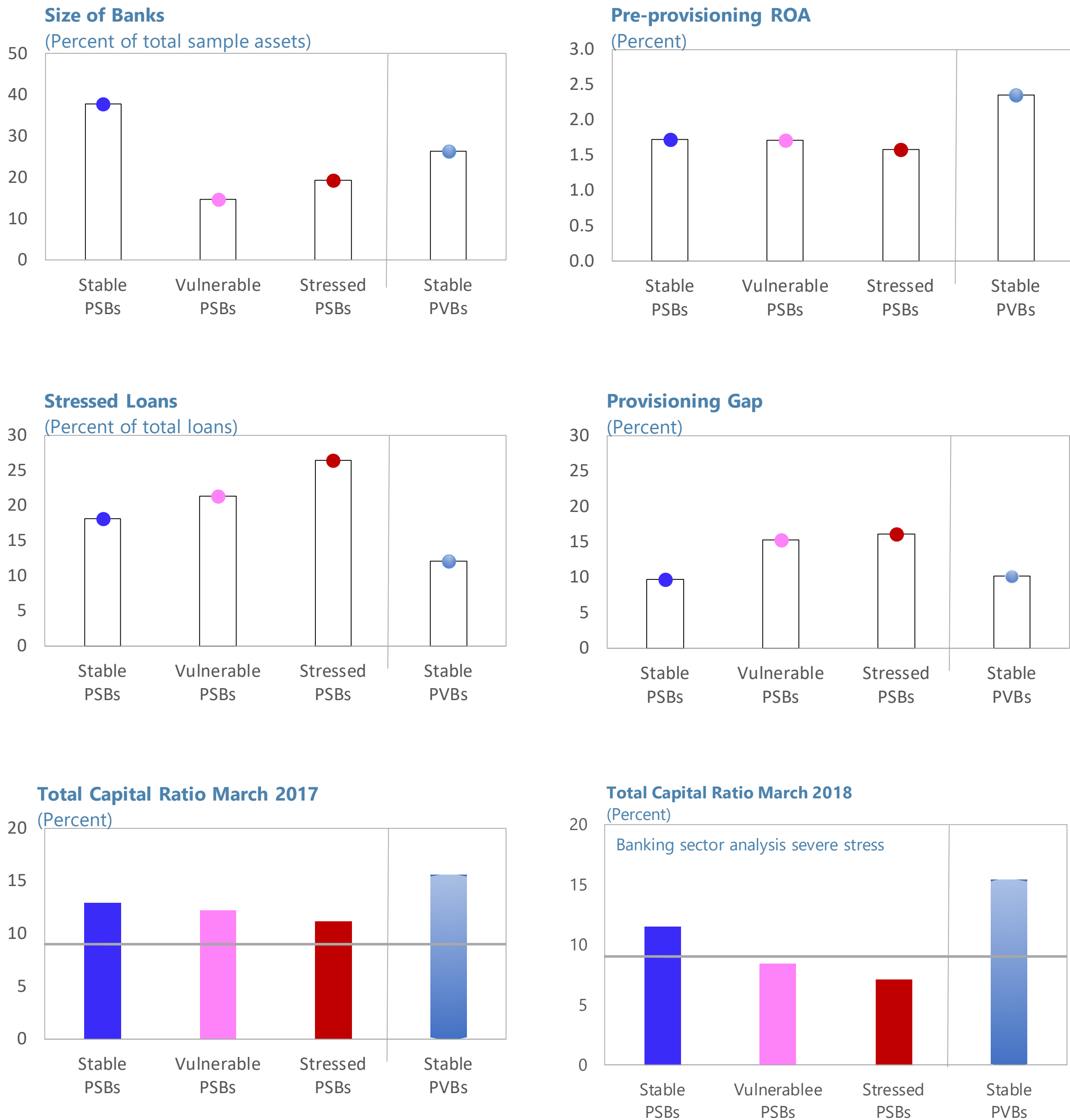








Sources: IMF, World Economic Outlook; and; IMF staff estimates.



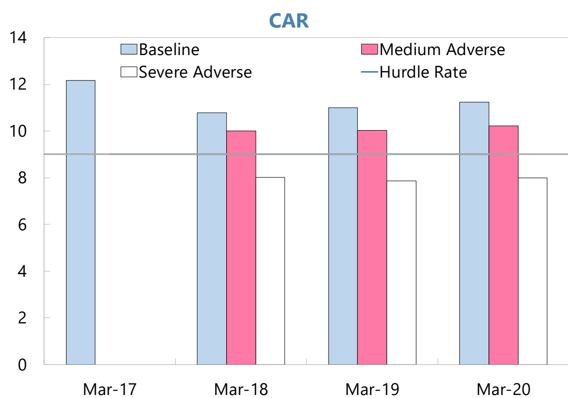
Sources: Fitch database; banks annual reports; and IMF staff estimates.

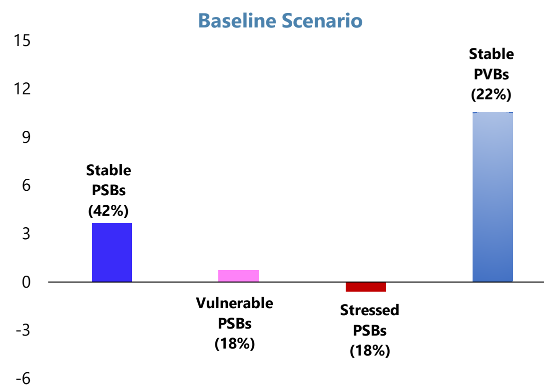
1/ The analysis covers 36 banks—20 PSBs and 16 private banks (PVBs)—of which 15 banks are also included in the stress tests.

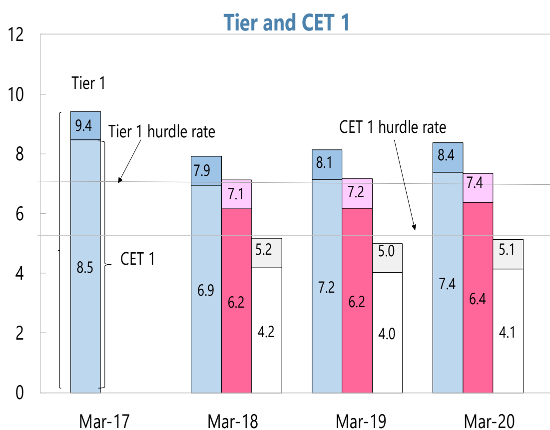
Figure 10. India: Stress Tests: Aggregate Results [1/]
(Public Sector Banks, 60-65 percent LGD assumption, percent)

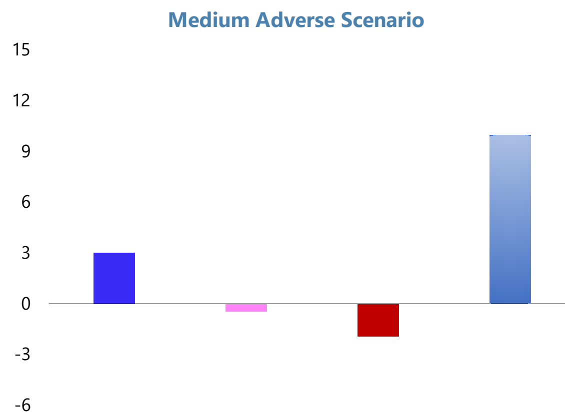
Aggregate capital and NPL ratios by scenario

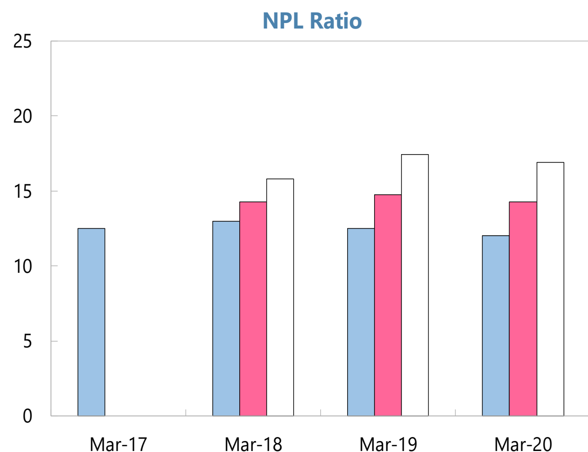
Tier 1 capital gaps by bank groups

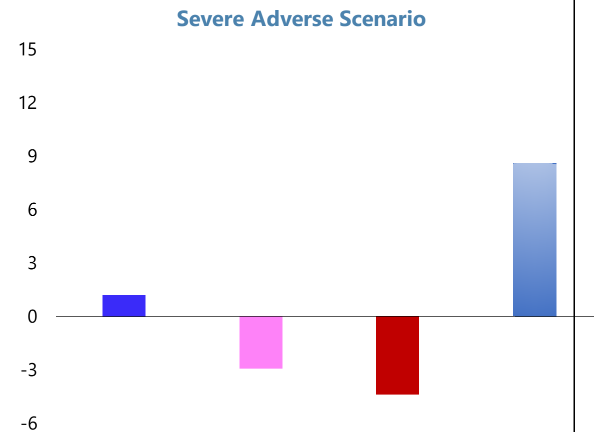










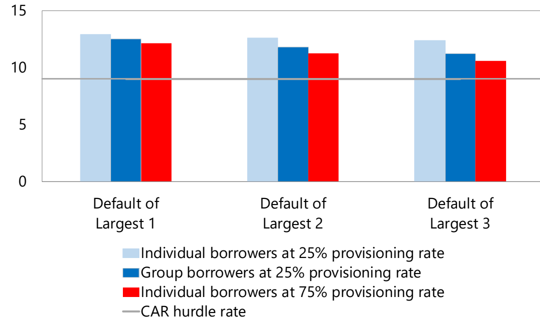


Sources: Reserve Bank of India; and IMF staff estimates.

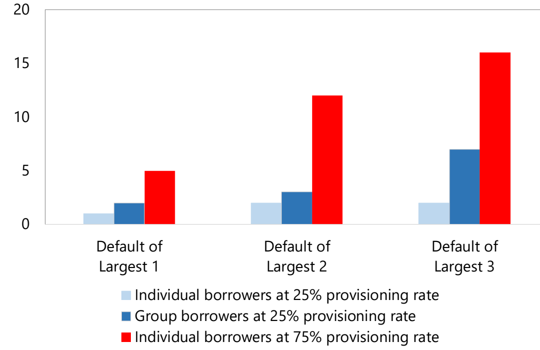
[1/] Capital gap is defined as the difference between the Tier 1 capital ratio and the 7 percent Tier 1 hurdle rate, averaged among banks pertaining to groups G1 to G3.

Figure 11. India: Concentration and Liquidity Stress Test Results

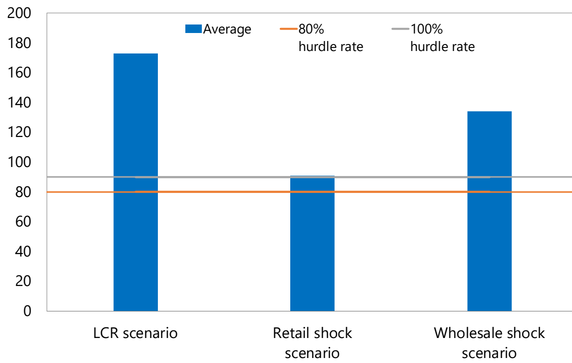
A higher provisioning rate would reduce the capital ratio…



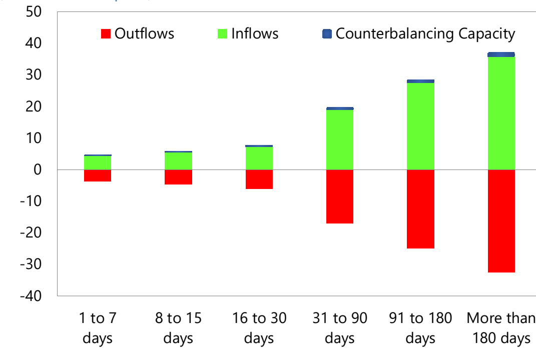
… and 16 out of 59 banks would experience capital shortfalls.



Banks in general could withstand liquidity shocks.



Large short-term asset holdings could cover cash outflows.



Source: Reserve Bank of India.

Table 1. India: Structure of the Financial System[1]

	Total assets-2010/11				Total assets-2016/17			
	No of institutions	In INR billion	Percent of total assets	Percent of GDP	No of institutions	In INR billion	Percent of total assets	Percent of GDP
Total	163	117,107		134.1	148	235,053		138.5
Scheduled Commercial Banks	81	71,834	61.3	82.2	92	137,469	58.5	81.0
Public Sector Banks	26	52,940	45.2	60.6	27	93,941	40.0	55.4
Private Sector Banks	21	13,982	11.9	16.0	21	35,514	15.1	20.9
Foreign Banks	34	4,912	4.2	5.6	44	8,015	3.4	4.7
Regional Rural Banks	82	2,154	1.8	2.5	56	4,105	1.7	2.4
Local Area Banks	4	11	0.0	0.0	3	7.8	0.0	0.0
Cooperative Credit Institutions	96,176	8,555	7.3	9.8	95,558	11,660	5.0	6.9
Urban Cooperative Banks	1,645	2,733	2.3	3.1	1,645	2,718	1.2	1.6
Rural Cooperative Credit Institutions	94,531	5,822	5.0	6.7	93,913	8,942	3.8	5.3
Non-banking Financial Companies	12409	6,689	5.7	7.7	11,523	19,614	8.3	11.6
Deposit-taking NBFCs	297	1,054	0.9	1.2	178	2,715	1.2	1.6
Non-Deposit taking NBFCs	12112	5,635	4.8	6.5	11,345	16,899	7.2	10.0
o/w: Nondeposit taking NBFCs systemically important	319	5,635	4.8	6.5	220	16,888	7.2	10.0
Other Financial Institutions	5	2,469	2.1	2.8	4	5,613	2.4	3.3
Standalone Primary dealers	20	103	0.1	0.1	7	311.6	0.1	0.2
Insurance Companies	49	15,126	12.9	17.3	55	30,760	13.1	18.1
Non-life Insurance	24	627	0.5	0.7	29	1,823	0.8	1.1
Life-Insurance	24	14,301	12.2	16.4	24	28,542	12.1	16.8
Reinsurance	1	198	0.2	0.2	2	394.5	0.2	0.2
Provident and Pension Fund		4,243	3.6	4.9	8	7,966	4.0	4.7
Mutual Funds	51	5,922	5.1	6.8	45	17,546	7.5	10.3

Sources: Reserve Bank of India; Insurance Regulatory and Development Authority of India, Securities and Exchange Board of India; IMF World Economic Outlook; and IMF staff calculations.

1/ Other Financial Institutions includes development banks (National Bank for Agriculture and Rural Development, Exim Bank, National Housing Bank, and Small Industries Development Bank of India).

Table 2. India: Banking Sector Financial Soundness Indicators

(Percent unless otherwise indicated)

	Mar-11	Mar-12	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17
Capital Adequacy							
Regulatory capital to risk-weighted assets	14.2	14.2	13.9	13.0	12.9	13.3	13.7
Regulatory Tier I capital to risk-weighted assets	10.0	10.4	10.3	10.1	10.3	10.8	11.3
Common Equity capital to risk-weighted assets				9.9	10.0	10.5	10.5
Leverage ratio (Tier 1 to total assets)	7.0	7.3	7.5	7.1	7.6	8.0	7.9
Leverage ratio (regulatory capital to total assets)	9.9	10.0	10.1	9.2	9.5	9.9	9.5
Risk weighted assets (in INR billion)	47,249	54,621	63,966	70,649	80,344	87,466	91,159
Asset Quality							
Nonperforming loans to gross total loans	2.4	2.9	3.4	4.1	4.6	7.8	9.6
Nonperforming loans net of provisions to Tier I capital	8.4	11.0	13.7	19.1	26.8	34.3	38.9
Provisions to nonperforming loans	52.4	56.3	45.9	42.7	42.5	41.0	44.0
Large exposures to capital (in percent)					926	841	787
Related party loans to capital	0.6	0.7	0.4	0.8	0.8	0.3	0.9
Restructured loans to total loans	3.5	4.5	5.6	5.7	6.3	3.6	2.5
Earnings and Profitability							
ROAA (annualized)	1.1	1.1	1.0	0.8	0.8	0.3	0.4
ROAE (annualized)	13.6	13.4	12.9	9.5	9.3	3.2	4.4
Net interest income to gross income	22.2	19.1	18.0	17.8	12.5	12.8	13.2
Noninterest expenses to gross income	14.4	11.9	11.6	12.0	8.6	9.0	9.7
Personnel expenses to noninterest expenses	59.4	57.2	56.1	55.7	54.7	53.1	51.7
Trading and fee income to total income	7.2	5.9	5.7	5.8	3.9	3.9	4.6
Liquidity							
Liquid assets to total assets	15.2	14.0	14.8	13.5	13.6	13.1	20.5
Liquid asset to total short-term liabilities	39.2	36.9	42.4	37.8	43.4	41.6	
Liquidity coverage ratio					96.3	98.7	125.0
Customer deposits to total (noninterbank) loans	131.3	127.9	127.1	127.0	126.7	127.1	136.4
Sensitivity to market risk							
Net open positions in foreign exchange to capital	0.5	0.5	0.3	0.3	0.2	0.2	0.2
Net open positions in foreign exchange to tier I capital	0.7	0.6	0.5	0.4	0.3	0.3	0.3
Net position in equities as a percentage of tier I capital				2.0	2.3	2.4	2.6

Source: Reserve Bank of India.

Table 3. India: Macroeconomic Scenario Projections

(Percentage changes, unless indicated otherwise)

	FY2016/17	FY2017/18	FY2018/19	FY2019/20
Baseline				
Real GDP	6.8	7.2	7.7	7.8
Nominal GDP	11.1	11.7	12.5	12.6
Exchange rate (Rs/US$, period averages)	1.6	1.8	2.0	2.3
Current account balance (percent of GDP)	-0.9	-1.5	-1.5	-1.6
Real export of goods and services	5.7	6.9	8.0	7.9
Nominal exports of goods (percent of GDP)	11.9	12.2	11.9	11.9
Real Investment	3.4	7.6	8.0	8.2
CPI	4.5	4.7	5.1	5.0
Nominal interest rate	6.3	6.3	6.4	7.1
Real interest rate	1.7	1.6	1.3	2.1
Weighted average lending rate	10.5	10.5	10.6	11.3
Real average weighted lending rate	6.0	5.8	5.6	6.3
General government balance (percent of GDP)	-6.6	-6.4	-6.3	-6.0
Medium Adverse				
Real GDP	6.8	5.1	6.2	7.3
Nominal GDP	11.1	10.0	10.5	10.9
Exchange rate (Rs/US$, period averages)	1.6	7.3	4.9	1.8
Current account balance (percent of GDP)	-0.9	-1.8	-1.6	-1.5
Real export of goods and services	5.7	-0.1	3.3	6.9
Nominal exports of goods (percent of GDP)	11.9	11.8	11.9	12.0
Real Investment	3.4	-0.1	2.6	5.9
CPI	4.5	6.0	5.6	4.7
Nominal interest rate	6.3	8.3	7.6	7.1
Real interest rate	1.7	2.4	2.1	2.4
Weighted average lending rate	10.5	12.8	12.0	11.4
Real average weighted lending rate	6.0	6.8	6.4	6.6
General government balance (percent of GDP)	-6.6	-8.1	-7.1	-5.9
Severe Adverse Scenario				
Real GDP	6.8	3.1	4.8	6.9
Nominal GDP	11.1	8.2	8.6	9.2
Exchange rate (Rs/US$, period averages)	1.6	12.8	7.9	1.4
Current account balance (percent of GDP)	-0.9	-2.2	-1.6	-1.5
Real export of goods and services	5.7	-7.0	-1.4	5.9
Nominal exports of goods (percent of GDP)	11.9	11.5	11.9	12.2
Real Investment	3.4	-7.7	-2.8	3.7
CPI	4.5	7.3	6.1	4.5
Nominal interest rate	6.3	10.4	8.9	7.1
Real interest rate	1.7	3.1	2.8	2.6
Weighted average lending rate	10.5	15.0	13.3	11.4
Real average weighted lending rate	6.0	7.7	7.2	7.0
General government balance (percent of GDP)	-6.6	-9.8	-7.9	-5.7

Sources: IMF, World Economic Outlook; and; IMF staff estimates.
Note: The baseline scenario is based on the April 2017 WEO data.

Annex I. Report on the Observance of Standards and Codes: Basel Core Principles

1. This assessment of the implementation of the Basel Core Principles (BCP) in India was completed as part of the 2017 FSAP, jointly undertaken by the IMF and the World Bank.[1] The assessment covered the scheduled commercial banks, and reflects the regulatory and supervisory framework in place as of the completion of the assessment. It is not intended to analyze the state of the banking sector or crisis management framework, which are addressed by other assessments conducted in this FSAP. An assessment of the effectiveness of banking supervision requires a review not only of the legal framework, but also a detailed examination of the policies and practices of the institutions responsible for banking regulation and supervision.

A. Information and Methodology Used for the Assessment

2. This assessment was against the standard issued by the Basel Committee on Banking Supervision in 2012. Since the past BCP assessment, which was conducted in 2011, the BCP standard has been revised. The revised Core Principles (CPs) strengthen the requirements for supervisors, the approaches to supervision, and the supervisors' expectations of banks through a greater focus on effective risk-based supervision and the need for early intervention and timely supervisory actions. Furthermore, the 2012 revision placed increased emphasis on corporate governance and supervisors' conducting sufficient reviews to determine compliance with regulatory requirements and thoroughly understanding the risk profile of banks and the banking system. This assessment was thus performed according to a significantly revised content and methodological basis, compared to the previous BCP assessment carried out in 2011.

3. Both essential and additional criteria have been assessed, but only essential criteria have been graded by the assessors. To assess compliance, the BCP Methodology uses a set of essential and additional criteria for each principle. The essential criteria were usually the only elements in which to gauge full compliance with a CP. The additional criteria are recommended as the best practices against which the authorities of some more complex financial systems may agree to be assessed and graded.

4. Grading is not an exact science and the CPs could be met in different ways. The assessment of compliance with each principle is made on a qualitative basis. Compliance with some criteria may be more critical for effectiveness of supervision, depending on the situation and circumstances in a given jurisdiction. Emphasis should be placed on the commentary that should accompany each Principle grading, rather than on the grading itself. The assessment used a four-part grading system: compliant; largely compliant; materially noncompliant; and noncompliant, in line with the BCP assessment methodology.[2] The team reviewed the framework of laws, regulations,

[1] The Detailed Assessment Report has been prepared by Hee Kyong Chon (IMF), Charles Taylor, and Jan Willem Van der Vossen (both external experts).

[2] http://www.bis.org/publ/bcbs230.htm.

and supervisory guidelines and benefited from a self-assessment performed by the RBI and comprehensive responses to FSAP questionnaires. The RBI also facilitated access to supervisory documents and files, staff, and systems.

5. The team appreciated the excellent cooperation, including extensive provision of internal guidelines, supervisory files, and reports. The assessment team held extensive meetings with RBI officials, as well as the MoF, the industry, and other relevant counterparts who shared their views. In particular, the team would like to thank the RBI staff, who responded to the extensive and detailed requests promptly and accurately during the assessment, at a time when supervisory staff were burdened by many supervisory and regulatory initiatives.

B. Preconditions for Effective Bank Supervision[3]

6. An effective system of banking supervision needs to be able to develop, implement, monitor, and enforce supervisory policies under normal and stressed conditions. There are a number of elements or preconditions that are necessary for effective supervision:

- ***Sound and sustainable macroeconomic policies:*** See section on Macrofinancial Context, part B in this report.
- ***A well-established framework for financial stability policy formulation:*** See section on Financial Sector Oversight, part A.
- ***A well-developed public infrastructure:*** On insolvency and creditor rights, see Box 2. On financial market infrastructures, see section on Financial Sector Oversight, part C. Convergence with IFRS is pending—IFRS has been transposed in the Indian Accounting Standards and will be implemented by scheduled commercial banks and certain categories of NBFCs in April 2018. For banks, the RBI issued directions in February 2016 on the Indian Accounting Standards roadmap. The new accounting standards will allow timelier recognition of credit losses and provide forward-looking information, but imply a steep learning curve for the accounting profession, banks, and supervisors, where further guidance and dissemination of good practices is needed.
- ***A clear framework for crisis management and financial safety nets:*** See section on Financial Sector Oversight, part D.
- ***Effective market discipline:*** Key governance and disclosure requirements for market participants are spelled out in the Indian Companies Act of 2013. The Act contains provisions relating to Board constitution, Board meetings, Board processes, independent directors, general meetings, audit committees, related-party transactions, and disclosure requirements in financial statements, etc., in all financial institutions. Additional disclosure requirements applicable to banks are set by the RBI or as part of mandatory disclosures for listed companies.

[3] Some elements of this section draw from other documents produced as part of the 2017 FSAP.

C. Main Findings

Responsibilities, Objectives, Powers, Independence, and Accountabilities (CPs 1–2)

7. The RBI's supervisory responsibilities and powers are generally well established. There are no material gaps in coverage of the Indian system of bank supervision and regulation. This is evident from legislation, the public stance of the RBI, and the content of the RBI's guidance. The legal framework gives the RBI powers to authorize banks to conduct ongoing supervision, address compliance with laws, and undertake timely corrective actions to address safety and soundness concerns. Laws and regulations are updated frequently.

8. There is a need to clarify the RBI's formal objectives and to strengthen its independence. Supervisory objectives and the first priority of safety and soundness are not clear in the law, although it is evident that the RBI is committed at the operational level to ensuring the safety and soundness of the banking system. Supervisory powers over PSBs are incomplete, as the RBI has no legal ability to dismiss PSB Board members, merge PSBs, or revoke their statutory authority to conduct banking business.[4] Furthermore, the government appoints the governor of the RBI for a maximum term rather than a minimum term, and can dismiss him or her without cause.

9. Legal changes are recommended to clarify supervisory objectives, provide full supervisory powers over PSBs, and to limit appeals or overrides of supervisory decisions. Formal grounding of the RBI's independence in exercising its supervisory attributes would provide greater legal certainty. Legislation should be amended to enable the RBI to extend all the powers currently exercised over private sector banks to PSBs; in particular, regarding Board member dismissals, mergers, and license revocation. The RBI Act should be amended to appoint the governor for a minimum term, ending the government's ability to dismiss the governor without cause. It should also remove the option of an appeal to the government when the RBI revokes a license. If statutory changes are difficult, the RBI and the government should consider adopting a framework agreement whereby the government would acknowledge the RBI's full operational authority and independence in supervision and regulation, as they did recently for monetary policy.

Ownership, Licensing, and Structure (CPs 4–7)

10. Permissible activities for banks, licensing, transfers of ownership, and bank mergers and acquisitions are appropriately defined and controlled. The use of the word "bank" is controlled and deposit taking is confined largely to banks, although any deposit taking by institutions that are not regulated as banks should be prohibited. Guidance and processes for scrutiny of license applications are adequate in almost all respects. The RBI should require groups that own significant shares of a bank to list all their beneficial owners and to report promptly to the RBI any material changes in the holdings of those shares.

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[4] Although the RBI cannot force the merger of PSBs, it can propose mergers, including mergers that would amalgamate a private sector bank with a PSB.

Ongoing Supervision (CPs 8–10, 12, 15)

11. **The RBI has made substantive changes in moving toward the implementation of a risk-based approach, but further enhancements are necessary**. The SPARC framework was introduced in FY 2013. The framework deploys an adequate mix of onsite and offsite supervisory tools. The core of risk assessment under SPARC is a proprietary statistical model, which is a multi-tiered scorecard with qualitative assessments. Appropriately, these assessments are updated dynamically in response to changes in strategy and circumstances, but the process of implementation and adjustment should be managed strictly to maintain consistency and the framework's robustness. Assessors noted that the model needs independent review and validation.

12. **The enforcement link between SPARC assessments and supervisory actions is weak with respect to imposing capital add-on**. The assessors noted that a bank's Risk Assessment Report does not discuss the bank's identified capital shortage in association with necessary capital augmentation or risk-mitigation plans. Although there were cases requiring identified capital add-ons, none was followed by supervisory actions; that is, by a written request for capital augmentation. The RBI should enhance the robustness of the risk-based supervision framework by clearly linking the SPARC assessments to enforceable supervisory actions.

13. **Formal comprehensive guidelines regarding the oversight of compliance with Risk Assessment Report action points need to be established**. The RBI states that non-compliance with action points within the agreed timeline is managed by the Senior Supervisory Managers and gets factored into the assessment of governance and oversight function under SPARC. However, without formal guidelines on the oversight of compliance, it is difficult to ensure that the bank's compliance of action points is managed and enforced in a consistent manner across all banks.[5]

14. **It would be useful also to develop supervisory assessment handbooks to ensure consistency across banks and supervisory judgements**. Once the RBI enhances the robustness of the SPARC framework, it should consider developing detailed SPARC assessment handbooks to improve the consistency of its supervisory framework.

15. **The extent of the assessment of resolvability of banks is limited under the SPARC framework**. Recovery and resolution plans have not been required by the RBI. The establishment of a recovery and resolution regime and the risk assessment pertaining to the resolvability of large banks (such as domestic systemically important banks) needs to be considered upon the passage of the resolution legislation bill.

16. **Other improvements should be sought in the engagement with banks' Boards, bottom-up stress tests, and consolidated supervisory returns**. The supervisor should maintain frequent contact with the bank's Board and non-executive Board members to better understand and assess matters such as strategy, group structure, corporate governance, performance, risk

[5] The RBI states that with the setting up of the Enforcement Department, supervisory concerns, including the violations necessitating penal action, will be addressed in a more focused manner.

management systems, and internal controls. More active engagement with independent Board members is needed. The RBI should consider finalizing and utilizing the stress testing methodology to identify, assess, and mitigate emerging risks across banks as a complementary supervisory tool. The authorities should consider enhancing the collection of data for purposes of consolidated supervision in terms of frequency and granularity.

Corrective and Sanctioning Powers (CP 11)

17. In almost all respects, the RBI has sufficient supervisory powers, but—as discussed above—there are limitations, particularly with respect to PSBs. Legislation should be amended to remove any statutory limitations on the RBI's ability to enforce regulations in PSBs, including in the areas of Board member removal, mergers, and withdrawals of licenses. Furthermore, any private sector license revocation could be appealed on its merits to government, whose decision is final. Legislation should be amended to give the RBI full authority to revoke a bank license without appeal to the government; and to ensure it can act independently with respect to Prompt Corrective Action enforcement.

Cooperation and Cross-Border Banking Supervision (CPs 3, 13)

18. A framework has been put in place for cooperation and coordination of the RBI with other domestic financial regulators. In February 2013, a MoU was signed to facilitate cooperation in the supervision of the 11 financial conglomerates in India. The MoU envisages information sharing among regulators, subject to the legal requirements of professional secrecy, coordinated onsite inspections of entities within the conglomerates, and early information of each other in case of crisis. The MoU does not yet envisage joint inspections, but work is ongoing to develop a framework in this area. The RBI's mandate could be usefully strengthened in the area of financial stability. It is recommended to include more explicit provisions in the applicable bills, acts, and regulations to support recovery and resolution actions mutually. The FSDC-SC, Early Warning Group, and the FSDC working group committee structures could be streamlined to achieve clearer mandates and more efficient coordination.

19. Since 2010, the RBI has embarked on a successful program to conclude MoUs with foreign regulators. Agreements were concluded with 43 jurisdictions, covering information sharing, onsite examinations, crisis management, confidentiality, and meetings of the authorities, and supervisory colleges have been established for the six Indian banks with cross-border operations. The RBI chairs the meetings of the supervisory colleges for these banks, and the most important home and host authorities are invited. In the past five years, the RBI has established formal relationships with overseas supervisors, including colleges for its six largest internationally active banks. Thirty-six onsite inspections were performed in the establishments of 15 Indian banks abroad; a number of these jointly with the host authority. The RBI staff report good day-to-day working relationships with their main foreign counterparts.

Corporate Governance (CP 14)

20. The appropriate rules on fitness and propriety, and banks' internal governance structures, are in place with respect to private and foreign banks. Nevertheless, the influence the RBI may exercise on banks' governance through section 21 Banking Regulation Act, placement of RBI representatives on banks' Boards, and the RBI's very limited authority under the Banking Acts, as well as the custom to hold the PSB Boards accountable has become problematic. Under the law and according to custom, the RBI cannot hold PSB Boards accountable for assessing and—when necessary—replacing weak and nonperforming senior management and government-appointed Board members. Moreover, the government's and the RBI's roles in appointing senior management and placing their own officials on the Boards creates a conflict of interest with regard to the exercise of supervision and the PSB's business decisions.

21. A number of improvements are necessary in the area of PSB governance. Consistent with the recommendations contained in the Indradhanush Plan and 2014 Nayak report, the Banks Board Bureau should be able to appoint and remove senior management of PSBs, assuming the role presently carried out by the MoF. Over time the banking laws should be changed to empower the RBI and the Boards of PSBs to exercise the same responsibilities for PSBs as now apply to private banks. When the law is amended, the requirement that PSB Boards include ex officio the RBI, as well as the power of the RBI by virtue of section 21 Banking Regulation Act may need to be reconsidered.

Capital, Risks, Problem Assets, Provisions and Large Exposure (CPs 16–19, 22–25)

22. The RBI has adopted the Basel III capital adequacy framework. In a 2015 Regulatory Consistency Assessment Programme, with which the assessors concur, under the aegis of the Basel Committee, the RBI framework was assessed to be compliant with the Basel Framework. The RBI capital framework also includes a capital conservation buffer, leverage ratio, and countercyclical capital buffer. These frameworks apply to public as well as private sector banks. At this time, the RBI offers only the standardized approach for credit, market, and operational risk. However, currently the RBI is reviewing applications of several banks to apply the Internal Ratings Based Approach for credit risk. No authorizations have yet been granted, pending validation of banks' models and the conduct of parallel runs.

23. The regulations and supervision on risk management are considered broadly adequate. The RBI comprehensively prescribes banks' systems for credit risk management. Board approval is required for banks' risk strategy. A sound organizational structure for risk management is required, including a Risk Management Committee, a Risk Management Department, and a robust loan review process. With regard to credit risk, for instance, banks are required to set up an internal risk rating system, incorporating financial analysis, projections and sensitivity, and industrial and management risks. Review of credit risk should take place twice per year by independent loan review officers. Banks report to the RBI on a quarterly basis on loan quality, classification, and provisions.

24. All banks need to follow guidelines and meet targets on priority sector lending, which compromises banks' independent, risk-based credit allocation policies and strategies. These public policy-oriented constraints can impose significant limitations on the banks' own development of credit risk management strategies and policies, and may lead to risk accumulation. The RBI should consider reviewing PSL policy, including targets and scope of application to allow banks flexibility in meeting PSL targets, if proposed projects do not meet banks' commercially based risk management strategies and processes.

25. The introduction of IFRS 9 provides an opportunity to strengthen loan classification and provisioning rules. The RBI may need to maintain a prudential filter as a regulatory floor after the introduction of accounting expected loan-loss provisioning in April 2018. In this context, the RBI should review its existing classification and provisioning rules to ensure they are calibrated in line with actual losses and cure rates. If necessary, regulatory parameters should be adjusted for more timely recognition of appropriate provision. The RBI should also reassess the need for amending special loan categories that could weaken the loan classification and provisioning adequacy. Also, the RBI should develop a reporting tool and enhance monitoring, by closely assessing the materiality, trend, and build-up of risks in special situations in a systematic way. Furthermore, it is important to note that good practices are continuously evolving in the areas of prudential treatment of problem assets, nonperforming exposures, and forbearance. The RBI should stay on top of this and align its practices and regulations as soon as possible with new regulatory developments. Finally, given the high level of NPAs in the system, the authorities should consider a more proactive approach to ensure that banks, via adequate provisioning, have proper incentives to tackle NPAs and free up balance sheets for more productive lending.

26. The RBI has introduced a revision of the large exposure and risk concentration rules that aim to fully converge with the Basel guidance. Although the new circular fully enters into force only in April 2019, it already prescribes significantly lower general limits on exposure to individual borrowers and groups of borrowers of 20 percent and 25 percent of bank Tier 1 capital, versus the current general limits of 25 percent and 40 percent, respectively. However, the current system still offers differentiated treatment for a significant number of special situations that need to be reviewed and simplified, with the objective of sound risk management rather than special treatment for socially sensitive or priority projects.

27. The RBI allows banks to include Indian State Government securities, also known as State Development Loans, in the level 1 high-quality liquid assets buffer. In 2015, the Basel Committee's Regulatory Consistency Assessment Programme reviewed the features of the State Development Loans and concluded that they do not qualify as sovereign debt securities in the context of the Basel standards. The inclusion of State Development Loans resulted in a material upward effect on reported liquidity, which hampers its international comparability. The RBI does not consider it necessary to rectify this rule, which is considered satisfactory from a prudential point of view. CP 24 stipulates that the liquidity requirements should not be lower than those prescribed in the applicable Basel standards. Therefore, the inclusion of the State Development Loans in level 1 high-quality liquid assets is one of the shortcomings assessors have observed. The RBI should

consider reviewing and enhancing regulation of liquidity risk management to be more in line with Basel standards.

28. The RBI should consider expanding the scope of supervisory reporting of operational risk events and associated losses. Aspects of operational risk reporting and examination are in place; a comprehensive guideline on Cyber Security Framework in banks was issued in June 2016; a Cyber-Security and Information Technology Examination Cell was launched; and reporting of financial fraud was well established. However, with regard to non-IT operational risk, the formal reporting protocol has limited applicability other than fraud. There may be scope to strengthen other aspects of operational risk reporting, such as reporting on human errors, processing errors, and external events.

Other Regulation, Accounting, and Disclosure (CPs 20, 26–29)

29. The RBI has issued the Guidelines on Intra-Group Transactions and Exposures, which include related-party transactions since the last FSAP. However, the rules over related-party transactions still have room for improvement. For instance, there is no explicit requirement for Board approval to be obtained prior to related party exposure write-offs. It is unclear that the intragroup exposure limit is applied to related-party transactions between a bank and its major individual shareholder or family. In addition, other regulations affecting related-party transactions are scattered across several supervisory documents or legal texts, making it difficult to define a clear framework of related-party transactions. It would be beneficial if the regulations/guidelines of related party add further clarification.

30. The internal control regulations issued by the RBI are adequate and are supported by the requirements of the SPARC risk-based supervision system. This system provides extensive guidelines for inspection of the internal control and audit function, and prescribes that a bank's internal controls allow identification and controlling of risks. The Internal Audit Departments in banks are required to have appropriate resources and staff with the requisite skills. Tasks can be outsourced, allowing additional expertise to be brought in. The auditors reported that overall experience with the quality of internal audit of banks was satisfactory.

31. The Institute of Chartered Accountants of India, a statutory body, issues Accounting Standards applicable to all listed companies, including banks.[6] Banks are also governed by RBI norms on income recognition, asset classification and provisioning, and classification and valuation of investment portfolios. Banks are required to publish audited financial statements annually in the regional newspaper. Only external auditors approved by the RBI and who are on the list of approved auditors are permitted to audit banks. Starting April 1, 2018, Indian Accounting Standards will converge with IFRS, including IFRS 9 on expected losses. The RBI prescribes rotation of audit firms

[6] The Ministry of Corporate Affairs (MCA), through its notification on 16 February 2015, issued the Indian Accounting Standards, which converge with IFRS.

every 3–4 years. The accounting and auditing professions are of high quality, and bank accounting standards are comprehensive.

32. Currently, the external auditor is not obliged to report immediately to the RBI any issues encountered in the audited bank that are of material interest to the supervisor. This is only permitted after publication of the annual statements. Moreover, regulators need powers to access the auditor's working papers when needed. This is currently not envisaged. The laws and/or regulations should explicitly authorize the external auditor to inform the RBI of any concerns at any time; also, before the annual statements have been finalized and published. The RBI should be given the explicit authority to obtain information at any time from the external auditor.

33. With regard to the AML/CFT framework, there is currently no specific requirement imposed on banks with regard to the treatment of customers who are domestic politically exposed persons. In line with the Financial Action Task Force Recommendation 12, in addition to performing customer due diligence measures required by the standard, the banks should be required to take reasonable measures to determine whether a customer or beneficial owner is a domestic politically exposed persons or a person entrusted with a prominent function by an international organization and, in cases where there is a higher risk business relationship with such a person, to take enhanced due diligence measures. In addition, the know your customer rules do not highlight in the definitions section that banks are required to identify beneficial ownership where the customer is an individual. This constitutes a deficiency, given that money-laundering activities often involve the engagement of front men to obscure the identity of beneficial owners.

34. The AML/CFT reporting framework is not sufficiently broad. Although the controls over reporting financial fraud are well established in India, financial fraud is only one type of predicate crime among the AML/CFT concerns over money-generating criminal activities. The RBI should broaden its reporting requirements to address money-laundering issues, not just fraud.

Summary Compliance with the Basel Core Principles

Core Principle	Comments
1. Responsibilities, objectives and powers	There are no material gaps in coverage of the Indian system of bank supervision and regulation. This is clear and credible from legislation. The legal framework gives the RBI powers to authorize banks, conduct ongoing supervision, address compliance with laws and undertake timely corrective actions to address safety and soundness concerns. Laws and regulations are updated frequently. New arrangements between domestic financial supervisors have been put in place to smooth group regulation and supervision. In the past five years, the RBI has established formal relationships with overseas supervisors, including colleges for its six largest internationally active banks. The RBI can review the activities of parents, affiliates and subsidiaries of banks. While safety and soundness of banks is an important objective for the RBI, the legislation does not define it clearly and unambiguously as its first priority for supervision.

Core Principle	Comments
2. Independence, accountability, resourcing and legal protection for supervisors	The RBI has budgetary autonomy and adequate resources. It is transparent about its core purpose, which is published on its website. It regularly gives a public account of its activities and use of resources in its Annual Report and elsewhere. In most respects, it has operational independence. The legal framework for banking supervision includes legal protection for the RBI and its officers. However, • While it does regulate and supervise the PSBs, the RBI does not have *full* discretion to take supervisory actions. • The RBI Act contains a number of powers, enabling the central government to supersede decisions of the RBI. Although these powers have not been used in practice, they are broad and their existence undermines the RBI's legal independence. • The RBI governor is not appointed for a minimum term, but for a maximum one and may be dismissed at will by the government without disclosing the reasons for such action.
3. Cooperation and collaboration	The overall framework for cooperation is considered comprehensive and effective. Nevertheless, it is recommended to include more explicit provisions in the applicable bills, acts, and regulations to support mutual recovery and resolution actions. These rules should also support e.g., agency-appointed administrators, prosecutors, and liquidators. The authorities are working on a format for joint inspections, including any regulatory agency that has an interest in the institution that is being inspected.
4. Permissible activities	The permissible activities of institutions that are licensed and supervised as banks are defined and the use of the word "bank" in names is controlled. The term "bank" and related terms are defined in Indian law. Permissible activities for banks are also well defined in legislation and regulation, although the central government can impose on banks to undertake nonbanking activities. Only banks regulated by the RBI can refer to themselves using the term "bank" and related terms. Deposit taking is largely, but not entirely, confined to banks. The RBI does maintain a list of banks on its public website.
5. Licensing criteria	The RBI is the licensing authority for all banks in India. Guidance and processes for scrutiny of license applications are adequate. However, there is a potential reason to be concerned about ultimate beneficial ownership. Difficulty in establishing ultimate beneficial ownership should be grounds for rejecting a license application.
6. Transfer of significant ownership	The RBI generally has the power to review any transfer of significant ownership or controlling interests held in existing banks. Significant ownership is either expressly or implicitly defined in statute. Approval by the RBI for a significant transfer in ownership is required for private sector banks. The RBI could, in principle, block a significant ownership transfer for a PSB, if it judged that such a transfer was not in the interest of the banking system. The RBI's supervisory powers to prevent a change in significant ownership refer to a fit-and-proper test similar to that undertaken as part of a bank licensing, and they can reject a change based on false information. Banks must advise the RBI if a significant shareholder becomes unfit. While periodic reporting to the RBI and SEBI, and the RBI's supervision onsite and offsite, do allow the RBI to monitor significant ownership, it is not clear that they would necessarily detect changes in beneficial ownership.

Core Principle	Comments
7. Major acquisitions	The RBI has the power to approve or reject major acquisitions by private sector banks. Through its continuous monitoring and periodic Internal Capital Adequacy Assessment Program reviews, it should be aware of major acquisitions contemplated by any public or private sector bank. It can impose prudential conditions on major acquisitions or investments by any bank via its normal regulatory powers. These extend to the establishment of cross-border operations. Its supervision of banking groups ensures that corporate affiliations or structures do not expose the bank to undue risks or hinder effective supervision.
8. Supervisory approach	The supervisory approach of the RBI has undergone some substantive changes toward the implementation of a risk-based approach. The risk-based supervision framework of RBI (SPARC) deploys a good mix of onsite and offsite supervisory tools, but it is still in its early stage of implementation. The existence of a Senior Supervisory Manager in charge of the specific bank(s) helps supervisors maintain a comprehensive understanding of the overall risk profile of individual banks. Each Senior Supervisory Manager has a high degree of autonomy and responsibility for supervising a specific bank. The enforcement link between SPARC assessments and supervisory actions is nevertheless weak. The assessors note that a bank's Risk Assessment Report does not discuss a bank's identified capital shortage in detail in association with necessary capital augmentation or risk mitigation plans. For example, the model computes the required add-on capital for banks with a supervisory rating of 'C' and lower, which are considered to have a risk of failure above the acceptable supervisory risk appetite. Nevertheless, the assessors note that there were no cases where such identified capital adds-on were followed by specific remedial actions. Finally, resolution powers and tools are very limited and the RBI does not assess the bank's resolvability nor does it prepare recovery and resolution plans.
9. Supervisory techniques and tools	The RBI has established a comprehensive range of supervisory tools and techniques to implement its risk-based supervision approach. Under the risk-based supervision framework, the relative importance and intrusiveness of onsite and offsite supervision depends on the evolving risk profile and systemic importance of the individual banks. In particular, the new Central Repository of Information on Large Credits database appears to be useful in the current context to ensure consistency of assessments of large credit exposures and asset classification across banks. However, there are no detailed formal guidelines, which define penal actions or further enforceable measures, in case that action points of the Risk Assessment Report are not addressed in an adequate manner. Also, as a supervisory tool, the bottom-up stress testing methodology is under development within the Department of Banking Supervision.
10. Supervisory reporting	The RBI has extensive powers to require banks to submit any relevant supervisory information. The quantity and types of the data collected from banks vary based on the group structures and business profiles. The RBI validates prudential returns periodically and automatically upon each submission. The submitted information is also subjected to verification during onsite visits. Banks that submit erroneous information to the RBI are subject to penalties. In addition, The RBI has an assessment process in place to periodically review the returns. For this purpose, the RBI established inter-departmental groups with responsibilities for the introduction of new returns/modification of returns.

Core Principle	Comments
	However, with regard to prudential returns, apart from a few (e.g., half-yearly consolidated prudential returns), most data are submitted on a solo basis rather than on a consolidated basis. In addition, there are no explicit guidelines/criteria for hiring third parties who conduct supervisory tasks, to assess the quality of the work performed by those experts, or obliging them to report to the RBI promptly material shortcomings that are identified.
11. Corrective and sanctioning powers of supervisors	The RBI has an adequate range of supervisory tools for timely responses. This includes the ability to revoke the banking license or to recommend its revocation. In particular, the RBI: • has processes to help in detecting issues quickly and raising them with the bank, including with their Board. Supervisors can then monitor risk mitigation plans and follow-up on any shortfalls; • has an appropriate set of supervisory tools; • has the power to take timely risk mitigating actions; • has specific options for escalating these actions; • can take corrective actions against members of management and the Board of a private bank; • can coordinate corrective actions against nonbank entities in financial conglomerates to protect the bank. Ring-fencing a bank from nonbank liabilities within a group might not be an option in times of stress, but intra-group exposures are limited by regulation; and • cooperates with other agencies as needed to resolve problem situations. However, under the current Prompt Corrective Action regime, some of the more stringent actions under prompt corrective action are for action by the "government/RBI." Its decisions to revoke any banking license are subject to government appeal.
12. Consolidated supervision	The RBI can supervise every part of any Indian banking group or financial conglomerate. It can monitor and apply prudential standards to all subsidiaries and associate enterprises within the banking group, domestically and internationally. In particular, through intra-group transaction monitoring and coordination with other domestic regulators, it understands risks that other entities in a group might pose to a bank and to take supervisory action to limit those risks. The RBI will not license a nonbank operating company to own a bank. Through a network of MoUs and supervisory colleges, it can now supervise foreign operations of Indian banks effectively. It monitors continuously intra-group financial exposures and transactions. The RBI can take action to limit activities in nonbank subsidiaries in concert with the nonbank financial supervisor concerned. Some prudential standards are set and are monitored on a consolidated basis, such as standards regarding concentration, capital, and liquidity.
13. Home-host relationships	Much has been achieved by the RBI since the previous assessment. The current framework shows that it is functioning adequately. The RBI is very active in its exercise of cross-border supervision, and in organizing cooperation with colleagues abroad on the basis of MoUs and in supervisory colleges. A large number of MoUs

<table>
<tr><th>Core Principle</th><th>Comments</th></tr>
<tr><td></td><td>have been concluded, and another 9 are being negotiated. A significant number of cross-border inspections has been held. The RBI staff confirms that they have good contacts and working relationships with counterparts in other countries.</td></tr>
<tr><td>14. Corporate governance</td><td>The appropriate rules on fitness and propriety and banks' internal governance structures are in place with respect to private and foreign banks. The influence the RBI may exercise on governance of banks through section 21 of Banking Regulation Act, and the very limited legal authority of the RBI to hold the PSB Boards accountable regarding strategic direction, risk profiles, assessment of management, and compensation have resulted in a low overall rating on this assessment.

Under the law, and according to custom, the RBI is not in a position to hold PSB Boards accountable for assessing, and when necessary, replacing weak and nonperforming senior management and government-appointed Board members. government's role in appointing senior management and placing their own official on the Board creates the potential for government interfering with the PSB's business decisions. The result of this interference may explain in part the fact that PSB financial performance in recent years has been so much weaker than private banks.

Moreover, the presence of RBI and MoF officials on the PSB Boards, as required by law, puts RBI supervisors in the uncomfortable position of having to assess the performance and competence of these officials in their role as Board members. For example, if a PSB assumes an inappropriate amount of risk, it would be problematic for the supervisor to recommend that the RBIs take action against the Board and its designated member. In addition, the PSB Board has limited role in selection of senior management, where once again MoF is involved in selecting the CEO, the chairman and the full time executive directors, subject to approval by the RBI for fit-and-proper standard.</td></tr>
<tr><td>15. Risk management process</td><td>The RBI does:
• determine that banks have Board-approved appropriate risk management strategies;
• require comprehensive risk policies and frameworks to be comprehensive;
• require the risk management framework be well documented, internally communicated and evolves appropriately;
• ensures the Boards and senior management obtain the information they need to assess capital adequacy;
• examine the level of capital and liquidity and the processes banks use to ensure adequacy;
• ensure models used for risk measurement are appropriate for use, validated and developed and used under strong governance;
• ensure that the risk-management function has the resources, independence, Board access, and authority it needs;
• require prior Board approval for dismissing a credit risk officer;
• issue guidance on each major risk type;
• require banks to have contingency plans;
• require banks to stress test; and</td></tr>
</table>

Core Principle	Comments
	• assess how banks account for risks in internal pricing, performance measurement and new product approval. However, the RBI does not impose specific requirements for robust risk management MIS, as opposed to implicit requirements derived from requirements for such measurement, aggregation and reporting of different risk types in normal times. The RBI does not have a specific requirement in its principle guidance on risk for recovery or resolution plans. While RBI supervisors do regularly assess Board documents and meet with selected members of Boards, including the heads of the risk and audit committees, they do not as a rule meet with the Board as a whole, or with the non-executive directors individually. Such meetings are useful to, among other things, confirm that Boards and senior management understand the risks associated with any material change to the business.
16. Capital adequacy	The RBI is in the process of implementing the Basel III capital adequacy framework, and is working with selected banks to approve advanced approaches and parallel runs. The RBI framework, in particular the current capital definition, is appropriate. The framework was considered compliant by the Basel Committee's Regulatory Consistency Assessment Program in 2015.
17. Credit risk	All banks need to follow guidelines and meet targets on priority sector lending, which compromises banks' independent, risk-based credit allocation policies and strategies. These public policy-oriented constraints can impose significant limitations on the banks' own development of credit risk management strategies and policies, and may lead to risk accumulation that otherwise could have been avoided.
18. Problem assets, provisions, and reserves	The current systems and processes to monitor asset classification and provisioning could be considered broadly adequate. Significant positive developments have been set in motion since previous FSAP. In the area of loan classification and provisioning, changes have been introduced, generally in the direction of further tightening of the rules. For loans where regulatory forbearance has been allowed for restructured accounts (deferment of date of completion and commencement of operations) allowing them to remain "standard," the provision has been increased. A very significant policy action to start addressing the NPA problem has been the 2015 AQR, which coincided with the introduction of the new 2015 Master Circular on loan classification and provisioning. The exercise showed a significant level of under-recognition of NPAs and under-provisioning, and the corresponding need for the reinforcement of capital in many banks. The current coverage with provisions, although it improved slightly, seems to be on the low side, given persisting high vulnerabilities in the corporate sector. Also, the system for classification and provisioning still shows several weaknesses: • The regulation recognizes a number of special situation advances, some of which considerably extend the period beyond the contractually agreed payment dates, before the bank starts receiving its expected cash flow (e.g., project loans of which commencement of commercial operation has been delayed for certain reasons). The structure of the rules, with multiple cases of different treatment under special situations is complex and difficult to monitor given the lack of systematic reporting on the magnitudes of these special cases.

Core Principle	Comments
	• The introduction of IFRS9 provides an opportunity to strengthen loan classification and provisioning rules. The RBI needs to systematically review credit risk parameters (i.e., loss rates, recovery rates, etc.) across the banking system to ensure that the parameters of the asset classification and provisioning regulations (i.e., provisioning rates and categories of impairment) remain realistic.
19. Concentration risk and large exposure limits	To align the exposure norms for Indian banks with the Basel Standards, a new Large Exposures Framework was issued on December 1, 2016. However, this new framework will not be applicable fully until April 2019. The current rules still have many exceptions that allow large exposures up to 50 percent of its capital base (e.g., infrastructure project loans). Banks must gradually adjust their exposures to comply with the large exposures limit by that date. Accordingly, prior to this date, banks should avoid taking any additional exposure/reduce exposure in cases where their exposure is at or above the exposure limit prescribed under the new framework.
20. Transactions with related parties	The RBI issued the Guidelines on Intra-Group Transactions and Exposures, which expand to related-party transactions, to maintain arm's-length basis. Several shortcomings remain, despite improvements over related-party transactions since the last FSAP. For example, there is also no explicit requirement for Board approval to be obtained prior to related party exposure write-offs. It is unclear that the Guidelines on Intra-Group Transactions and Exposures limit is applied to related-party transactions between the bank and the bank's major individual shareholder or family.
21. Country and transfer risks	The RBI guidelines for credit risk management are generally in line with this CP, and relevant supervision is also conducted by Senior Supervisory Managers.
22. Market risk	Trading activity by Indian banks is relatively limited and simple in nature. A major part of the investments is in government securities. Foreign banks perform the role of market makers in certain market segments like interest rates and foreign exchange and are dominant players in the derivatives market. All banks are following standardized approach for computing market risk capital charge. The guidelines and supervisions are broadly in line with Basel standards and this CP.
23. Interest rate risk in the banking book	Through successive guidance issued since 1999, the RBI has raised standards for Indian banks. These require banks to have adequate systems to identify, measure, evaluate, monitor, report and control or mitigate interest rate risk in the banking book.
24. Liquidity risk	The RBI maintains the Statutory Liquidity Requirement (SLR; 20.5 percent) to run in parallel with the LCR requirement (80 percent currently, and 100 percent by January 2019) as regulatory liquidity ratios for banks. [7] The SLR requires banks to hold a substantial portion of their assets in cash, gold, government securities, and state development loans. Since the RBI has full authority to recalibrate the SLR requirement in times of stress, the assessors expect that the RBI would lower the SLR requirements under stressed conditions to facilitate banks liquidity management. However, there is one gap regarding the definition of high-quality

[7] SLR has been reduced in July 2017 from 20.5 percent to 20 percent.

Core Principle	Comments
	liquid assets. The RBI allows banks to include Indian State Government securities, also known as State Development Loans, in the high-quality liquid assets level 1 buffer, which is not in line with the Basel Committee's decision.
25. Operational risk	Regulations/guidelines are stipulated in a comprehensive way, and relevant supervision is also conducted by the Senior Supervisory Managers in line with the CPs. A comprehensive circular on Cyber Security Framework in Banks was issued on June 2016 and Cyber Security and Information Technology Examination Cell was launched for more comprehensive examination. However, for operational risk events that should be reported to the RBI, the formal reporting protocol has limited applicability. There is no explicit requirement or formal offsite returns in the regulations, for the bank to keep the RBI apprised of developments affecting operational risk at banks if an incident other than frauds occurs. In addition, loss data accumulation other than fraud appears to be relatively limited since all banks currently use the Basic Indicator Approach for operational risks.
26. Internal control and audit	The RBI has issued a comprehensive framework for internal control and audit, as well as a detailed list of parameters that are reviewed during the onsite inspections in the context of the SPARC risk-based assessment process. In this way, the RBI has issued a mutually reinforcing set of standards and processes. A score for the quality and effectiveness of internal audit and control is included in the bank's overall risk rating by the RBI.
27. Financial reporting and external audit	The accounting and auditing professions are of high quality, and the accounting standards applicable to banks are comprehensive. Preparation of financial statements based on IFRS-convergent Indian Accounting Standards will start April 1, 2018, including IFRS 9 on expected losses. However, the laws and/or regulations do not currently explicitly authorize the external auditor to inform the RBI of any concerns at any time, before the annual statements have been finalized and published. Moreover, the RBI does not seem to have the explicit authority to obtain information at any time from the external auditor. In particular, the RBI does not seem to have the authority to access the external auditor's working papers, as needed.
28. Disclosure and transparency	Building on the publication of the annual financial statements, mandated by Art. 31 of the Banking Regulation Act, the RBI has developed a set of disclosure requirements, which allow market participants to assess key information on capital adequacy, risk exposures, risk assessment processes and business parameters, to provide a comparable, consistent and understandable disclosure framework. The RBI website also offers a wide range of information and data on the banking system in India.
29. Abuse of financial services	The RBI Know Your Customer Master Direction does not highlight in the Definitions section that banks are required to identify beneficial ownership where the customer is an individual. This constitutes a deficiency, given that money-laundering activities often involve the engagement of front men to obscure the identity of beneficial owners. There is currently no explicit requirement imposed on banks with regard to the treatment of customers who are domestic politically exposed persons or persons entrusted with prominent functions by an international organization. The RBI's requirements relating to foreign politically exposed persons are also not fully in line

Core Principle	Comments
	with the international standards, as they do not specifically require banks to: have appropriate risk-management systems to determine whether the customer or the beneficial owner is a politically exposed person; examine the customer's source of wealth (in addition to the source of funds); and the coverage does not apply to associates. In addition, although the controls over reporting financial fraud were well established, financial fraud is only one type predicate crime among the AML/CFT concerns over money-generating criminal activities. The Master Direction on Frauds that requires banks to report frauds is not sufficiently broad to meet this CP, which requires reporting of suspicious activities and incidents of fraud when such activities/incidents are material to the safety, soundness or reputation of the banks.

Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks

Core Principle	Recommendation
1. Responsibilities, objectives and powers	• Legislation is needed to update and clarify the supervisory mandate of the RBI. The statute should clearly state that safety and soundness, including financial stability, are the top priority of supervision. • The government should defer to the RBI in matters of safety and soundness, including in particular matters affecting PSBs. The RBI decisions with respect to safety and soundness should not be subject to Government review. • Supervisory powers over the PSBs should be enhanced. Supervisors should be able to use independently the same broad range of supervisory tools and enforcement actions with respect to public and private sector banks. • Short of legislation to update and clarify its supervisory mandate, the RBI and the government should consider adopting a framework agreement as they did recently for monetary policy, formalizing and clarifying objectives and responsibilities of the RBI and the government. Such a framework might record agreement that: o The main objective of RBI bank supervision is prudential and that other supervisory objectives, such as financial inclusion, financing government, priority sector funding, consumer protection are secondary; o The government would defer to the RBI in all matters regarding the licensing of banks, (including revoking licensing) permissible activities, governance (including dismissal of Board members), general management and risk management, and corrective actions needed to address safety, soundness and stability concerns (See CP2, 4, 11, and 14); and o These provisions would apply to all banks, including the PSBs, fully and without reservation.
2. Independence, accountability, resourcing and legal	• The 1934 Act should be amended, so that the RBI governor is appointed for a minimum term. It should be possible for the government to dismiss the governor before the end of his/her term only if due- process establishes

Core Principle	Recommendation
protection for supervisors	incapacity, dereliction of duty or unethical behavior, in which case the reasons for dismissal should be published. • For legal clarity, it would be preferable to eliminate the provisions providing the government with powers to supersede the RBI's decisions. • The RBI should track the resources deployed through dedicated Senior Supervisory Manager teams and specialist units for supervision of the domestic systemically important banks and other large banks. It should review whether the level and character of resources are appropriate in absolute terms, and as a share of total supervisory departmental resources, compared with the importance of these institutions in the banking system.
3. Cooperation and collaboration	• Amend the interagency MoU of 2013 to create options to provide assistance among agencies in case of enforcement actions as needed and upon request. • Amend mandates in the RBI Act and the BR Act to strengthen the RBI mandate for financial stability. • Streamline the FSDC-SC, Early Warning Group, and FSDC working group committee structures to achieve clearer mandates and responsibilities for financial stability and more efficient coordination in time of crisis. • Consider the frequency of supervisory colleges for large institutions, or increase information exchange between meetings.
4. Permissible activities	• Repeal Section 6(o) of the 1949 Act. • Deposit taking by institutions that are not regulated as banks should be prohibited while the volume of such deposits is very small.
5. Licensing criteria	• The RBI needs to review the respective regulations and/or supervisory practices to ensure that suitability of shareholders encompass the ultimate beneficial owners.
6. Transfer of significant ownership	• The RBI should require groups that own significant shares of a bank to list all their beneficial owners and to report promptly any material changes in the holdings of such shares.
8. Supervisory approach	• Strengthen enforcement link between SPARC assessments and supervisory action (e.g., capital add-on). • Finalize the review of the SPARC framework (e.g., independent model validation) to enhance it robustness. • Develop supervisory handbooks on onsite and offsite SPARC assessments to further ensure consistency.
9. Supervisory techniques and tools	• Develop formal comprehensive guidelines regarding the oversight of compliance of Risk Assessment Report action points to further ensure that the bank's compliance of action points is managed in a consistent, focused, and enforceable manner. • Finalize supervisory bottom-up stress testing methodology.
10. Supervisory reporting	• Enhance the collection of data for consolidated supervision in terms of frequency (e.g., quarterly CPR) and granularity (e.g., data collection of group-wide asset classification).

Core Principle	Recommendation
11. Corrective and sanctioning powers of supervisors	• Legislation should be amended to give the RBI full authority to revoke a bank license without appeal to the government; and to ensure it can act independently with respect to Prompt Corrective Action enforcement.
12. Consolidated supervision	• Consider introducing and supervising against prudential group-level standards for bank-led financial conglomerates for interest rate risk, large exposure limits, and concentration limits, etc.
13. Home-host relationships	• The authorities are advised to include language in the MoUs, or make parallel arrangements to strengthen coordination of responses to the media in case of crisis or problems that draw media attention.
14. Corporate governance	• Over the near-term the Banks Board Bureau should be empowered to appoint and remove senior management of PSBs and assume the role presently carried out by the MoF. • Legislation should be amended to empower the RBI and the PSB Boards to exercise the same responsibilities as now apply to private banks and to remove the requirement that PSB Boards include ex-officio RBI officials.
15. Risk management process	• Consider specific and separate requirements for robust risk management MIS. • Institute the practice of supervisors meeting regularly with Board members, especially non-executive directors.
17. Credit risk	• Consider reviewing the PSL policy, including targets and scope of application to allow banks flexibility in meeting the PSL targets if proposed projects do not meet banks' commercially based risk management strategies and processes.
18. Problem assets, provisions, and reserves	• The RBI should further reassess the need for amending the special loan categories relating to asset classification benefits, as some of these special situations could alter the repayment schedules and weaken the loan classification and provisioning adequacy. Also, the RBI should develop reporting tools and enhance monitoring, to closely monitor the materiality, trend, and build-up of risks in this special situations in a systematic way. • In the context of introduction of IFRS 9, the RBI should review its existing classification and provisioning rules to ensure they are calibrated in line with actual losses and cure rates. If necessary, regulatory parameters should be adjusted to accurately reflect more timely recognition of provisioning. • The RBI should stay on top of new regulatory developments and align its practices and regulations as soon as possible. It is important to note that good practices are continuously evolving in the areas of prudential treatment of problem assets, nonperforming exposures and forbearance [8]. • Overall, the RBI should consider a more proactive approach to ensure that banks, via adequate provisioning, have proper incentives to tackle the NPAs and free up balance sheets for more productive lending.

[8] For instance, "Prudential treatment of problem assets, definitions of nonperforming exposures and forbearance," Basel Committee on Banking Supervision, April 2017.

Core Principle	Recommendation
19. Concentration risk and large exposure limits	• Expedite the introduction of the new large exposure rules, monitor banks' practice more closely and take supervisory action (as needed), and reduce/remove as much as possible the current exceptions to the basic limits.
20. Transactions with related parties	• Include in the regulation the explicit requirement for Board approval prior to related-party exposure (beyond a specified level) write-offs. • Review the regulation to clarify that an appropriate exposure limit is placed to major individual shareholders and families. • Consider issuing a consolidated document to compile the regulations on related party transactions.
21. Country and transfer risks	• Consider strengthening group-wide country risk management framework by collecting such data on a consolidated basis.
24. Liquidity risk	• Review and enhance the regulation on liquidity risk management to be more aligned to Basel standards (e.g., Indian State Government Securities is not considered as *sovereign* debt securities in the context of the Basel standards).
25. Operational risk	• Expand formal reporting protocol for banks to keep RBI appraised of developments affecting operational risk (e.g., incident reports other than fraud). • Strengthen supervision in collecting/accumulating good-quality loss data.
27. Financial reporting and external audit	• The laws and/or regulations should explicitly authorize the external auditor to inform the RBI of any concerns at any time, also before the annual statements have been finalized and published. • Amend legislation to ensure that the RBI has the explicit authority to obtain information at any time from the external auditor and access the external auditor's working papers, as needed.
29. Abuse of financial services	• Amend the laws/or regulation on domestic politically exposed persons to address limited applicability of enhanced due diligence for them. There is no specific provision with regard to domestic politically exposed persons (and those of international organizations). The RBI's requirements relating to foreign politically exposed persons also need to be enhanced to fully in line with the international standards • Include in the Know Your Customer Master Direction explicitly that banks are required to identify beneficial ownership where the customer is an individual, since this constitutes a deficiency given that money laundering activities often involve the engagement of front men to obscure the identity of beneficial owners. • Broaden its reporting requirements to address money laundering issues, not just fraud. Fraud is only one type of money generating criminal activities.

Authorities' Response to the Assessment

35. The Indian authorities express our sincere gratitude to the joint IMF-World Bank FSAP mission team led by Marina Moretti (Mission Chief) and Aurora Ferrari (Team Leader) for the conduct of the FSAP in 2017. We recognize the importance of the FSAP not just as an independent peer review assessment by professionally competent staff, but also as a collaborative process that provides a learning opportunity to staff on both sides and is of value for its policy advice. This contributes to our efforts to identify strengths and weaknesses of our financial system and to further development of our financial markets through deepening and broadening access, thus helping in building a more efficient and resilient financial system. We remain committed to this exercise that is carried out as a mandatory exercise for 29 jurisdictions with systemically important financial systems in the global economy and will follow-up by considering its recommendations and implementing them through sequenced and timed actions as may be appropriate.

36. Amid growing intermediation through financial markets, India remains a bank-dominated economy and the authorities will give special importance to the Detailed Assessment Report (DAR) of the Basel Core Principles (BCP). We appreciate the overall assessment and see its specific recommendations as an opportunity for improvement. We note in particular that that the Basel Committee on Banking Supervision (BCBS) had published the revised BCP in September 2012 after the completion of the India FSAP mission in 2011. While the bar has been raised high on the BCP after its revision in 2012 and on that account the assessment grading in this report are not comparable with those in 2011 FSAP, the authorities remain committed to compliance with BCP 2012.

37. Currently, several banks in India, especially the Public Sector Banks (PSBs), are facing asset quality problems reflected in their stressed assets and the Reserve Bank of India, in close coordination with the government of India, are according high priority to addressing this problem. India is moving towards a new state-of-the-art bankruptcy regime. Making use of the recently enacted Insolvency and Bankruptcy Code, 2016, the Reserve Bank of India has identified several accounts that are nonperforming and asked banks to follow-up with the National Company Law Tribunal for resolution/ insolvency in accordance with the time-bound process laid down in the Code. The move is expected to make a significant dent to quantum of NPAs starting next year. Banks have also been asked to disclose any material divergence (above a threshold of 15 percent) in their own and supervisory assessments on the NPAs and in additional provisioning requirements (as ratio of net profits after tax). The Reserve Bank of India had earlier conducted an Asset Quality Review of the banks and has since internalized the process strengthening the regular inspections buffeted by continuous monitoring of NPAs and their recognition helped by the Central Repository of Information on Large Credits (CRILC). RBI had withdrawn regulatory forbearance since April 2015 and now requires bank to make same provisioning on restructured standard assets as for the NPAs.

38. All these moves have helped usher in an era of transparency and improved discipline and will go a long way in resolving the problem of bad loans in India. The authorities are also using this window of opportunity to bring about structural improvements in the banking sector. The government of India has sought, through its Indradhanush plan, to revitalize PSBs through capital

infusion and improved governance. All these efforts are likely to turnaround the NPA cycle, strengthen bank balance sheets, enhance provisioning coverage, address current fragilities and ultimately improve banking soundness.

39. On a few specific aspects in this report, the authorities' response is as follows:

- Regarding risk accumulation stemming from the mandatory Priority Sector Lending (PSL) allocations (CP17), we submit that in India, the scope for penetration of bank led financial services to the segments classified under PSL is immense and offers much scope for innovative lending strategies to diversified pools of borrowers which, to the contrary, may reduce risk accumulation. The experience has been that the asset quality of PSL assets is better than some non PSL asset categories. Further, within the PSL targets, banks have the flexibility to choose their borrowers.

- The inclusion of the State Development Loans in the HQLA has been assessed as one of the shortcomings by the assessors (CP24). We may clarify that state development loans are issued as state government bonds, and we have slotted them under HQLA 1 as they meet the necessary qualitative characteristics of HQLA. State governments in India have sovereign powers in a number of respects, including revenue raising powers. Under the Basel Liquidity framework, HQLAs range in categories from HQLA-1 to HQLA-2B. State development loans clearly have qualities superior to HQLA-2B assets. So, rather than suggest that state development loans should not be included in HQLA, it would be appropriate to consider, with reasons, into which category of HQLA they should be slotted. The authorities are fully conscious that some market reforms are needed in the state-development-loan market to encourage better market pricing across States. They are working towards this end, but they judge the instrument to be sufficiently liquid and entailing characteristics akin to high-end HQLA assets. This view of ours is also applicable to CP 24 (essential criterion 2). We have given the RCAP assessors cogent reasons why state development loans should qualify to be a part of HQLA at a minimum as HQLA-2A, if not HQLA-1.

- As regards broadening its reporting requirements to address money-laundering issues by RBI (CP29), it may be noted that RBI regulations require suspicious transaction reports to be filed with the Financial Intelligence Unit-India, and that banks put in place a robust AML detection and reporting framework. The Indian authorities have been fully committed to the AML/CFT framework and are further looking into the requirements with a view to further strengthen its implementation.

Annex II. Report on the Observance of Standards and Codes: Principles for Financial Market Infrastructures

1. This Annex summarizes the assessment of two Financial Market Infrastructures (FMI) operated by the Clearing Corporation of India (CCIL). It reviews the CCP and trade repository; and the responsibilities of the authorities against the Committee on Payments and Market Infrastructures (CPMI) and International Organization of Securities Commissions (IOSCO) Principles for Financial Market Infrastructures (PFMIs). The assessment was conducted through a country visit in the context of the India FSAP in March 2017.[1]

2. The information used in the assessment includes relevant laws, by-laws, regulations, rules and procedures governing the systems, and other available material. In addition, extensive discussions were held with the RBI, SEBI, CCIL, and its participants. The reports produced as part of the CPMI-IOSCO Level 1 and Level 2 implementation monitoring exercises were used for the assessment of the responsibilities of the authorities. This assessment uses the methodology presented in the CPMI-IOSCO publication "Principles for Financial Market Infrastructures: Disclosure Framework and Assessment Methodology" (December 2012).

A. Overview of Financial Market Infrastructures in India

3. The securities and derivatives clearing and settlement systems in India are organized around different types of products: (i) government securities, money market instruments, FX instruments, and rupee derivatives; (ii) corporate securities and financial derivatives; and (iii) commodity derivatives. The scope of this assessment is limited to the clearing and settlement systems for the first set of products, on account of their systemic importance for the functioning of India's interbank money markets. The different sets of products are subject to different legal frameworks, different regulatory arrangements, and a variety of clearing and settlement systems operated by different entities. Securities and derivatives clearing and settlement systems handle a large number of transactions and are as such of systemic importance. Volumes in the derivatives segments increased strongly during the last years. The National Payments System in India has undergone a major reform over the last two decades, in particular, the securities and derivatives clearing and settlement systems. These systems are comprehensive and designed to minimize risks in the rapidly developing securities and derivatives markets. In addition, the real time gross settlement (RTGS) system, implemented in 2004 and upgraded in 2013, is a hybrid system and has multiple access channels, more flexibility by way of having multiple parameters, and also more liquidity management tools.

4. Government securities are cleared by the CCIL and settled in the books of the Public Debt Office (PDO) system of the RBI. The CCIL also clears money market and FX instruments, interest rate swaps, and forward rate agreements. Cash settlement takes place in the RTGS system of the RBI and the securities leg, where applicable, is settled in the RBI PDO. All securities placed as

[1] Massimo Cirasino and Harish Natarajan (both World Bank) were the assessors.

collateral are held in the RBI PDO. The CCIL guarantees the settlement of the transactions and, as such, acts as a CCP. The RBI is the regulator and overseer, based on the Payment and Settlement Systems Act, 2007 as amended in 2015.

5. Corporate securities and financial derivatives are traded on the National Stock Exchange, Bombay Stock Exchange, Metropolitan Stock Exchange of India, and regional exchanges. Commodity derivatives are traded on the National Commodities and Derivatives Exchange of India, the Multi Commodity Exchange of India, and the National Multi Commodity Exchange of India. Corporate securities and financial derivatives traded on the National Stock Exchange are cleared by the National Securities Clearing Corporation Ltd. Securities and derivatives on the Bombay Stock Exchange are cleared by the Indian Clearing Corporation Ltd. The Metropolitan Stock Exchange of India has an arrangement with the Metropolitan Clearing Corporation of India Ltd, which clears the transactions executed on its trading platform. The Multi Commodity Exchange and the National Commodities and Derivatives Exchange also have their own clearing houses. National Securities Clearing Corporation Ltd, Indian Clearing Corporation Ltd, and Multi Commodity Exchange of India-Stock Exchange Clearing Corporation Ltd act as CCPs for corporate securities and derivatives. The securities leg of transactions is settled in the National Securities Depository Ltd and the Central Depository Services Ltd. The cash leg is settled in one of the banks that act as a clearing bank for the exchanges. SEBI is the regulator and supervisor of these stock exchanges and clearing corporations.

B. CCIL

6. The CCIL was set up in 2001 to clear and settle transactions in debt, money, foreign exchange, and derivative markets. The prime objective of the company is to improve efficiencies and mitigate risks in the settlement process. The company started operations in February 2002. The company offers CCP clearing in the over-the-counter (OTC) markets for various money market instruments.

7. The CCIL operates payment systems authorized under the Payment and Settlement Systems Act, 2007 and regulations there under by the RBI. The CCIL is authorized to operate the following payment systems:

a. ***Securities Segment***—outright and repo trades in government securities.

b. ***Collateralized Borrowing and Lending Obligations*** (CBLO)—a repo variant that is traded anonymously on a trading platform provided by a CCIL subsidiary.

c. ***FX Settlement Segment***—(i) *USD-INR Settlement* (Cash, Tom, and Spot trades, including Forward trades when these enter Spot Window*);* (ii) *FX Forward Segment* (CCP Clearing of USD/INR Forward trades); and (iii) *CLS Segment* (Continuous Linked Settlement: settlement of cross currency trades of members through CLS Bank).

d. ***Rupee Derivatives Segment***—rupee-denominated interest rate swap and forward rate agreement trades.

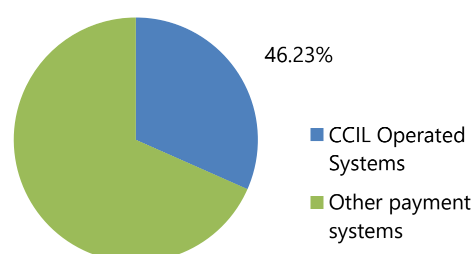
While the CCIL offers CCP clearing in respect of a, b, c (i), c (ii), and (d), transactions in the CLS segment are settled on a non-guaranteed basis. The CCIL is also notified as a qualified CCP (QCCP).

8. The CCIL provides trade repository services for INR interest rate swaps and forward rate agreements; and all OTC derivatives trades in credit, interest, and foreign exchange markets. The CCIL is licensed as a trade repository since 2015, and has been providing trade repository services to the wholesale market players who are authorized by RBI to trade and take position in the interest rate swap market since August 2007. Until the Payment and Settlement Systems Act amendment in 2015, the RBI had under the RBI Act, given directions to all members to report trades to the CCIL. The Payment and Settlement Systems Act amendment in 2015, brings the TRs under the provisions of the PSSAs. The CCIL now also operates trade repositories for all OTC derivative trades in credit, interest and foreign exchange markets (including for client trades).

9. Clearcorp Dealing System (India) Limited, a fully owned subsidiary of the CCIL, provides several trading platforms to its members for dealing in government securities, foreign exchange, and the CBLO. Clearcorp also operates an anonymous order matching electronic trading platform for interest rate swaps referenced to overnight MIBOR benchmark. The trading system functions in coordination with CCP Clearing as mentioned in above. The trades from trading system are automatically processed for CCP clearing.

10. The CCIL members are banks and financial institutions operating in India. In addition to banks domiciled in India, Indian branches of American and European Banks are active players in the CCIL. These entities are members of the CCIL in securities, the CBLO, FX, and rupee derivatives segments. The CCIL's clearing and settlement cover trade settlements for wholesale market entities, such as banks, mutual funds, and insurance companies, in the OTC market.

CCIL Settlement Volume, 2016



The CCIL settlement volume in the context of total volume of all payment systems can be seen in the Figure and the transactions settled in the various systems operated by the CCIL for the period January–December 2016 are in the table below.

Daily Average Value of Transactions Settled in CCIL, 2016

SN.	Systems	Value in USD billions
1	FX clearing	27.01
	Average month end	99.56
2	G-Sec	22.06
3	CBLO	10.88
4	CLS	5.24
5	Derivatives	3.56

Source: RBI Bulletin.

System design and operations

11. The system design and processes vary by market segment. In all the segments where the CCIL offers CCP clearing service, a process is in place to collect intraday marked-to-market margin and volatility margin and there is an established default handling waterfall in place. Securities and cash collaterals are collected towards for specific market segments and are held as one pool in the Settlement Guarantee Fund. The participants are also required to contribute to the Default Fund by market segment, pro-rated based on their exposure and system throughput. The Default Fund is sized to cover the stress tested credit exposures for the participant with the largest position and the five weakest participants. The securities and cash collateral are held as one pool. In addition, the CCIL has established a Settlement Reserve Fund as its skin-in-the-game, which can also be used to cover any credit losses and for meeting any liquidity needs. The details of the design and operations for specific market-segments are presented below. For all market-segments except the CLS Bank settlements, the CCIL functions as a CCP.

CCIL Market-Segment Wise Settlement Mode and Key Statistics, end-2016

Market Segment	Trading Platform	Types of Particpiants	Settlement mode	Settlement Value (INR billion)[1]	YoY Growth settlement value (percentage)
Government securities - outright	NDS-OM and OTC	Banks, cooperatives, NBFIs, primary dealers, institutional investors	DVP III	163,169	66.61
Government securities - Repo	CROMS and OTC	Banks, cooperatives, NBFIs, primary dealers, institutional investors	DVP III	111,401	33.19
Collateralized Borrowing and Lending Operations	CBLO	Banks, cooperatives, NBFIs, primary dealers, institutional investors	DVP III	200,942	7.79
Forex: Cash, Tom, Spot, Forward	Fx Clear and OTC	Banks and authorized dealers	PVP	419,917	19.99
Forex Swap: Cash, Tom, Spot, Forward	Fx Swap and OTC	Banks and authorized dealers	PVP		
Forex Forward [2]	Fx Swap and OTC	Banks and authorized dealers	PVP	72,202.88 [3]	17.05
Derivatives : Interest rate Swaps and Forward Rate Agreements	ASTROID	Banks and authorized dealers		711.95 [4]	
	ASTROID and OTC	Banks and authorized dealers		7,248.88 [4]	
CLS Bank	OTC	Banks	PVP	40,993	5.88

[1] Average settlement amounts unless stated otherwise.
[2] Including Forward leg of the swap.
[3] Forex Forward positions settled in Spot.
[4] Traded volumes.

- ***Government securities segment:*** Secondary market transactions (settlement on T+0 and up to T+2 basis) in government securities flow to the CCIL in two modes. Outright and repo trades concluded on anonymous order matching platforms i.e., NDS-OM and CROMS respectively flow for clearing and settlement through a straight through process. OTC outright and repo trades concluded by the members are reported on NDS-OM and CROMS respectively. These trades are accepted for clearing and settlement by the CCIL. In the process, the CCIL is subject to market risk which is covered through collection of initial margin and mark to market margin. The trades received as above are subjected to on-line exposure check. Post such exposure checks these trades are novated whereby the CCIL becomes counterparty to those trades. These trades are then settled on delivery versus payment (DVP) III (i.e., DVP after achieving multilateral netting) basis on their respective settlement dates.

- ***CBLO segment****:* The CBLO facilitates borrowing/lending money on a collateralized basis. It is issued for a maximum tenor of one year and traded on yield time priority on the CBLO anonymous order matching platform managed by Clearcorp. Most of the transactions in the CBLO, however, are on overnight basis. Members can borrow against the eligible collaterals deposited by them with the CCIL, and recorded under the Constituent Subsidiary General Ledger account of the CCIL with the RBI PDO. Transactions concluded on the trading platform are subject to margin check and are then accepted for guaranteed settlement. Settlement is carried out on DVP III basis as in the case of securities segment. As the repayment of borrowing against the CBLO is guaranteed by the CCIL, it should have enough collateral to meet any eventuality of a default by the borrower. To take care of this risk, all borrowings are fully collateralized through setting up of borrowing limits for the members against their collateral deposits in eligible government securities. These collaterals are subjected to hair-cuts and are revalued at least on a daily basis. Any shortfall in the value of collaterals (to cover outstanding borrowings) is collected through margin calls.

  The CCIL is also exposed to the risks due to a member not honoring its obligation to lend or borrow at the time of settlement. To ensure that this risk is adequately taken care of, the CCIL collects initial margin and marked-to-market margin from the members in respect of their deals for lending and borrowing.

- ***FX segment***: The CCIL settles all inter-bank Cash, Tom, Spot and Forward USD/INR transactions on guaranteed basis. All inter-bank transactions concluded bilaterally by its clearing participants (members) through various dealing platforms are reported to CCIL. Trades done on FX-Clear and FX-Swaps trading platforms run by Clearcorp directly flow to CCIL's settlement system.

  Details of trades concluded bilaterally by the members are reported to the CCIL in a specified format. These trades are validated and matched in the CCIL's clearing system. Matched trades are subjected to exposure check on an on-line basis and trades that pass such exposure check are accepted for clearing and settlement. The matched cleared forward trades are accepted for clearing and settlement on their entering spot window. Exposure check is carried out on-line, both for trades from FX-Clear and FX-Swaps trading systems and for reported trades. The CCIL becomes the central counterparty to every accepted trade through the process of novation.

The CCIL settles the net positions of the members on a payment versus payment (PVP) basis. The Rupee leg is settled through the members' current accounts with RBI and the USD leg through the CCIL's account with its settlement banks at New York.

For effective risk management, a Net Debit Cap is set in both currencies for each member in this segment. The limit is in terms of maximum sell position permitted in the currency per settlement date. Margin is collected to cover the market risk based on a value at risk-based margin factor. For entities with lower short term credit ratings, additional margin is collected. Margin contribution of a member to avail the limit is in U.S. dollar funds.

Members with higher ratings can avail higher limits for Tom and Spot settlement dates. The CCIL covers the risk arising out of such higher exposures by collecting additional initial margin.

For covering the liquidity risk in U.S. dollar, the CCIL has collateralized lines of credit in place from its overseas settlement bank. Collaterals for availing of such credit facilities are furnished out of USD treasury bills purchased by the CCIL out of the margin contributions made by the members to the Settlement Guarantee Fund for this segment.

For covering the liquidity risk in Indian rupee, lines of credit in rupee have been arranged from the banks. Such lines of credit are available at the RBI at the time of settlement.

- ***FX forward segment***: The CCIL extends clearing and settlement of USD/INR forward trades with residual maturity up to 13 months. Forward trades concluded on FX-swap trading platform run by Clearcorp and OTC trades reported by the members are subjected to on-line exposure check. Trades which pass the exposure check are novated by the CCIL and accepted for clearing and settlement in this segment.

  Settlement of the trades happens through the USD/INR settlement segment. On S-2 day, the net position of each member is computed. Such net positions are subjected to exposure check for limit adequacy in the USD-INR settlement segment before acceptance.

  The risk associated with the process is the pre-settlement risk which is equivalent to market risk on forward positions. The risk is managed through collection of margins in the form of initial margin, mark to market margin, volatility margin (imposed during high volatile periods), etc. from the members. Margins collected from the members are based on assessment of exposures on their outstanding trade positions also carried out on an on-line basis.

- ***Rupee derivatives (interest rate swap) segment:*** The CCP clearing of rupee-denominated Interest Rate Swap trades was launched by CCIL in March 2014. CCP Clearing of rupee swaps and forward rate agreements, along with the anonymous trading platform, started in August 2015.

  The risk management relating to rupee derivatives segment provides for collection of margins based on the outstanding trade portfolios of the members. The CCIL seeks to cover the risk through prescription of Initial margin (including spread margin), mark to market margin, etc.

The CCIL also provides central trade processing services in INR interest rate swap and forward rate agreements. The instruments covered are interest rate swaps—fixed float and basis swaps with maximum maturity of 10 years and forward rate agreements with maximum maturity of 10 years. The CCIL extends post-trade processing services like Interest Rate Reset, tracking payment obligation of members on their outstanding contracts etc. and settlement of daily cash flows on a non-guaranteed basis.

- ***CLS Settlement:*** The CCIL also offers settlement of transactions in various currencies through the CLS bank on a non-guaranteed basis. The trades reported by the members are subjected to clearing based on the base exposure limit set for each member. Settlement at the CLS bank happens on PVP basis through UBS, Switzerland.

Regulation, supervision, and oversight of CCIL

12. The CCIL has been authorized by the RBI as a "Payment System" under the Payment and Settlement Systems Act, 2007 for undertaking Clearing and Settlement of transactions in Government Securities, CBLO, FX and Rupee Derivatives. The CCIL's by-laws, rules, and regulations, which are also included under schedule to Regulations 5 of the Payment and Settlement Regulations, 2008, provides required legal basis on its various material aspects such as netting, finality of settlement, default procedures, etc. In July 2013, the RBI designated the CCIL as a critical FMI. The RBI also announced that the oversight framework of the CCIL shall be based on the Principles for Financial Market Infrastructures.[2] The CCIL is regulated and overseen as per the framework by the RBI. The CCIL is subjected to offsite supervision as also onsite inspection.

General organization of the FMI

13. The CCIL is a public limited company registered under the Indian Companies Act, 1956. The oversight of the governance of the CCIL is vested in the Board of Directors. The roles and responsibilities of the directors are clearly set out in the Companies Act, 2013 and also in a separate governance policy put in place by the company. The overall functions of the company are supervised and managed by the Board, whereas specific interest areas have been delegated to the Board Committees. The managing director looks into the day-to-day functioning of the company, assisted by a very strong group of senior officials who are professionals and market experts, and who function as Line Officials. Line Officials are supported by middle management and supervisory grade officials. The CCIL has a sound structure of corporate governance. It has put in place a policy on directors' appointments, remuneration, including the criteria for determining qualifications, independence, evaluation of directors' performance, etc., in terms of the requirements under the Companies Act, 2013. The Board of Directors presently comprises 15 directors, consisting of

[2] The policy document on Regulation and Supervision of Financial Market Infrastructures regulated by the RBI is available at https://www.rbi.org.in/scripts/bs_viewcontent.aspx?Id=2705.

nominees of shareholders, independent directors, managing director, and a non-executive chairperson.

Recent changes and planned reforms

14. The CCIL has introduced several new products and services to meet the evolving needs of market players. The key developments are listed below.

- Portfolio compression exercise for FX forward segment introduced.
- An anonymous order matching platform (ASTROID) for trading in Rupee Derivatives segment introduced.
- Default Fund introduced in all clearing segments.
- The quantum of default fund for a month is now based on the highest stress losses observed during the preceding six-month period instead of the earlier practice of taking into account the highest loss observed during the preceding one-month period only. Also, provision to call for additional default fund if stress loss exceeds prefunded default resources introduced.
- Incremental marked-to-market margin is debited at the end of the day instead of the earlier practice of debiting the same next day morning.
- Online monitoring of exposure introduced for all settlement banks.
- Pre-order exposure check introduced for all members of the CBLO segment.
- Floor incorporated in initial margin model for all clearing segments to mitigate pro-cyclicality.
- Increase in haircut rates of collateral on imposition of volatility margin introduced.
- Introduction of Retail Participation by Demat Account Holders in the government bond market.
- Risk Advisory Group comprising of members which are participants, was formed to discuss risk related issues and make suitable suggestions/recommendations to the Risk Management Committee.
- A comprehensive risk management framework has been formulated, which narrates various types of risks faced by CCIL and the measures in place to handle those risks.

C. Assessment of CCIL and Responsibilities of Authorities

15. The assessment of the CCIL CCP system against the PFMI concludes that the systems have a high degree of observance of the principles, with three principles being not applicable. There are improvement opportunities in some areas:

- ***Legal framework:*** There is a provision in the CCIL by-laws and specific market segment regulations to cancel or revoke admitted trades that are contested on the grounds of fraud, misrepresentation or material mistake. The CCIL should examine this in consultation with the regulator on the materiality of this.

- ***Risk management framework:*** The CCIL should explicitly recognize the risks it is exposed to from the trading platforms operated by CCIL's subsidiary. The CCIL should also pursue the discussions on recovery plan and adopt a comprehensive recovery plan.

- ***Credit risk management***: The CCIL could consider enhancing its stress testing framework by excluding the marked-to-market and volatility margin calls of the participant with the largest exposure from the assessment of adequacy of pre-funded resources.

- ***Liquidity risk management:*** The CCIL should enhance the scenarios considered in liquidity stress testing to include: peak values over longer periods; failure of one or more settlement banks; failure of participant across market-segments; and, finally, to take into account any potential liquidity needs to cover the settlement positions of the defaulting participant across days.

- ***Default management and segregation and portability***: The CCIL needs to implement a framework for segregation and portability of customer funds and assets in the government securities market and any future market into which it introduces tiered participation arrangements. The framework should explicitly reference any applicable regulations of the RBI and other regulators and describe how the process for portability would be facilitated by the CCIL. This could be addressed through explicitly requiring segregation in the CCIL by-laws, rules, and regulations, and validating as part of default drills.

- ***Business risk***: The CCIL should pursue its efforts to develop and formalize the recovery plan and appropriately reflect these in its by-laws, rules, and regulations.

- ***Custody and investment***: The CCIL could consider seeking a formal written confirmation from the auditors of the two U.S. settlement banks on their observance of segregation of client accounts.

- ***Operational risk***: The CCIL could consider incorporating additional scenarios in the Business Continuity Plan to assess achievement of recovery-time and recovery-point objectives even in very adverse situations. The CCIL explicitly recognizes its FMI links with the RBI-operated RTGS and PDO, in the risk management framework. The CCIL should, in addition, explicitly recognize its FMI links with the RBI-operated RTGS and PDO, with respect to the business continuity planning in its operational risk management framework.

- ***Tiered participation***: The CCIL should study the prevalence of transactions on behalf of constituents in all the market segments, and if it is significant, institute mechanisms to monitor the risks arising from tiered participation in the government securities market and any other

markets where this is allowed in the future. The mechanisms could be calibrated based on the scale of tiered participation—starting from periodic data collection on the top customers of each participant, to establishing a framework like the one for the government securities segment.

- ***Efficiency and effectiveness**:* The CCIL could also consider introducing annual surveys of participants, to seek their feedback on existing products and services and demand for new products and services.

16. The assessment of the CCIL trade repository systems against the FMI Principles finds a high level of observance, with 12 principles being not applicable. There are improvement opportunities in three areas:

- ***Legal framework:*** The CCIL should put in place the specific operating regulations for the trade repository services and amend the by-laws and rules to reflect trade repository services.

- ***Operational risk management:*** The CCIL could consider incorporating trade repository services fully into the scope of Business Continuity Plan for CCIL services.

- ***Efficiency:*** As noted for the CCP services, the CCIL could conduct a survey to assess user satisfaction with the CCIL's trade repository services, and also seek inputs for enhancing the CCIL's products and services in its role as a trade repository.

17. The assessment of the responsibilities of the authorities also finds a very high level of observance. Areas for further improvement are noted:

- ***Regulatory, supervisory, and oversight powers and resources**:* SEBI should assess if they currently have the human and organizational capacity to fully meet their current and expanding oversight responsibilities, arising in particular from the commodity derivatives market FMIs coming under their purview.

- ***Application of the FMI Principles to FMIs***: The RBI and SEBI should progress their plans to assess all the FMIs under their respective purview. In the case of the RBI, the RBI PDO needs to be assessed; and in the case of the SEBI the commodities market FMIs need to be assessed and the CSDs need to publish their disclosure framework.

- ***Cooperation with other authorities**:* The various committees under the FSDC provide for structured cooperation between the RBI and SEBI, with respect to the FMIs. The RBI and SEBI should evaluate the need for strengthening the cooperation framework with respect to establishing protocols for sharing data and information related to FMIs in both normal and crisis situations.

List of Prioritized Recommendations

Princ.	Issues of Concern and Other Gaps or Shortcomings	Recommended Action	Relevant Parties	Priority
1	CCIL by-laws and operating regulations for specific market segments are not aligned on the point of irrevocability and finality, with respect to admitted trades that are contested on grounds of fraud, misrepresentation or material errors.	CCIL should examine the materiality of this, in consultation with the RBI.	CCIL, RBI	Medium Term
1	CCIL has not yet received regulatory approval on the operating regulations for the trade repository services.	CCIL should coordinate with the RBI to put the rules for the trade repository segment in place in an expeditious manner.	CCIL, RBI	Short Term
3	Risk management framework does not explicitly cover risks associated arising from trading platforms which originate trades settled by CCIL.	CCIL should explicitly recognize the risks it is exposed to from the trading platforms operated by the CCIL's subsidiary.	CCIL, RBI	Short Term
4	CCIL's credit risk stress testing assumes a participant in stress will cover its marked-to-market and volatility margin calls.	CCIL could consider enhancing its stress testing framework by excluding the marked-to-market and volatility margin calls of the participant with the largest exposure from the assessment of adequacy of pre-funded resources.	CCIL	Short Term
	Though CCIL does not provide CCP / guaranteed services in the CLS bank segment, but is exposed to market risk for which it collects margins from members. CCIL credit risk management framework does not explicitly seek to cover the largest exposures in the PVP settlement in CLS segment.	CCIL should consider having resources to address market risk for two largest participants given the PVP settlement arrangement.		Medium Term
7	CCIL should enhance the scenarios considered in the liquidity stress testing.	CCIL liquidity risk stress test scenarios need to explicitly include additional scenarios related to historical peaks, stress events across markets segments and multi-day exposures. In addition, the CCIL should consider including reverse stress testing.	CCIL	Short term

Princ.	Issues of Concern and Other Gaps or Shortcomings	Recommended Action	Relevant Parties	Priority
13 and 14	The segregation and portability framework is not complete.	CCIL needs to implement a framework for segregation and portability of customer funds and assets in the G-Sec segment where to an extent tiered participation exists. The framework, should explicitly reference any applicable regulations of the RBI and other regulators and describe how the process for portability would be facilitated by CCIL. This could be addressed through explicitly requiring segregation in the CCIL by-laws, rules, and regulations and validating as part of default drills.	CCIL, RBI	Medium term
15	The CCIL is in the process of enhancing its recovery plan.	CCIL has all the tools in place for timely recovery. CCIL should however, pursue its efforts to further develop and formalize the recovery plan and appropriately reflect these in its by-laws, rules, and regulations.	CCIL, RBI	Medium Term
17	CCIL could enhance its test scenarios to simulate ability to invoke Business Continuity Plan during periods of market stress.	CCIL could consider incorporating additional scenarios in the Business Continuity Plan to assess achievement of recovery-time and recovery-point objectives even in very adverse situations: • operational risk event at critical times during the business day – say 3 hours before close of business day or beginning of business day; • Accessing lines of credit when the credit providers are working from their back-up sites; and • Functioning of settlement banks from their back-up sites. CCIL explicitly recognizes its FMI links with the RBI-operated RTGS and PDO in the risk management framework. CCIL should, in addition, explicitly recognize its FMI Links with the RBI-operated RTGS and PDO, with respect to the business continuity planning in its operational risk management framework. CCIL should explicitly include trade repository services in the scope of its business continuity planning exercise.	CCIL	Medium term

Princ.	Issues of Concern and Other Gaps or Shortcomings	Recommended Action	Relevant Parties	Priority
19	The CCIL by-laws, rules and regulations do not recognize tiered participation arrangements.	Currently, there is no tiered participation in any segment except in Government securities segment under an RBI approved scheme. In the government securities segment, constituent positions are tracked. CCIL could consider having a reporting requirements from the direct members through whom the constituents participate on the delay in giving margin, etc. by the constituents.	CCIL	Medium Term
21	Participants in some segments of the market served by CCIL expressed need for additional services and features – for CCP services.	CCIL could consider studying the feasibility of introducing the below features highlighted by the participants the mission team met: • Ability to flag shortage of securities when placing a repo or an outright sale through CROMS and NDS-OM; • Introduce tiered participation in the CBLO segment, along the lines of the arrangements in the government securities market. CCIL could also consider introducing annual surveys of participants to seek their feedback on existing products and services; and demand for new products and services.	CCIL, RBI	Long term
	There is a need for a structured approach to gather feedback and inputs from participants in the CCIL CCP and trade repository services.		CCIL	Short term

List of Prioritized Recommendations for Responsibilities

Resp.	Issues of Concern and Other Gaps or Shortcomings	Recommended Action	Relevant Parties	Priority
B	Capacity to conduct regular assessments of the relevant FMIs with the PFMIs	SEBI should assess if they currently have the human and organizational capacity to fully meet their current and expanding oversight responsibilities, in particular arising from the commodities market FMIs coming under their purview.	SEBI	Short term
D	Regular application of PFMIs	The RBI and SEBI should progress their plans to assess all the FMIs under their respective purview. In the case of the RBI, the RBI PDO needs to be assessed; and in the case of SEBI the commodity derivatives market FMIs need to be assessed and the CSDs need to publish their disclosure framework.	RBI, SEBI	Short term
E	Cooperation among authorities	The various committees under the FSDC provide for structured co-operation between the RBI and the SEBI, with respect to the FMIs. The RBI and SEBI should evaluate the need for strengthening the co-operation framework with respect to establishing protocols for sharing data and information for e.g., a framework/formal arrangement for sharing of corporate bonds data with regulator or other FMIs could be considered.	RBI, SEBI	Medium term

Authorities’ Response

18. **RBI acknowledges and appreciates the detailed assessment of the two FMIs operated by CCIL,** viz. the CCP and the trade repository, and assessment of the authorities against the responsibilities indicated in the Principles for Financial Market Infrastructures, by the FSAP team.

19. **Adoption and effective implementation of PFMIs—‘Principles’ by FMIs and ‘Responsibilities’ by authorities—is crucial from a safety and efficiency perspective and RBI has taken necessary measures to ensure that PFMIs are implemented consistently by FMIs.** RBI welcomes and supports comprehensive assessment of FMIs under FSAP, as an opportunity to have a fresh and independent outlook.

20. RBI had in July 2013 issued a Document for Regulation and Supervision of FMIs and, accordingly, has been assessing CCIL for FMIs operated by it against PFMIs. RBI believes that this approach is effective and in line with its statutory objectives and global financial stability perspective, which has been well recognized by the FSAP team.

21. RBI would continue to take necessary steps to ensure that recommendations made in the Assessment are appropriately addressed. Accordingly, RBI would examine the recommendation made on assessment of PDO as a CSD. The operations of PDO is in a transitory phase and, as such, assessment will be taken up at an opportune time.

22. As regards the rating of trade repository for Principle 1, we would like to mention that the operating Regulations for TR services have since received our regulatory approval. CCIL has also notified the Regulations by placing on its website with effective date being 24th July 2017: https://www.ccilindia.com/Membership/ByLawsDocs/CCIL%20TR%20rules%2024072017.pdf.

Appendix I. Risk Assessment Matrix

Overall Level of Concern		
Source of Risks	**Likelihood (Over next 1–3 years)**	**Impact**
Continued deterioration of corporate balance sheets	**High** The government (owner of PSBs) may be reluctant or unable to address decisively asset quality problems in PSBs and repair of corporate balance sheets in view of limited fiscal space and the need for deeper structural reforms.	**High** The balance sheets of banks and corporates will further deteriorate, undermining the capital position of PSBs, reducing lending to the economy, and adversely affecting the recovery of private investment.
Tighter or more volatile global financial conditions	**Medium** A risk repricing or related surge in global financial markets volatility could negatively affect investor confidence and lead to a sharp reversal of recent large capital inflows.	**Medium** Large capital outflows may lead to a tightening of monetary conditions and a depreciation of the rupee, which may further weaken corporate balance sheets (both through an increase of the debt burden as most loans are on variable interest rates and unhedged FX exposures). This would lead to an increase of the level of impaired assets in banks. At the same time, higher interest rates could increase banks' funding costs and reduce net interest income as margins tighten (due to maturity mismatches and limited pass-through). Larger impaired assets and lower net interest income would lead to larger recapitalization needs. Higher interest rates may also reduce the price of debt securities and amplify the impact of maturity mismatches from long-term investments in infrastructure.
Slowdown in economic growth fueled by external shocks	**Medium** Deterioration of economic outlook in key advanced and emerging market countries would cloud the sustainability of recovery.	**Low** Corporate vulnerabilities will rise and asset quality in PBSs will continue to deteriorate; banks will need to increase provisions and capital.
Increased volatility of global energy prices	**Medium** An increase in the volatility of oil prices may have significant effects on the current account deficit and inflation.	**Low** A tightening of monetary conditions and a depreciation of the rupee will further weaken corporate balance sheets (both through an increase of the debt burden as most loans are on variable interest rates and unhedged FX exposures). This would lead to an increase of the level of impaired assets and larger fiscal outlay necessary for recapitalizing banks.

Appendix II. Banking Sector Stress Testing Matrix

Domain		Assumptions	
		Top-Down by Authorities	Top-down by FSAP Team
BANKING SECTOR: SOLVENCY RISK			
1.Institutional perimeter	Institutions included	• 55 scheduled commercial banks, including public sector banks (PSBs), and private banks (PVBs)	Stress Tests: • The 15 largest banks (12 PSBs and 3 PVBs) Banking Sector Analysis: • 36 banks (20 PSBs and 16 PVBs)
	Market share	• 99%	Stress Tests: • 71%
	Data and baseline date	• Supervisory data as of March, 2017	Stress Tests: • Supervisory data as of March, 2017 Banking Sector Analysis: • Company disclosure (Fitch) as of March, 2017
2. Channels of risk propagation	Methodology	• RBI stress test framework	• IMF stress test framework
	Satellite Models	RBI stress test framework: • Credit risk: panel regression of credit loss parameters (NPA implied PDs) and macroeconomic variables Sensitivity Tests: • Market risk: standard valuation loss quantification (Loss = exposure at default x modified duration x interest rate change) • Sovereign bond holdings are marked to market • Interest rate risk: Gap analysis of Net Interest Income (NII) e.g. quantification of impact of change in interest rates on NII	IMF stress test framework: • Credit risk: panel regression of credit loss parameters (Stressed Loans implied Stressed PDs) and macroeconomic variables Sensitivity Tests: • Decline in Pre-provisioning Return on Assets • Market risk: standard valuation loss quantification (Loss = exposure at default x modified duration x interest rate change) • Sovereign bond holdings are marked to market • Interest rate risk: Gap analysis of Net Interest Income (NII) e.g. quantification of impact of change in interest rates on NII
	Stress test horizon	• 3 years	• 3 years

Domain		Assumptions	
		Top-Down by Authorities	Top-down by FSAP Team
3. Tail shocks	Scenario analysis	• Three scenarios: One baseline scenario (WEO), two downturn scenarios (adverse and severe adverse) of 1 and 2 standard deviation decline in GDP • Macroeconomic variables: exchange rate, inflation, policy rates, lending rates, exports, GDP, investment, current account, fiscal deficit	• Three scenarios: One baseline scenario (WEO), two downturn scenarios (adverse and severe adverse) of 1 and 2 standard deviation decline in GDP • Macroeconomic variables: exchange rate, inflation, policy rates, lending rates, exports, GDP, investment, current account, fiscal deficit
	Sensitivity analysis	• Sensitivity tests with respect credit risk, market risk and interest rate risk • Concentration test: Default of largest 1-3 group borrowers, subject to 25-75% provisioning rate	• Sensitivity tests with respect to profitability, credit risk, market risk and interest rate risk, and changes in risk-weights • Concentration test: Default of largest 1-3 group borrowers, subject to 25-75% provisioning rate
4.Risks and buffers	Risks/factors assessed	• Credit risk • Market risk • Interest rate risk	• Credit risk • Market risk • Interest rate risk
	Behavioral adjustments	• Statutory tax rate and 75% dividend payout	• Statutory tax rate and 75% dividend payout
5. Regulatory and market-based standards and parameters	Calibration of risk parameters	• PDs derived from NPA series • NPA coverage ratio and implied LGD remain at around 43% during the first year, and subsequently increase during year 2 and year 3 as GDP recovers, in line with banks' provisioning capacity • Loan portfolio grows at 7 percent annually; and risk-weights increase	• PDs derived from stressed loan time series • LGDs: 60%/55%/50% in Baseline and Medium Severe Scenario; 65%/55%/50% in Extreme Severe Scenario • Migration of 25 percent of restructured loans to NPA at the beginning of the stress test horizon • Constant size and composition of balance sheet; constant risk weights Banking Sector Analysis • Analysis projected banks' income statement and capital ratios one year ahead • Assumes LGD of 60 percent • Migration of 8 percent of standard loans into stressed loans
	Regulatory/accounting and market-based standards	Hurdle rates: • CET1 Capital Ratio: 5.5% • Tier 1 Capital Ratio: 7% • Total Capital Ratio: 9%	Hurdle rates: • CET1 Capital Ratio: 5.5% • Tier 1 Capital Ratio: 7% • Total Capital Ratio: 9%

Domain		Assumptions	
		Top-Down by Authorities	Top-down by FSAP Team
6. Reporting format for results	Output presentation	• Aggregate capital ratios • Number of failing banks and percentage of assets that fail	• Aggregate capital ratios • Disaggregate capital gaps by bank groups • Number of failing banks and percentage of assets that fail • Aggregate capital shortfall
Banking Sector: Liquidity Risk			
1. Institutional perimeter	Institutions included	• 28 scheduled commercial banks	• 28 scheduled commercial banks
	Market share	• Supervisory data as of December, 2016	• Supervisory data as of December, 2016
	Data and baseline date	• Cash-flow-based using maturity buckets • Standard LCR test • LCR retail funding shock scenario • LCR wholesale funding shock scenario	• Cash-flow-based using maturity buckets • Standard LCR test • LCR retail funding shock scenario • LCR wholesale funding shock scenario
2. Channels of risk propagation	Methodology	• Funding liquidity shock • Market liquidity shock	• Funding liquidity shock • Market liquidity shock
3.Risks and buffers	Risks	• Counterbalancing capacity	• Counterbalancing capacity
	Buffers	• Bank run and dry up of wholesale funding markets, taking into account haircuts to liquid assets	• Bank run and dry up of wholesale funding markets, taking into account haircuts to liquid assets
4. Tail shocks	Size of the shock	• Standard FSAP run-off rates and haircuts	• Standard FSAP run-off rates and haircuts
5. Regulatory and market-based standards and parameters	Regulatory standards	• Hurdle metrics: liquidity gap • Basel III ratios: LCR	• Hurdle metrics: liquidity gap • Basel III ratios: LCR
6. Reporting format for results	Output presentation	• Distribution of liquidity gaps and LCRs • Number of passing and failing institutions and the corresponding share of banking sector assets	• Distribution of liquidity gaps and LCRs • Number of passing and failing institutions and the corresponding share of banking sector assets

* PVBs: private banks; PD: probability of default; LGD: loss given default; NII: net interest income.

Appendix III. Implementation of 2011 FSAP Recommendations

Recommendations	Priority (H/M)	Time frame	Status
Addressing system-wide risks			
Enhance RBI monitoring of corporate indebtedness, refinancing risk, and foreign exchange exposures.	H	S	I
Improve the performance and financial strength of public financial institutions and subject them to full supervision and regulation.	H	M	PI
Financial sector oversight			
Strengthen oversight of overseas operations of Indian banks through MOUs with host countries for information sharing, supplemented by onsite inspection programs and supervisory colleges.	H	M	I
Enhance formal statutory basis for the autonomy of regulators in carrying out their regulatory and supervisory functions.	M	M	I
Tighten the definition of large and related-party concentration (short-term) and gradually reduce exposures limits to make them more consistent with international practices.	H	M	PI
Enhance specialized expertise available to the supervision function by developing programs to accredit and retain skilled supervisors.	H	M	I
Continue to strengthen coordination and information sharing mechanisms among domestic supervisors through MOUs and formal frameworks to avoid regulatory gaps, identify emerging risks, and facilitate crisis response.	H	S	I
Provide a lead supervisor with legal backing for conducting consolidated supervision including through authority to inspect subsidiaries and affiliates.	H	S	I
Expedite passage of Insurance Law (Amendment) Bill.	H	S	I
Implement a corrective action ladder for insurers, based on solvency ratios.	H	S	I
Enact legislation to formalize the New Pension Scheme and the Pension Fund Regulatory and Development Authority.	H	S	I
Systemic liquidity, crisis management, and safety nets			
Announce a timetable for the gradual reduction in the SLR and to review the use of the held-to-maturity category, taking account of emerging global prudential liquidity requirements.	M	M	PI
Strengthen resolution tools by granting stronger powers to supervisors to resolve nonviable entities in an orderly fashion.	H	M	NI
Develop and periodically test arrangements to deal with a major disruption to the financial system.	H	M	NI

* Priority: H = High, M = medium; Time frame: S = short term, M = medium term; Status: I = implemented, PI = partially implemented, NI = not implemented, TBD = to be determined.

INTERNATIONAL MONETARY FUND

INDIA

November 7, 2017

FINANCIAL SYSTEM STABILITY ASSESSMENT—SUPPLEMENTARY INFORMATION

Prepared By

Monetary and Capital Markets Department

This supplement provides additional information that has become available since the Financial System Stability Assessment was circulated to the Executive Board. The thrust of the executive summary remains unchanged.

On October 24, 2017, the Government of India announced a major recapitalization plan for domestic public sector banks (PSBs). The plan amounts to Rs 2.1 trillion (approximately $32 billion or 1.3 percent of GDP), and entails issuance of Rs 1.35 trillion in government recapitalization bonds to PSBs; budgetary support of Rs 180 billion; and the raising of Rs 580 billion in the equity market by PSBs (the latter in effect diluting the government's ownership share) over the next two years.

An upfront recapitalization of PSBs is in line with the FSAP's recommendations. The size of the envisaged capital injections is expected to largely address the PSBs' recapitalization needs, estimated at 0.75–1.5 percent of GDP by the FSAP stress tests; help accelerate the resolution of distressed assets; and support the PSBs' ability to resume lending and a revival of corporate investment, particularly for SMEs that have been affected negatively by PSBs' lending constraints. Further details on the restructuring plans and conditions of the recapitalization plan are yet to be announced.

On November 1, the Government of India announced the establishment of an Alternative Mechanism panel, headed by India's Finance Minister, to seek consolidation across state-owned banks. The panel is expected to direct the PSBs to examine merger proposals (benefitting from inputs from the Reserve Bank of India) and devise its own procedures for the appraisal of banks' merger proposals. This is consistent with the FSSA's call for a broader restructuring of the PSBs, in addition to recapitalization.

Statement by Mr. Gokran, Executive Director for India, and Mr. Joshi, Senior Advisor to the Executive Director

November 10, 2017

On behalf of Indian authorities we would like to express sincere appreciation to the Financial Sector Assessment Program (FSAP) mission team for the constructive and detailed exercise undertaken on various aspects of India's financial sector. We welcome several of the recommendations in this report, reflecting the overall confluence of our thinking. Some new thoughts that have emerged will engage the attention of the authorities in days ahead.

We underwent FSAP exercise during 2011-12. It is heartening to note that the FSAP team has appreciated the major reforms undertaken and recognized the efforts made by Indian authorities. In addition, as part of our commitment to the Financial Stability Board, we had also undergone a Financial Stability Board (FSB) Peer Review in 2016 with focus on the two areas of Macro-prudential policy framework and Regulation and Supervision of Non-Banking Financial Companies, follow-up action on which is already underway.

Authorities welcome the Board's decision to discuss India's FSAP report on a standalone basis. This review has taken place at a time when India is undergoing major financial sector reforms that include introduction of bankruptcy and insolvency framework for corporates, special resolution regime for financial firms, introduction of uniform Goods and Services Tax (GST), measures to curb black money including demonetization, promotion of digitization, improvements in system wide oversight framework and structural reforms to enhance bank resilience and bank recapitalization.

Our track record on successful implementation of the 2011 FSAP recommendations has been reflected in the current FSAP report. The process of change was charted out continuously through reforms by the authorities in close consultation with various stakeholders. The FSAP process helped us immensely in furthering the consensus.

Let me highlight the major developments since the 2011 FSAP, and also a few major issues which were raised during the 2017 FSAP mission.

1. Key Developments since 2011 FSAP

The two main areas of Basel Core Principles, noted during FSAP 2011 have been fully addressed: (i) regarding the oversight of overseas operations of Indian banks by regulators, onsite inspection of overseas branches of Indian banks and information exchange through MoUs and supervisory colleges with overseas regulators have been effectively instituted; and (ii) on large exposure limits, as per the fresh guidelines issued in December 2016, exposure values of a bank to a group of connected counterparties has been capped at 25 percent of the bank's capital, thus aligning exposure norms for Indian banks with the Basel Committee on Banking Supervision (BCBS) standards. The Reserve Bank of India (RBI) has also issued comprehensive guidelines on Intra-Group Transactions and Exposures, which include related-party transactions. Besides, on the issue of independence and accountability of the regulators, Reserve Bank of India (RBI) does enjoy budgetary autonomy and operational independence and is transparent in its functioning. The legal provisions to terminate tenures of the top functionaries or to supersede decisions of the RBI and the other regulators are just enabling provisions for extra-ordinary situations and de-facto there is no government interference in the functioning of any of the regulators.

On the other recommendation to develop periodical test arrangements to deal with a major disruption to the financial system, we would like to inform that an inter-regulatory technical group under the aegis of Financial Stability and Development Council (FSDC), *inter-alia,* is responsible for considering risks to systemic financial stability. The inter-regulatory group is chaired by the Governor of the Reserve Bank of India (RBI) and includes members from other regulators. Further, there is an early warning group to co-ordinate the response of government and regulators in times of crisis. The RBI also brings out a Financial Stability Report bi-annually, which also goes into the deliberations of the FSDC and its constituent Groups and provides a structured framework to discuss the issues of major disruption to the financial system. Hence, this recommendation of FSAP 2011 may also be identified as "Partially Implemented".

Authorities wish to highlight that the Insolvency and Bankruptcy (IBC) Code, 2016 is a major leap and with the enactment of the Financial Resolution and Deposit Insurance Bill, 2017 (FRDI Bill) the resolution framework will get completed. Besides, while disaster recovery tests in face of operational risks are being conducted, broader tests for financial disruptions will be considered in near future.

The Securities and Exchange Board of India (SEBI) has made significant efforts to address the recommendations of the previous FSAP. Amendments to the SEBI Act have granted SEBI additional investigative powers, created a special court that handles criminal cases filed by SEBI, and given SEBI full authority to regulate pooled investment schemes involving a corpus of Rs 1 billion or more.

With the passage and notification of the Pension Fund Regulatory and Development Authority (PFRDA) Act 2013, the Authority has been conferred with a statutory status. Its mandate covers development of the pension sector as also framing of regulations for the advancement of the National Pension System (NPS) and protection of the interest of the subscribers.

The Insurance Laws (Amendment) Act, 2015 provides for enhancement of the foreign investment cap in an Indian Insurance Company from 26% to an explicitly composite limit of 49% to safeguard of Indian ownership and control while providing Insurance Regulatory and Development Authority of India (IRDAI) with enough flexibility to discharge its functions more effectively and efficiently among others.

As FRDI Bill 2017 has already been introduced in August, 2017 and is under consideration of the Parliament. India is at an advanced stage of establishing an efficient resolution framework consistent with the international norms. The authorities therefore, feel that this recommendation of FSAP 2011 may be taken as "Partially Implemented".

2. India's views on few major observations on the recommendations made in FSAP 2017

There are several recommendations, which the authorities broadly agree with and many of these are already being implemented. Of course, there are differences in nuance in some of them. There are also some with which the authorities disagree.

(i) Banking and Market Infrastructure

The RBI framework was assessed to be compliant with the Basel Framework under the 2015 Regulatory Consistency Assessment Programme. The capital framework includes a capital conservation buffer, leverage ratio, and countercyclical capital buffer. The framework applies to public as well as private sector banks. The FSSA observes that the RBI offers only the Standardized Approach for credit, market, and operational risk. While currently the RBI is reviewing applications of several banks to apply the Internal Ratings Based (IRB) approach for credit risk, the bank models need to be carefully validated and parallel runs are needed. IRB and advanced approaches are not without pitfalls and robustness of the models need to be established. In recent period, there has been widespread recognition that the IRB approach, based on complex models, is being misused by undercapitalized banks to lower risk weights. Thus, the standardized approach is finding favour with regulators. As such, we are cautious in pushing the IRB approach at this stage.

We appreciate the FSAP team's concern to phase out the Statutory Liquidity Ratio (SLR). While we reiterate that this is consistent with the authorities view, the move in this direction must factor in the potential market impact. The Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework in January 2014 had recommended that SLR be brought down in consonance with requirements of the Liquidity Coverage Ratio (LCR) under Basel III framework. Accordingly, the SLR has been brought down in a consistent but gradual manner, and now stands at 19.5 percent down from 23 percent in January 2014.

Divestment of government ownership in public sector banks (PSBs) is envisaged as part of the recapitalisation plan under which PSBs will raise capital from the markets. However, transfer of controlling ownership is not under immediate consideration.

Regarding review of loan classification and provisioning rules with respect to special loan categories, we reiterate that the authorities are in the process of such a review in conjunction with International Financial Reporting Standards (IFRS-9), wherein expected loss framework forms the basis for provisions and all loans are covered by provisioning. This framework will capture past loss data and cure rates in the provisions. Introducing a prudential floor on the

lines of IFRS is also envisaged by the authorities. At the same time, it needs to be recognized that in the Indian context, special category loans, which comprise loans primarily to the agriculture sector, do not necessarily violate the prudence principles and instead reflect the inclusion criteria. Repayment of such loans is in consonance with crop seasons and the cash flows of the farmer. Moreover, the Basel Committee on Banking Supervision (BCBS) guidelines issued in 2016 on prudential treatment of problem assets currently provides for supervisory deviation from the 90-day norm and prescribing up to a 180-day norm in case of retail and public sector entities exposure if this is considered appropriate for local conditions.

Regarding the Priority Sector Lending (PSL) norms, they play an important role in providing credit to sectors which do not get access to formal finance and therefore facilitate inclusion, employment and growth. One-size fits all approach, therefore, may not serve a good purpose in this case.

It is worth mentioning here that the RBI's norms require that even if one facility provided to a borrower is classified as non-performing loans (NPL) due to non-payment, all facilities of the borrowers have to be classified as NPLs. This principle of 'borrower-wise asset classification' is applied even in case of retail loans, whereas internationally, retail loans generally attract facility wise classification norms (though subject to a materiality clause). Hence, in that sense the RBI loan classification norms are more stringent than the international practice.

On the FSAP observations on crisis preparedness and Emergency Liquidity Assistance (ELA), it needs to be noted that there are no technical obstacles to extending ELA. In fact, RBI has in place a carefully drafted Board-approved policy on ELA that incorporates constructive ambiguity and flexibility, and as such does not prefer more clarity than is necessary as it could engender moral hazard. It may be noted that the FRDI Bill, 2017 already contains a provision of government grants, in addition to the Resolution Corporation's (RC) power to charge a premium for providing deposit insurance. Further, on the matter of crisis preparedness, the FRDI Bill 2017 has adequate provisions, including the mechanism of early detection of risks (risk to viability mechanism), identification of systemically important financial institutions (SIFIs), and the requirement to submit restoration and resolution plans. Regarding the Principles of Financial Market Infrastructure, we are happy to inform that the Clearing Corporation of India Limited (CCIL) observes almost all of them. The two principles which are found to be broadly observed are being currently considered for quick implementation. As for the trade repository (TR), the operating regulations for TR services have since received RBI regulatory approval and CCIL has notified the regulations and complied with the principle.

(ii) Capital needs assessment & Recapitalization efforts

Since undercapitalization of PSBs has been the focus of much debate we would like to highlight a significant development that took place soon after this FSAP exercise Though not earlier included in the FSSA report, this development is now reflected through a staff supplement informing the Executive Board of the Government's recent decision taken on October 24, 2017 to substantially recapitalize PSBs. The recapitalization of Rs. 2.11 trillion (about US$32.5 billion) will be implemented over the next two years. This includes budgetary provisions of Rs.181.39 billion and recapitalisation bonds of Rs.1,350 billion; the balance capital amount is to be raised by the PSBs from the market by diluting government equity. The FSAP team's stress tests estimated the capital needs of banks between 0.75 percent of GDP in the baseline to 1.5 percent of the GDP in the severe adverse scenario. The team's assessment was that these

capital needs were manageable in aggregate. The findings of the RBI's own stress tests, the results of which are published in the recent Financial Stability Report released on June 30, 2017, have not been substantially different This recapitalization package will effectively address the capital gap assessed in the FSAP exercise even under the severe stress scenario.

The authorities are also using this window of opportunity to bring about improved governance in PSBs. The bank recapitalization package will be front-loaded through issuance and placement of recapitalization bonds on the balance sheet of banks facing capital shortfall. The package will, however, also be differentiated with the front-loading being greater for banks that have better addressed their balance-sheet issues and which are in a position to use fresh capital injection for immediate credit creation. This will help ameliorate financing constraints faced by parts of the real economy. The intention of the differentiated approach is to link the recapitalization to operational and governance reforms at PSBs, limit moral hazard and ensure that the infused capital is well-used. Furthermore, as a part of the capital needs will be raised from the markets, there will be scope for improved market discipline, contributing to the overall thrust of improving governance in these banks.

The fiscal burden of the recapitalization bonds will get dispersed over time with only the interest burden coming on-budget until redemptions. Therefore, the fiscal deficit burden appears manageable. Moreover, the recapitalisation is cash neutral under the IMF methodology. With banks having adequate liquidity parked in government bonds as excess SLR, this excess liquidity can get reallocated for credit once the bank capital is adequately high to enable credit creation.

The recapitalization plan has been well-received by the markets, with rating agencies already stating it as "significant credit positive". The authorities are making all out efforts that are likely to turnaround the NPL cycle, strengthen bank balance sheets, improve provisioning coverage, address current fragilities, and ultimately improve banking soundness. The Government has taken several legislative measures to facilitate recovery and resolution of stressed assets. The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act) and the Recovery of Debts Due to Banks and Financial Institutions Act, 1993 were amended in 2016 to enable expeditious recovery of non-performing loans. Further, during the current year the Banking Regulation Act, 1949 was amended to authorize the Reserve Bank of India (RBI) to direct banks to initiate the insolvency resolution process under the rubric of IBC. The institutional infrastructure comprising of National Company Law Tribunals (NCLT) and the National Company Law Appellate Tribunal (NCLAT) to adjudicate corporate appeals has already been operationalized. The Insolvency and Bankruptcy Board of India (IBBI) is in place for oversight and enforcement of rules for insolvency resolution and liquidation in a timebound manner. The other measures taken by RBI include (i) setting up of the Central Repository of Information on Large Credits (CRILC) that helps in tracking not just the NPAs, but incipient stress and inadequate recognition of bad loans; (ii) introducing the Framework for Revitalizing Distressed Assets in the Economy with a special focus on addressing coordination problems in large consortium accounts under Joint Lenders' Forums (JLF); and (iii) using the revised Prompt Corrective Action (PCA) framework to work towards needed improvements in weak banks.

Ultimately, these efforts, along with the two game-changing moves in 2017 ─ (a) pushing resolution and insolvency through the recently enacted IBC and (b) the announced

recapitalization plan ─ will not only ensure stability of the Indian financial system but also unleash efficient financial intermediation in support of broader economic impulses.

(iii) Securities & Commodities Markets and Insurance

On the recommendation on the development of risk-based system for selective reviews of listed companies' reports, and the transfer of legal authority on public listed company reporting from the Ministry of Corporate Affairs to Securities and Exchange Board of India (SEBI), we would like to mention that the Companies Act, 2013 (CA-13) contains the basis/minimum requirements on corporate regulation. Moreover, other regulators like SEBI, RBI, IRDAI etc. have the power to prescribe more detailed regulatory requirements under their sectoral jurisdictions.

We would like to inform that the minimum requirements with respect to preparation, circulation, filing and review of various disclosures through specified reports/returns have been provided under the CA-13. SEBI has specified additional sectoral requirements for listed companies through various regulations. This arrangement has been working well and no change is considered necessary. It may also be noted that Companies Act, 2013 provides for constitution of National Financial Reporting Authority (NFRA) as an independent regulator for audit to ensure complete independence, thoroughness and accountability on the part of auditors.

Sharing of information between Ministry of Corporate Affairs (MCA) and SEBI exists and simultaneous and timely disclosure of information needs to be done on the exchange platforms by the companies.

Regarding unification of commodity markets, Government has announced in the Budget Speech for 2017-18 that "the Commodities markets require further reforms for the benefits of farmers and an Expert Committee will be constituted to study and promote creation of an operational and legal framework to integrate spot market and derivatives market for commodities trading. The electronic National Agriculture Market (e-NAM) would be an integral part of such framework." The Expert Committee has accordingly been set up on June 13, 2017.

On the recommendation related to introduction of risk-based solvency regime and risk-based supervision for insurers, it is informed that within IRDAI, a Project Committee has already been constituted with the task to study and further develop an appropriate framework of Risk Based Supervision (RBS) and is expected to submit a final report by end of November, 2017. Based on the same, the Authority will review the issues related to enhanced implementation of comprehensive RBS regime. IRDAI is also constituted a steering committee to implement Risk Based Capital (RBC) Regime with broad timeframe of 3 years.

(iv) System Oversight

It is felt that financial sector oversight is well served by the apex coordinator FSDC which ensures smooth inter-regulatory coordination and independence of regulators. Its Sub-Committee is vested with the responsibility of analysing, finalizing and approving macroprudential tools. The Government is taking suitable actions to address the recommendations made by the FSB peer review to strengthen the macroprudential policy framework.

On improving systemic risk and macro-prudential oversight, authorities have decided in the FSDC forum that each regulator would formulate macro-prudential policy in their respective areas and bring it to FSDC forum, including cross-sectoral issues, for finalization. The Government also proposes to set up a Financial Data Management Centre (FDMC) mainly to standardize and provide analytical support to the FSDC on issues related to financial stability. We already have an understanding among the regulators to share information towards further improving and expanding the scope for systemic risk analysis. The draft FDMC Bill does not restrict the regulators in maintaining separate database for regulatory purpose and the regulatory powers of regulators remain unaffected. The systemic macro-financial risk factors are also captured in the Financial Stability Report (FSR) published by RBI.

Cyber-attacks and malicious cyber activities in the financial sector is a matter of great concern. The Government has already announced for establishment of a cyber security Computer Emergency Response Team for Finance (CERT-Fin) in the financial sector and working towards the same.

(v) Resolution

In addition, on the coverage of the Resolution Framework in the FSSA, we note that the observations in FSSA are based on the old Financial Resolution and Deposit Insurance Bill (FRDI) Bill of 2016. The new, FRDI Bill 2017, tabled in the Parliament on August 10, 2017 is a marked improvement over the previous Bill of 2016 and many issues identified/ suggestions made in the FSSA in this area have already been resolved in the 2017 Bill.

Authorities wish to highlight that the issues relating to duplication of supervisory authority in the pre-resolution phase, strengthening of resolution tools and safeguards, recovery and resolution plans, treatment of domestic & foreign liability holders, and matter of crisis preparedness have been adequately accommodated in the revised Bill, 2017.

(vi) Infrastructure Finance

On Infrastructure finance, the authorities feel that there is inadequate appreciation of the detailed "diagnostics" made by the Government resulting in the structuring of innovative financing vehicles which have been well received by the market. Various steps to enhance investment in infrastructure sector including launching of innovative financial vehicles such as Infrastructure Debt Funds (IDFs), Real Estate Investment Trusts (REITs)/Infrastructure Investment Trust (InvITs), National Investment and Infrastructure Fund (NIIF), laying down a framework for municipal bonds, allowing complete pass through of income tax to securitization trusts including trusts of Asset Reconstruction Companies (ARCs), bringing in 5/25 Scheme to extend long tenor loans to infrastructure projects, take-out finance, flexible structuring etc. have been taken. Several steps to ensure timely completion of projects have also been taken such as rigorous project appraisal, online computerized monitoring system (OCMS) for better monitoring, setting up of Central Sector Project Coordination Committees (CSPCCs) in states and a Cell called Project Monitoring Group (PMG) in the Cabinet Secretariat for all large projects, both public and private. Central e-PMS, a web enabled information system has also been put in place for monitoring project having investments above Rs.1000 crore (USD 167 million).

We also take note of the FSAP recommendation for transfer of ownership of National Housing Bank to the Government and regulation of Housing Finance Companies to RBI. The RBI had some time back suggested the same and this is under consideration of the Government of India.

3. Other Issues

a) Authorities wish to bring attention to the part of report on Financial Sector Oversight Framework (Supervision and Regulation) which finds mention of Banking Supervision, Insurance Supervision and Securities Regulation and not pension. As enactment of legislation related to NPS and PFRDA was one of the recommendations of the previous FSAP report, this has been implemented, as acknowledged in the report. A para on Pension Sector Supervision and Regulation may be considered for incorporation in the report mentioning the passage of PFRDA Act 2013 and the subsequent notification of regulations for prudential oversight and consumer protection.

b) Regarding mitigation of money laundering risks, significant measures have been undertaken to deter tax evasion

i. In the context of domestic tax evasion, under the Prevention of Money Laundering Act, 2002 (PMLA) the activity of generation of (black) money is itself unlawful i.e. 'predicate offence' and as a result the Government has a right to confiscate that money on the reason that it never belonged to the accused. It may be difficult to consider domestic tax invasion as 'predicate offence' to money laundering, the latter offence is criminal in nature and has cross boarder implications. Further, such qualification would be harsh to the tax payers as many times adjustment to income are made based on legal issues and would affect the large number of population.

ii. Further, incentives in the form of tax rebates to encourage digital payments are not in line with the Government's taxation policy as it is intended to phase out to all the exemptions and deductions. Such tax rebates would be more beneficial to the taxpayers from higher income group and shall mostly benefit existing users. Further, considering India's tax base, the proposal would have limited affect, as only the taxpayers would be incentivized and larger population would remain out of the purview of proposed incentives. Instead of providing tax rebates to incentivize digital payments, certain provisions have been put in place to disincentivize cash transaction like all cash transactions relating to sale of goods and services in excess of rupees two lakh are to be reported by the person concerned.

4. Conclusion

On the whole, we welcome the 2017 FSAP both as a testimony to a sound and vibrant financial system in India that serves a large population at diverse stages of development, as well as for its help in charting out the future course of financial sector reforms. The Indian authorities are pursuing a financial sector agenda which will bring about efficiency, stability, transparency and inclusiveness in the delivery of financial services. The recommendations made by FSAP will further reinforce and guide us terms of sustainable financial sector development, and towards a fundamentally strong and resilient financial system.