



HIGH-LEVEL SUMMARY TECHNICAL ASSISTANCE REPORT

INDIA

Review and Evaluation of the Reserve Bank of
India's Stress Test Model Framework

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Prepared By

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High-Level Summary Technical Assistance Report Monetary and Capital Markets Department

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The *High-Level Summary Technical Assistance Report* series provides high-level summaries of the assistance provided to IMF capacity development recipients, describing the high-level objectives, findings, and recommendations.

ABSTRACT: This report provides a brief summary of the purpose and findings of a technical assistance (TA) mission that was intended to review and evaluate the Reserve Bank of India (RBI)'s stress test model suite, which took place in April 2023. The RBI's model suite was found to be strong and well developed in numerous respects. The most noteworthy recommendations pertain to credit risk, market risk, and macro-financial scenario design. A detailed list of 28 recommendations spanning all areas was left with the RBI. A detailed TA report accompanies this brief summary report.

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Background

The Technical Assistance (TA) mission took place in April 2023. It was organized upon enquiry from the Reserve Bank of India (RBI) to let its stress test model suite be reviewed and evaluated by the IMF. The mission team comprised Mr. Marco Gross (TA mission lead) and Ms. Wei Sun; both from the Monetary and Capital Markets Department of the IMF. The mission team visited RBI's headquarters in Mumbai, India, from April 3-12, 2023.

Summary of Findings

The mission purpose was for the IMF to provide a thorough review of the Reserve Bank of India (RBI)'s analytical capacity and model suite for solvency risk analysis, liquidity risk analysis, and balance sheet connectedness of banks (alongside non-bank financial institutions, NBFIs). The RBI provided the IMF team with all available documentation, in the form of documents and through slide shows and detailed discussions during a meeting series that spanned ten working days. Toward the later phase of the mission window, the IMF team provided RBI staff with an overview of what it considers best practice (at the Fund and by drawing on practices in other countries) in the above-mentioned areas.

The IMF also provided the RBI with a primer on climate risk analysis. At the request of the RBI, the team delivered a three-hour session on climate risk analysis. It served to provide the RBI with an understanding of how to go about climate risk analysis, including data, analytical tools, and models; including with India-specific research conducted ahead of the meeting by IMF staff, to place all discussions in an India-specific context.

Summary of Recommendations

RBI's model suite was found to be well developed in numerous respects. Three positive findings include: (1) All primary databases, including supervisory data, required for systemic risk analysis were found to be well maintained and data can "flow freely" between the departments that require access to it; (2) the systemic risk analysis covers a wide range of risks and institutions beyond banks, including insurers, mutual funds, and central counterparties; and (3) its structural network-contagion module is strong, building on a long time series (since 2010) of bilateral exposure data matrices that span numerous financial exposure types and beyond banks also pension funds, insurance firms, housing finance companies, and other NBFIs types.

The most noteworthy recommendations pertain to credit risk, market risk, and macro-financial scenario design. The credit risk model component was found to consist of various elements that are individually sound but are, to some extent, inconsistent in conjunction. The related recommendation was to simplify these model elements and make them consistent (various suggestions are included in the detailed TA report). A market risk component—in particular regarding interest rate risk—was found to be captured only indirectly and it was recommended to be properly developed and integrated in the solvency and liquidity risk models. RBI's macro-financial scenario design at present entails a statistical approach with a 1-year horizon; recommendations for how to extend it (regarding narrative design, the use of models, and horizons beyond the current 1-year) were left with the RBI.

A detailed list of 28 recommendations spanning all areas was left with the RBI. The rationale underlying all recommendations is laid out in the TA report that was left with the RBI for review. The financial stability department's staff in charge of all models and analysis were found to be very professional and well trained. A recommendation to expand their team was nonetheless deemed instrumental by the mission team and hence included in the report.

The IMF suggested that most recommendations should ideally be addressed within a two-year window, i.e., by 2025. Addressing them before the beginning of 2025 will be beneficial because a new accounting regime (akin to IFRS 9 in other jurisdictions in 2018) will be implemented in India in 2025 and will imply new tasks and analytical development needs.