Annual Report 2017 - 18

Promoting Excellence in Learning and Research

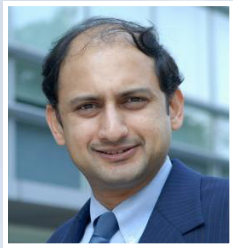
CAFRAL

CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

Promoted by Reserve Bank of India

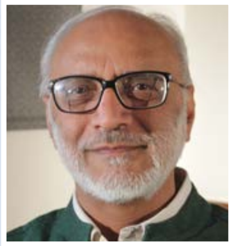
CAFRAL Governing Council

Dr. Urjit R Patel
Chairman, GC &
Governor,
Reserve Bank of India



Dr. Viral Acharya
Deputy Governor,
Reserve Bank of India

T V Mohandas Pai
Chairman of the Board,
Manipal Global Education
Services
Pvt. Ltd.



Dr. Ashok Gulati
Chair Professor for
Agriculture at Indian
Council for Research
on International
Economic Relations
(ICRIER), Infosys

Dr. Ajit Ranade
Senior President &
Chief Economist,
Aditya Birla Group,
India

Dr. Venkatesh Panchapagesan
Associate Professor of
Finance and Head, Real
Estate Research Initiative, IIM
Bangalore

Amartya Lahiri
Director
CAFRAL

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About CAFRAL

The Centre for Advanced Financial Research And Learning (CAFRAL) has been set up by the Reserve Bank of India (RBI) in the backdrop of India's evolving role in the global economy, in the financial services sector and its position in various international fora and to develop into a world class global institution for research and learning in banking and finance. CAFRAL is a not-for-profit organisation established as a Society and a Trust; it is an independent body promoted by RBI. CAFRAL became operational in January 2011.

The Governor of RBI is the Chairman of the Governing Council of CAFRAL. CAFRAL's learning arm is engaged in conducting seminars, conferences and other learning programs that serve as a platform for exchange of high-level policy dialogues between the various stakeholders by bringing together regulators, policy makers, bankers, academicians, researchers and practitioners. It also conducts advanced programs for enhancing professional capabilities of senior executives in the financial sector.

CAFRAL's research focus is on the areas of banking and finance. Within these broad areas, our interests include financial institutions, financial markets, behavioural finance, corporate finance, household finance and related areas of macro-finance such as monetary economics or international finance. CAFRAL aims to build intellectual capacity in these areas through its own staff, by hosting researchers of international repute and facilitating collaborative research by building data resources and analytical capabilities.

Mission

To evolve as a global centre of excellence for policy research and advanced learning in banking and finance.

Objectives

- Enhance our understanding of how the financial sector contributes to real sector growth through in-house and collaborative research that is useful and relevant
- Enhance professional capabilities in the banks, financial sector, and among central banks regulators and policy makers through learning events and programs
- Provide a platform for dialogue between policy makers, regulators, financial sector, practitioners and academics on issues of topical relevance and systemic importance
- Communicate and disseminate the conclusions and results of the learning and research activities of CAFRAL to policy makers, central banks, regulators and public at large
- Collaborate and network with domestic and global institutions with similar mandate for mutually beneficial arrangements

Abbreviations

AGM	Assistant General Manager
ALM	Asset Liability Management
AML	Anti-Money Laundering
BBB	Bank Board Bureau
BIS	Bank for International Settlements
CACMP	CAFRAL Advanced Credit Management Program
CAFRAL	Centre for Advanced Financial Research And Learning
CBI	Central Bureau of Investigation
CCIL	Clearing Corporation of India Ltd.
CCO	Chief Compliance Officer
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFT	Combating the Financing of Terrorism
CGM	Chief General Manager
CMD	Chairman and Managing Director
CRO	Chief Risk Officer
CTR	Cash Transaction Report
CVO	Chief Vigilance Officer
D-SIB	Domestic Systemically Important BanK
DEPR	Department of Economics and Policy Research
DBS	Department of Banking Supervision
DPSS	Department of Payment and Settlement Systems
DFS	Department of Financial Services
DG	Deputy Governor
DGM	Deputy General Manager
DSIM	Department of Statistics and Information Managment
ED	Executive Director
EU	European Union
FED	Federal Reserve Board
FEDAI	Foreign Exchange Dealers Association of India
FIMMDA	Fixed Income Money Market and Derivatives Association of India
FIU Ind	Financial Intelligence Unit India
FMI	Financial Markets and Institutions
FMP	Financial Markets Program
FSI	Financial Stability Institute
FSR	Financial Stability Report
GM	General Manager
GOB	Government Owned Bank
GoI	Government of India
HR	Human Resource
ICAI	Institute of Chartered Accountants of India
ICC	Indian Chamber of Commerce
IDBI	Industrial Development Bank of India
IGIDR	Indira Gandhi Institute of Development Research
IES	Indian Economic Service
IFC	International Finance Corporation
IGIDR	Indira Gandhi Institute of Development Research
IIMA	Indian Institute of Management Ahmedabad
IIMB	Indian Institute of Management Bangalore
IMF	International Monetary Fund
Ind AS	Indian Accounting Standards
ISI	Indian Statistical Institute
KYC	Know Your Customer
LCR	Liquidity Coverage Ratio
LVA	Layered Voice Analysis
MD	Managing Director
MFIN	MicroFinance Institutions Network
MIT	Massachusetts Institute of Technology
MoF	Ministry of Finance
MPER	Monetary Policy and Exchange Rate
MSME	Micro, Small & Medium Enterprises
NED	Non-Exicutive Director
NPA	Non-Performing Asset
NUS	National University of Singapore
OCC	Office of the Comptroller of the Currency
PMJDY	Pradhan Mantri Jan-Dhan Yojana
PSB	Public Sector Bank
PSL	Priority Sector Lending
RA	Research Associate
RAROC	Risk-Adjusted Return On Capital
RBI	Reserve Bank of India
RWA	Risk-Weighted Assets
SBI	State Bank of India
SEC	Securities and Exchange Commission
SDMIMD	Shri Dharmasthala Manjunatheshwara Institute for Management Development
SIB	Systemically Important Bank
SLR	Statutory Liquidity Ratio
SRU	Strategic Research Unit
STR	Suspicious Transaction Report
UBC	University of British Columbia
USA	United States of America
VP	Vice President

DIRECTOR'S REPORT
2017-18

Director's Report

CAFRAL's mandate is to promote high quality research in finance and economics along with facilitating learning on unfolding topics of interest to banking executives. In 2017-18, CAFRAL continued its ongoing work in meeting these two goals.

CAFRAL's research team produced fourteen papers and one policy note in 2017-18. The papers spanned a broad swathe of topics that spanned relationship banking to urbanization to inattentive investors to demonetization, amongst others. In addition, CAFRAL's research team also provided a number of briefings to the Monetary Policy Committee on topics ranging from the effects of tightening US monetary conditions to the effects of monetary shocks on corporate bond yields to the effects of public sector borrowing on the corporate bond market. CAFRAL researchers also collaborated with RBI researchers and made a joint presentation on the effects of dollar invoicing on international trade.

On the research communication and dissemination front, the research wing hosted a very successful annual international conference on the Financial System and the Macroeconomy. The conference saw ten papers presented and discussed by researchers drawn from all over the world. In addition, CAFRAL also co-hosted a domestic conference with the RBI and IIM Bangalore on finance and macroeconomics where researchers from a number of leading Indian institutions presented their research work. CAFRAL also hosted twenty research seminars during the year wherein invited researchers from around the globe presented their latest research work. This past year we also initiated a brown bag seminar series in which internal CAFRAL and RBI researchers presented their latest research ideas and results to get early feedback and direction. Seven papers were presented in this series by CAFRAL and RBI researchers.

CAFRAL's Learning team conducted twenty three programs with the primary objective of facilitating learning on topical and emerging issues for senior officers of commercial banks. The areas that were covered by the various programs included foreign exchange management, resolution of stressed assets, integrated risk management, digital banking, stress testing, cyber security, compliance with KYC/AML norms, and bank frauds. We also continued with our overseas partnerships by offering credit management program for senior executives jointly with NYU Stern in New York and a program on strategic leadership in the digital age jointly with Macquarie University in Sydney. We also continued our highly successful programs for non-executive directors and on financial markets for senior officials from government.

CAFRAL is committed to conducting high quality research and learning with a view to achieve excellence in all its activities. In the year ahead we hope to continue and improve on our work till now.

Amartya Lahiri
Director, CAFRAL

CAFRAL Research

CAFRAL built on its strengths over the last year. In total, 14 new research papers and one policy note were written. These papers studied topics such as financial inclusion, determinants of world savings, relationship banking during borrower distress, impact of state owned banks on corporate credit constraints in India, government bailouts of banks, credit risk modelling, NPA resolution, mutual funds and credit rating systems. We made 6 presentations to the Monetary Policy Committee as well as provided policy inputs to RBI departments on three topical issues. CAFRAL researchers presented in several research and industry oriented conferences nationally and internationally and were also featured in the press.

Academic Research

A list and abstracts of the papers with completed drafts for this Fiscal Year (2017-2018) is attached in Appendix A. Here, we provide a sampling of research done at CAFRAL this year.

In a working paper on titled “Urban Sprawl and Rural Development: Theory and Evidence from India,” Dr. Lahiri and Dr. Viktoria Hnatkovska (UBC) examined the evolution of the fortunes of rural and urban workers in India between 1983 and 2010, a period of rapid growth in India. They found evidence of a significant convergence of education attainments, occupation distribution, and wages of rural workers towards those of urban workers. They developed a two-sector model of structural transformation to rationalize the rest of the rural-urban wage convergence in India as the consequence of urbanization through land reclassification induced by productivity growth.

In a paper titled “The Progress of Financial Inclusion in India: Insights from multiple waves of survey data,” Ms. Günther, former visitor of CAFRAL and ODI fellow, useed Pan-India data from a survey of 135,147 individuals, and another survey of 16,000 households in four of India’s lowest income states to understand the country’s trends in financial inclusion. The sample frame (2013-2015) covered a time-period before and after the introduction of the PMJDY scheme, a supply-shock led to the opening of over 260 million new bank accounts. She found that PMJDY scheme significantly increased the likelihood of owning an account among the previously unbanked, such as the poor and uneducated. She also characterised large regional differences in the progress of financial inclusion

Lastly, in a paper titled “The effect of relationships with Government-Owned Banks on cash flow constraints: Evidence from India,” published in the Journal of Corporate Finance, Dr. Srinivasan and Professor Ashok Thampy at IIM Bangalore examined the effect of maintaining exclusive relationships with Government Owned Banks (GOBs) on real investment by publicly traded companies in India. Firms that maintained such exclusive relationships had an investment cash flow sensitivity (which is often thought to measure financial constraints) almost 30% lower relative to other firms. GOB relationships also increased sensitivity of investment to growth prospects. Exclusive relationships with private banks increased cash flow sensitivity while exclusive relationships with foreign banks had no impact. Surprisingly, the results are driven by the large firms which benefit from GOB relationships, and not the smaller firms which are the intended beneficiaries of government directed credit programs.

Inputs to the Monetary Policy Committee

The topics presented to the MPC are given below:

a. Increase in US interest rates: The impact of an anticipated increase in US interest rates on capital flows and INR depreciation was studied The main conclusion was that the impact would be moderate with around 5-10% depreciation along with small capital outflows. In addition, it was found that the banking sector was exposed to short term liability risk.

b. Crowding out of corporate bonds: The impact of central and state government borrowing on bond issuances by the corporate sector was studied. It was found that an increase central govt borrowing lead to a decrease of bank credit, while an increase of state borrowing lead to a decrease in corporate bond issuances. It was also found that monetary pass through was lower in periods of high issuances of state bonds.

c. Monetary shocks and corporate bonds: This study identified monetary shocks in India using overnight index swap (OIS) data. It studied the high frequency impact of these shocks on corporate bonds yields. It documented a novel finding that low rated corporate bond yields always increase in the presence of a shock regardless of the direction of the shock. It identified potential economic reasons for the above finding.

d. Dollar Invoicing, Exchange Rates and International Trade (joint with Strategic Research Unit, RBI): This study analysed how dollar-invoicing affected the linkage between the exchange rates and the trade. It found that an exporter's currency movements against USD had no effect on export growth upto 1 year. Only the demand side via the exchange rate movements of the importers against USD mattered. This result was explained through the sticky-dollar prices in the short-run.

e. US Fed policy spillovers on Indian Bond markets: This study examined the impact of US policy spillovers on the Indian bond market, focusing on the winding down of the QE and potential impact on Indian bond markets.

Inputs to RBI Departments

a. Department of Co-operative Banks on dissolution procedures for cooperative banks.

b. Financial Markets and Regulation Department on bond ratings.

c. Annual Report and Mint Street Memos on impact of the NPA ordinance on financial markets.

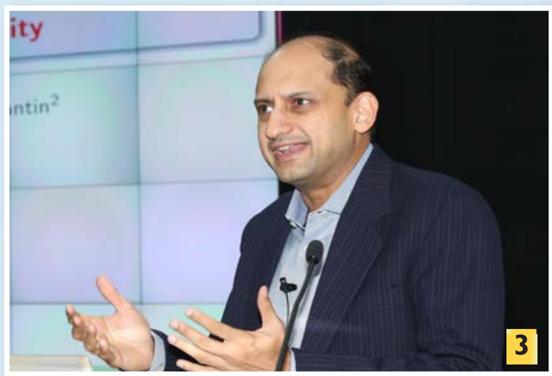
d. Impact of Prompt Corrective Action by RBI on financial markets.

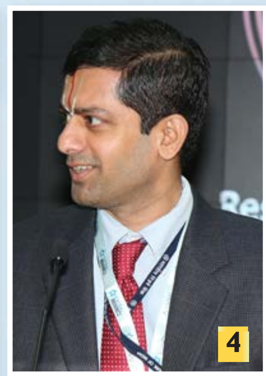
Other Outreach Activities - Research Conferences

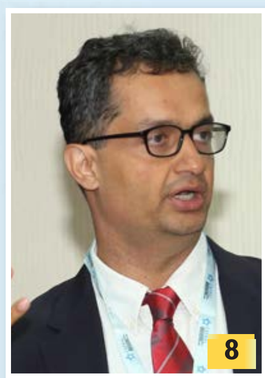
Dr. Urjit Patel, Governor, RBI at CAFRAL Annual Conference 2017

1. Dr. Urjit Patel, Governor, RBI
2. Dr. Amartya Lahiri, Director, CAFRAL
3. Dr. Viral V. Acharya, Deputy Governor, RBI
4. Dr. Anand Srinivasan, Addl. Director (Research), CAFRAL
5. Dr. Franklin Allen, Prof. Imperial College, London, UK
6. Dr.John Leahy, Prof. University of Michigan, USA
7. Mr. Ayhan Kose, Director, The World Bank, USA
8. Prof. Chetan Ghate, Prof. ISI, New Delhi
9. Dr. Igor Livshits, Prof. University of Western Ontario, CANADA

CAFRAL organized two conferences in this year. Our flagship conference examining the themes of financial systems and the macroeconomy was held on December 7-8 at RBI. The conference featured an open call for papers and over 100 submissions were received. A total of 10 papers were presented. Speakers included Professor Franklin Allen (Imperial College), Dr. Viral Acharya (Deputy Governor, RBI), Professor John Leahy (Michigan), and Professor Martin Uribe (Columbia University). The conference hosted presenters and discussants from several countries (India, US, Canada and Australia), and institutions including CAFRAL, the Federal Reserve Board of Philadelphia, the Federal Reserve Board of Governors, IIM Bangalore, ISB Hyderabad and the World Bank.







Some of the topics examined were the impact of corporate debt structure on precautionary savings, spillovers from emerging markets, effects of policy reforms on investment in India, and asset price bubbles. This was our first conference with an open call for papers, and it was a grand success. We expect this to be an annual event that will showcase our research skills.

We co-organized a conference with IIM Bangalore and RBI on Financial Markets and Macroeconomy in Emerging Economies. The conference featured speakers from IIM Bangalore, Department of Economic and Policy Research (RBI), Strategic Research Unit (RBI), Indira Gandhi Institute of Development Research, Indian School of Business and CAFRAL. Some of the topics studied were interaction of funding and market liquidity in government bonds, impact of the minimum public shareholding rule in India, impact of dollar invoicing on trade competitiveness, and effect of credit misallocation on aggregate productivity.

1. L-R: Dr. Amartya Lahiri, Director, CAFRAL and Dr. Viral V Acharya, DG, Reserve Bank of India
2. Saurabh Ghosh, RBI (SRU)
3. V Ravi Anshuman, IIM (B)
4. Prachi Deuskar, ISB
5. L-R: Vipul Mathur and Chetan Subramanian, IIM (B)
6. Indrani Manna, RBI (DEPR)
7. Rajeshwari Sengupta, IGIDR
8. Apoorva javadekar, Reserach Director, CAFRAL

In addition, ***CAFRAL and Asian Bureau of Finance and Economics Research (ABFER) held a session titled ("Finance in India")*** as part of the ABFER annual conference held between 22nd to 25th May, 2017 in Singapore. (ABFER is an institute founded by academics from Asia, North America, and Europe and is an independent network of high-quality academics akin to the NBER/CEPR. It also provides an opportunity to develop research capabilities in finance and economic research groups in academic and other institutions such as central banks in Asia-Pacific. The ABFER organizes an annual conference every year to promote Asia-Pacific research in finance and economics.)

It was attended by globally prominent academic researchers (including Professsor Raghuram Rajan, former Governor, Reserve Bank of India and professor of Finance at the University of Chicago), practitioners, central bankers and public policy decision-makers. It examined Asia-Pacific related financial and economic issues. The special session featured papers that examined small business lending programs, bankruptcy law and business groups in India.

1. Dr. Anand Srinivasan, Additional Director, CAFRAL
2. Dr. Nirupama Kulkarni, Research Director, CAFRAL

Research Seminars

There were a total of 20 research seminars by external speakers and 7 internal seminars held during this year. The topics included examination of several interesting topics such as whether central banks care about their profits in policy making, political influence on bank credit allocation in China, rating agency problems in India, treasury auctions in India, emerging market corporate debt, methodology for computation of MIFOR curve and general equilibrium model of trade and minimum wages. Our internal seminars covered topics such as foreign asset demand and demand for the US dollar, option implied risk aversion in India, and interest rate pass through in India.

The speakers included faculty in leading research universities in the US, Canada, UK and Australia, such as Professor V.V. Chari (University of Minnesota), Professor Anjan Thakor (University of Washington at Saint Louis), Professor Amrita Dhillon (King's College London, and Professor Arpita Chatterjee from the University of New South Wales.

Press Articles written:

1. Why ease of doing the business matters (2017 Mint, Dr. Apoorva Javadekar): This article showed the basic link between ease of doing index and the per capita income and the importance of some of the recent policies India has adopted on the ease of doing business rankings.

2. Decoding the imports surge post-demonetisation (December 2017, Mint, Dr. Apoorva Javadekar): This article studied whether the rise in Indian imports post-demonetisation was a result of supply chain breakdown post demonetisation, and concluded that this was not the case.

3. Cut the Confusion (Indian Express, January 20, 2018, Dr. Amartya Lahiri): The article illustrated that, contrary to some popular perceptions in India, the stance of monetary policy in India has been accommodating rather than contractionary. The article illustrated this by arguing that the real interest rate in India has been consistently lower than the long run real interest rate that is consistent with neither upward nor downward pressure on inflation.

4. Fiscally we are Anti-Keynesian (Feb 2018, Business Standard, Dr. Apoorva Javadekar): This article argued that fiscal deficit as a percentage of GDP is inherently a pro-cyclical fiscal policy rule, and that it is hard to pursue Keynesian policies. It also provided evidence that contraction in fiscal spending during recessions hurts much more severely than previous estimates suggest.

Presentations to industry and academic institutions.

Dr. Javadekar made a presentation to the Ministry of Finance (Office of the Chief Economic Advisor to the Prime Minister) as well as FEDAI (Foreign Exchange Dealers Association of India) on Exchange Rates and Trade. He was a panellist for an Assocham conference on bond markets. He made invited academic presentations at Ashoka University, IIM Ahmedabad and Indian Statistical Institute.

Dr. Lahiri gave keynote talks at the RBI Conference on "Financial Innovations, Market Regulations, Disruptions, and Central Banking", and the FEDAI Annual Day event in Mumbai. In addition, Dr. Lahiri also gave invited presentations at ISI-Delhi, Shiv Nader University, Ashoka University, Delhi School of Economics, and National University of Singapore. Dr. Lahiri also presented a paper at the 2018 Royal Economic Society Annual conference in Sussex.

Dr. Srinivasan was the Guest of Honor and Keynote speaker at the ICC Fintech Summit. He was also a distinguished speaker at the SDMIMD conference on Economic Growth and Sustainable Development, and a panellist at the ICC India Economic Outlook 2018 meetings. He was on the program committee of the European Finance Association annual meetings, and a discussant at the ISB Center for Analytical Finance annual conference on Corporate Finance.

Human Capital

We made a strong recruitment effort to hire Ph.Ds at the American Economic Association Meetings. There were a total of 6 candidates shortlisted for second round interviews at the rookie level. We have two acceptances – one at the rookie level (Mr. Gautham Udupa) from the University of Houston, and one at the senior level – Dr. Urvi Neelakantan at the Senior Level. Dr. Urvi comes with a wealth of experience with prior experiance as an Assistant Professor at the University of Illinois at Urbana-Champaign, and as a research and operational staff at the Federal Reserve Board of Richmond. We are very pleased at the outcome of the recruitment process at this level.

Our RA program continues to have a strong reputation both in the Indian financial industry as well as in the international research community. One RA has joined the Ph.D. program in Statistics at University of California at Berkeley, and another RA has joined the Ph.D. program in Economics at the University of Texas at Austin. These RAs also had offers from several other prestigious programs in finance and economics – University of Washington at St. Louis, Ohio State University, University of Washington at Seattle, Arizona State University, University of North Carolina at Chapel Hill and Boston College. Three RAs have joined masters programs in finance, economics and statistics with full financial support – University of Maryland, University of New South Wales, and Georgetown University. In addition, our RAs also had offers in the Masters programs at the University of Chicago and Columbia University in Statistics.

1. S S Mundra, former Deputy Governor, Reserve Bank of India and Chandan Sinha, Additional Director, CAFRAL with other speakers and participants at Program on Digital Banking, Mumbai
2. Dr Viral Acharya, Deputy Governor, Reserve Bank of India at CAFRAL Advanced Credit Management Program

Program on Digital Banking: Banks & Financial institutions currently are exploring opportunities to grow their business and introduce new products in a cost effective manner. Leveraging digital technology will be critical to changing the trajectory of traditional business growth. The objective of the program was to take a 360-degree approach to developing, understanding and opening new vistas in the Digital Banking space.

RBI CAFRAL Conference on Bank Frauds: The conference was arranged in the backdrop of increasing frauds both in value and volume terms. The objective of the conference was to convey RBI's concerns, review the action taken by the banks in implementing framework on loan frauds, brainstorm on the best practices in fraud risk management and facilitate interaction of bankers with the investigating agencies as well.

Participant Sound Bytes - Digital Banking

"Very relevant program, very timely and choice of speakers and topics was hallmark of the program . Very well organized program."

Pushpendra Sharma
Head-Compliance, RBL Bank

Participant Sound Bytes - Conference on Bank Frauds

"Proactive approach for preventing occurrence of fraud from the beginning & early detection and reporting of fraud. Ensuring and incalcating compliance culture in the organization."

Prem Kumar Chhokra
Allahabad Bank

CAFRAL Advanced Credit Management Program (CACMP): The objective of the Program was to expose senior officials to a credit management program which had a high level classroom as well as practical content through association with NYU Stern Business School. The overseas leg focused on project finance, corporate credit, consumer credit, financial distress and restructuring, credit monitoring, credit derivatives, structured finance and stress testing of credit risk, while the Indian leg provided inputs on current issues like risk governance, recent regulatory and international developments, digital banking, cyber risk, etc.

Participant Sound Bytes - CACMP

"It was nice experience to attend this program. It added a lot to our knowledge. Financial Distress & Restructuring, Corporate Credit, Credit monitoring, Consumer credit, Credit Risk, Structured Finance, etc. are going to help us in our daily banking needs and decision making."

Sanjay Sharma
General Manager,
Ulnion Bank of India

Conference of Chief Compliance Officers: Facilitate interaction and experience sharing amongst CCOs/CROs/CFOs and with the regulator; exposure to international practices /trends on regulatory and management reporting; and meeting the challenge of Risk Based Supervision.

Program for the Non-Executive Directors: Globally interconnected and highly competitive financial markets, rapid development of technology, competition from new players, introduction of differentiated banking and other sophisticated demands of the market have significantly changed the banking landscape. Besides, issues like asset quality deterioration in recent times and increased capital needs on account of implementation of Basel III are posing significant challenges to the banks. Boards of banks have to focus on developing appropriate business strategies and risk management tools to steer their banks. In this background, the objective was to sensitise and update the Non-EDs of banks on the current issues and challenges for more effective participation in board deliberations.

Workshop on Recovery and Resolution of Stressed Assets: To discuss the various options available to banks, the approach to be followed, internal processes and safeguards to be taken, etc. while taking a call on the resolution of the stressed assets, using a case study, the suitability of the outcome from the perspective of different investor classes, etc. was exmined with the objective of maximizing the economic value of the asset as opposed to just recovery maximisation.

1

1. N S Vishwanathan, Deputy Governor, RBI and Parvathy V Sundaram, PCGM, RBI with other speakers and participants at RBI-CAFRAL Conference on Bank Frauds
2. CACMP Participants at Stern Business School, New York
3. Dr. Viral Acharya, Deputy Governor, RBI with participants at CACMP program, Indian leg

2

Integrated Risk Management Program: Risk management is a complex function requiring specialised skills and expertise. Basel II/III require banks to maintain adequate economic capital to meet both Pillar 1 and Pillar 2 risks. As the domestic market integrates with the international markets, banks would have to develop necessary expertise and skill in managing various types of risks in a systematic manner. It is necessary that bank personnel fully understand the issues and challenges involved in risk management. It is also important to know that while we may be talking about credit risk, market risk and operational risk as separate risks, risks for all purposes are inter related and cannot be looked in isolation.

CAFRAL Workshop on Emerging trends in Cyber-Attacks, Response Management & Digital Forensics: The

Participant Sound Bytes - Emerfing trends in Cyber-Attacks, Response Management & Digital Forensics

"Harnessing the potential of Blockchain technology is interesting one which we may consider for protecting the crown jewels. Mobile security solution and all related inputs were good ones to further explore. A cyber risk survey as a risk investigation study need to be considered seriously by the bank. We have understood the insurance point of view."

NARAYAN GANESH RAJ
CISO & GM OPERATIONAL RISK
IDBI BANK

Participant Sound Bytes - CACMP

This is an excellent program to understand the various issues facing the Indian Financial/ Banking System. There was good mix of professionals from the various organisations."

Ajit Chandgude
GM, YES Bank

objective of the Workshop was to provide insights into the emerging trends in cyber-attacks, building appropriate incident response systems and leveraging on digital forensics and information sharing for tackling cybercrime.

Executive Development Program: To update and sensitise the top executives of commercial banks, financial institutions and RBI on diverse issues of contextual importance such as the global and domestic economic outlook, state of financial markets, challenges faced by financial lenders and the way forward, corporate governance, risk management, resolution and recovery of stressed assets, business strategy, fintech and digital banking, etc.

1. *S S Mundra, Former Deputy Governor, RBI at Conference for Chief Compliance Officers*
2. *Speakers and Participants at Program for Non-Executive Directors on the Boards of Commercial Banks*
3. *N S Vishvanathan, Deputy Governor, RBI*
4. *Dr. M S Sahoo, Chairperson, IBBI*

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4

Financial Markets Program: Financial markets are evolving rapidly, making it imperative for bankers & professionals to stay abreast with all recent developments. The objective of the program was to provide senior officials of government, regulators & commercial banks, with an overview of the money, debt, forex, capital markets & the related derivatives market, understand the inter-linkages between various segments of the financial markets, the linkages between domestic and global markets besides facilitation of an interface with regulators and market operators

Participant Sound Bytes - Executive Development Program

"A well rounded programme designed. The most concerning aspect today is on NCLT process which is adequately dealt."

Ajit Kumar Rath
ED, Andhra Bank

1. G Padmanabhan, Chairman, Bank of India, at Executive Development Program.
2. G Mahalingam, Former ED, RBI at Financial Market Program
3. Chandan Sinha, Additional Director, CAFRAL with speakers and participants at Financial Market Program
3. S S Mundra, Former Deputy Governor, RBI with other speakers and participants at Conference for Chief Compliance Officers


1

1. *Dr Amartya Lahiri, Director, CAFRAL with speakers and participants at CAFRAL Workshop on Emerging trends in Cyber-Attacks, Response Management & Digital Forensics*
2. Participants at Conference on Implementation and Compliance of Know Your Customer (KYC)-*Anti Money Laundering (AML) Standards Regime and Financial Crime Management*
3. *Participants at Conference of Chief Risk Officers & Heads of Risk Management Departemnts in Banks*

Conference on Implementation and Compliance of Know Your Customer (KYC)-Anti Money Laundering (AML) Standards Regime and Financial Crime Management: To sensitise the participants on the AML/CFT guidelines, regulatory requirements, role of FIU IND, compliance & submission of CTR/STR by the banks. Expose participants to practical insights on the current challenges in implementation of KYC-AML and regulatory compliance.

Conference of Chief Risk Officers and Heads of Risk Management Departments: To facilitate informed discussion on all aspects of risk management, role of Chief Risk Officers, supervisory expectations from Risk Based Supervision, stressed assets resolution with the end-objective of improving the risk management systems in banks.

Participant Sound Bytes - Conference for CROs & Heads of RMDs

"Focused on emerging risk practices and understanding of expectations from risk management function."

G Srinivas
Senior GM, ICICI Bank


2

Stress Testing, Risk Management and Capital Planning: Stress as a macroprudential surveillance tool, Stress Tests attempt to identify build-up of systemic risk and vulnerabilities in the financial system whereas supervisory or microprudential tests assess an individual bank's health. Stress Tests are also being used for prescribing the minimum level of capital that a bank must maintain even under stress situations. In addition, banks carry out their own internal stress tests from risk management and strategic perspectives. Internationally, the supervisory authorities are focusing on adequacy of buffers (viz., capital buffers, leverage buffers, liquidity buffers, systemic-bank buffer and Pillar 2 buffer) having implications for capital planning and discretionary distributions by banks.

Participant Sound Bytes - Executive Development Program

"As CEOs are facing huge challenges on HR and IT front, I feel need to include some eminent speaker on HR, and on IT particularly cyber security."

M K Jain
MD & CEO, OBC Bank

Participant Sound Bytes - Conference on KYC, AML and Financial Cirme Managment.

"A good forum to understand the perspective of regulators and quasi regulators. This would help in better implementation of the regulatory provisions."

Prachiti Lalingkar
VP, Company Secretary & Compliance Officer
ICICI Securities Primary Dealership Limited

In this context, the objective of the program was to take stock of the current practices in banks and introduce them to some of the global practices in this regard.

Leading in the Digital Age - A joint CAFRAL and Macquarie University Program: The dual-country program, designed for top executives of the Indian financial institutions, focused on managing strategic initiatives in the context of digital transformation and the need to enhance risk governance and risk culture. The Indian leg provided perspective on risk management, risk governance & cyber security while the key areas covered in Sydney included Digital Strategy, Risk Strategy, governance culture; Hands - on workshops on financial technology and cyber security issues.

Program on Final Basel III Regulatory Reform for Banks: The Basel Committee finalised its standards for the output floor and for revised approaches to the capital treatment of credit and operational risk in December 2017. These revised standards will have a major impact on banks' systems and data management, and on the capital ratios of many banks. In this background, the aim of the CAFRAL program was to update and sensitise the participants about these revisions and their likely implications for their operations.

CAFRAL – ReBIT Business Leaders' Forum (BLF) on Cyber Security: CAFRAL and ReBIT joined hands to

hold the Business Leaders' Forum (BLF) – a platform for continuous dialogue on Cyber Security amongst the key stakeholders. The main purpose of this initiative is to sensitise and create awareness at the level of Boards and Senior Mangement of banks and through them improve the internal threat mitigation policies and processes.This forum is envisaged to work at the decision-making level, over and above other forums or collaboration that may exist at the level of the Chief Information Security Officer (CISO), etc. and meet at periodical intervals.

As part of dissemination of knowledge contributed by the various speakers, their speeches, session discussiosns, papers and presentations are posted on CAFRAL's official website (www.cafral.org.in).

1. *Speakers and Participants at Program for Non-Executive Directors on the Boards of Commercial Banks*
2. *Shyamala Gopinath, Former Deputy Governor, RBI*
3. *A K Misra, Executive Director, RBI*
4. *Arundhati Bhattacharya Former Chairman, SBI*
5. *Chandan Sinha, Additional Director, CAFRAL*
6. *Speakers at Leading Digital Age Program, Foreign leg.*
7. *Participants at Leading Digital Age Program, Foreign leg.*

5

6

7

Administration and HR

CAFRAL's team is growing. During the year, many new faces have joined CAFRAL, while a few left to pursue other opportunities. As on August 1, 2018, CAFRAL has 35 contract staff. There is no officer on deputation from RBI as on date. CAFRAL welcomes two new Research Directors who have joined recently and one Additional Director (Research) whose contract has been renewed on long term basis. Also, we hired 13 Research Associates in batches. CAFRAL mentored two Research Interns and one doctoral Research Intern this summer.

Since its launch in January 2014, CAFRAL's website has been instrumental in global content distribution and expanding CAFRAL's reach. The online nomination process, introduced in June 2014, has been a big success in streamlining and smoothening the entire nomination process. The website has been attracting a lot of new and repeat visitors. As per the analytical study on CAFRAL's website, 20,622 are new visitors (82.4%) and Repeat Visitors are 4,393 (17.6%) who had left footprints in this financial year alone. CAFRAL website has been refurbished to include the research work done during the past couple of years.

The names of CAFRAL staff are given in Annex II.

Acknowledgements

We would like to acknowledge the valuable guidance given to us by our Governor & Chairman, CAFRAL, as also the Governing Council members. CAFRAL has received immense benefit from each one and has now poised to further develop on research and learning due to the solid foundation given by them in CAFRAL. We are also thankful to the Management and officials of the Reserve Bank of India, various financial services institutions, consulting organizations, academicians and professionals from various fields for their support provided to our activities. Without their unstinted support and encouragement, we could not have been able to reach this stage of development in our journey to achieve our objectives.

We also acknowledge the contribution of M/s Deodhar & Patel, our internal auditors, M/s CNK & Associates LLP, our statutory auditors, and other service providers.

Amartya Lahiri

Director, CAFRAL

CAFRAL - FINANCIAL STATEMENTS

2017-18

Independent Auditor's Report

To the Board of Trustees of
CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

Report on the Financial Statements

We have audited the accompanying financial statements of CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING (hereinafter referred to as "the Trust") comprising of the Balance Sheet as at March 31, 2018 and the Income and Expenditure Account for the year ended on that date, and a summary of significant accounting policies (hereinafter referred to as "the financial statements"). The financial statements have been prepared management based on the Indian Generally Accepted Accounting Principles and the relevant provisions of the Bombay Public Trusts Act, 1950 (hereinafter referred to as "the Act").

Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the state of affairs and results of the Trust in accordance with the accounting principles generally accepted in India and in accordance with the provisions of section 32 of the Act; this includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit.

We have taken into account the provisions of section 34 (2), 36B (4) the Act, the generally accepted accounting principles and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made there under.

We conducted our audit in accordance with the Standards on Auditing issued by the Institute of Chartered Accounts of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Trust's preparation of the financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on whether the Trust has in place an adequate internal financial controls system over financial reporting and the operating effectiveness of such controls. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Trust's Management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.

Opinion

In our opinion and to the best of our information and according to the explanations given to us and based on the consideration of reports of other auditors, the aforesaid financials statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs of the Trust as at March 31st 2018 and its surplus for the year ended on that date.

For C N K & Associates LLP
Chartered Accountants
Firm Reg No:101961W/W100036

(Manish Sampat)
Partner

M. No.: 101684

Place: Mumbai
Date: 21st September 2018

SCHEDULE - VIII [(Vide Rule 17 (1)]

The Bombay Public Trusts Act, 1950 Registration No. F - 33749 (Mum)

Name of the Public Trust: CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

Balance Sheet as at: 31st March, 2018

FUNDS & LIABILITIES	As at 31st March 2018 ₹	As at 31st March 2017 ₹
Trusts Funds or Corpus:		
Balance as per last Balance Sheet	50,00,000	50,00,000
Other Earmarked Funds:	NIL	NIL
(Created under the provisions of the Trust Deed		
or Scheme or out of the Income)		
Loans (Secured/Unsecured):	NIL	NIL
Liabilities:		
Advance From Reserve Bank of India	150,67,885	83,45,965
Liabilities as per Schedule "A"	77,19,564	69,43,336
Income And Expenditure Account:		
Balance as per last Balance Sheet	NIL	NIL
Add : Surplus/(Deficit) as per Income and Expenditure A/c	NIL	NIL
TOTAL	**277,87,449**	**202,89,301**

Notes to Accounts - Schedule 'F'
As per our report of even date

For C N K & Associates LLP
CHARTERED ACCOUNTANTS
FIRM REG. NO.101961W/W100036

(Manish Sampat)
Partner
M.NO.: 101684

Place: Mumbai
Date: 21st September 2018

	PROPERTY & ASSETS	As at 31st March 2018	As at 31st March 2017
		₹	₹
	Immovable Properties: (At Cost)	NIL	NIL
	Balance as per last Balance Sheet		
	Add: Additions during the year		
	Less: Sales during the year		
	Less: Depreciation up to date		
	Investments:	NIL	NIL
	Movable Properties (Schedule B):		
	Cost	287,36,872	239,54,940
	Less: Depreciation up to date	242,15,028	193,98,331
		45,21,844	45,56,609
	Unsecured and Good		
	Sundry Debtors (Net)	15,06,500	10,02,200
	Advances:-	107,10,324	67,50,300
	As per Schedule "C"		
	Income Outstanding:		
	- Interest Accured on Fixed Deposit	2,67,658	2,46,868
	Cash And Bank Balances:		
	(a) Cash in Hand	11,233	11,343
	(b) In Saving Account with banks	57,69,890	27,21,981
	(b) In Fixed Deposit with banks	50,00,000	50,00,000
	TOTAL	**277,87,449**	**202,89,301**

The above Balance Sheet to the best of our belief contains a true account of the Funds and Liabilities and of the Property and Assets of the Trust.

CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

TRUSTEE TRUSTEE TRUSTEE

Place: Mumbai
Date: 21st September 2018

SCHEDULE - IX [(Vide Rule 17 (1)]

Name of the Public Trust: CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

Income and Expenditure Account for the year ended 31 March, 2018

Expenditure	For the Year Ended 31st March 2018	For the Year Ended 31st March 2017	Income	For the Year Ended 31st March 2018	For the Year Ended 31st March 2017
	₹	₹		₹	₹
To Expenditure in respect of Properties	NIL	NIL	By deficit for the year reimbursed by RBI	732,78,082	746,06,428
To Establishment Expenses As per Schedule "D"	20,04,070	16,83,631	By Training Programme Fees Recovered	461,80,500	320,60,064
			By Bank Interest	11,68,188	10,64,438
			By Dividend	NIL	NIL
To Audit Fees	1,37,500	1,25,000	By Donations in Cash or Kind	NIL	NIL
To Contribution and Fees	NIL	NIL	By Grants	NIL	NIL
To Short Provision for Income Taxes of earlier yr	NIL	NIL	By Interest on Income Tax Refund	52,883	98,886
To Amount written off	NIL	NIL	By Misc Income	2,199	23,900
(a) Bad Debts					
(b) Loan Scholarship			By Other Rceipts	NIL	NIL
(c) Irrecoverable Rents					
d) Other Items					
To Depreciation	48,27,563	50,21,640	By Transfer from Reserve	NIL	NIL
As per Schedule "B"					
To Expenditure on the object of the trust Educational As per Schedule "E"	1137,12,719	1010,23,445			
To Surplus carried over to Balance Sheet	-	-			
Total	**1206,81,852**	**1078,53,716**	**Total**	**1206,81,852**	**1078,53,716**

Notes to Accounts - Schedule 'F'
As per our report of even date

For C N K & Associates LLP
CHARTERED ACCOUNTANTS
FIRM REG. NO.101961W/W100036

(Manish Sampat)
Partner
M.NO.: 101684

Place: Mumbai
Date: 21st September 2018

CENTRE FOR ADVANCED FINANCIAL RESEARCH AND LEARNING

TRUSTEE TRUSTEE TRUSTEE

Place: Mumbai
Date: 21st September 2018

Schedule A: Liabilities

Particulars	As on 31st March 2018	As on 31st March 2017
	₹	₹
Expenses Payable	72,38,718	67,36,577
Liability for Tax Deducted at Source	2,73,731	1,84,581
GST Liability (RCM)	1,83,337	-
Retention Money	17,178	17,178
Profession Tax Payable	6,600	5,000
Total	**77,19,564**	**69,43,336**

Schedule B: Movable Properties

Name of the Asset	Rate of Depreciation	COST			
		As on 1st April 2017	Additions	Deletions	As on 31st March 2018
		₹	₹	₹	₹
Tangible					
1. Computer Hardware Including Printers	33.33%	60,45,333	10,48,758	12,600	70,81,491
2. Other Electrical Equipment	33.33%	63,64,620	2,00,530	20,000	65,45,150
3. Furniture	20.00%	13,18,954	95,629	-	14,14,583
4. Car	20.00%	27,04,969	-	-	27,04,969
Intangible					
5. Computer Software	33.33%	75,21,064	34,69,615	-	109,90,679
Total		**239,54,940**	**48,14,532**	**32,600**	**287,36,872**
Previous Year		**225,58,314**	**14,51,626**	**55,000.00**	**239,54,940**

Schedule C: Advances

Particulars	As on 31st March 2018	As on 31st March 2017
	₹	₹
GST Input Credit	13,29,754	-
Service Tax input credit	-	83,481
Deposit	15,14,000	17,54,000
Other Receivables	20,845	17,141
Tax deducted at source	38,10,909	17,85,650
Prepaid Expenses	40,34,815	31,10,028
Total	**107,10,324**	**67,50,300**

	DEPRECIATION				Writen Down Value (WDV)	
	Up to 1st April 2017	During the Year	Deletions	As on 31st March 2018	As on 31st March 2018	As on 31st March 2017
	₹	₹	₹	₹	₹	₹
	47,56,682	11,88,098	4,200	59,40,580	11,40,911	12,88,651
	46,59,899	17,11,452	6,666	63,64,685	1,80,465	17,04,721
	8,37,729	2,30,597	-	10,68,326	3,46,257	4,81,225
	16,22,981	5,40,993	-	21,63,974	5,40,995	10,81,988
	75,21,040	11,56,423	-	86,77,463	23,13,216	24
	193,98,331	**48,27,563**	**10,866**	**242,15,028**	**45,21,844**	**45,56,609**
	144,13,357	**50,21,640**	**36,667**	**193,98,331**	**45,56,609**	**81,44,957**

Schedule D: Establishment Expenses

Particulars	For the Year Ended 31st March 2018	For the Year Ended 31st March 2017
	₹	₹
Administrative Expenses	15,16,951	11,90,152
Sitting Fees paid to Council Members	1,80,000	1,30,000
Facilities Management Expenses	3,07,119	3,63,479
Total	**20,04,070**	**16,83,631**

Schedule E: Expenditure on Object of the Trust - Educational

Particulars	For the Year Ended 31st March 2018			
	Learning	Research	Total	
	₹	₹	₹	
Administration Expenses	40,94,612	36,61,499	77,56,111	
Computer / Fax / Printer Consumables	70,070	70,070	1,40,140	
Event Related Expenses	263,81,094	7,87,362	271,68,456	
Honorarium - Guest Faculty	8,20,915	-	8,20,915	
Online Data Service	-	67,86,574	67,86,574	
Paper/ Conference registration fees	-	89,748	89,748	
Photography / videography	8,24,852	5,000	8,29,852	
Printing & Stationery	8,58,459	2,54,976	11,13,435	
Professional Fees	1,78,875	6,31,250	8,10,125	
Research Projects	-	3,15,120	3,15,120	
Salaries & Staff Expenses*	196,70,389	363,65,199	560,35,588	
Stay Expenses-Guest Faculty and Participants	8,75,200	1,27,614	10,02,814	
Training expenses relating to Employees	1,63,682	5,67,600	7,31,282	
Travel Expenses - Guest Faculty and Participants	3,98,063	24,00,703	27,98,766	
Travelling & Stay Expense of visiting professors	-	19,59,358	19,59,358	
Travelling & Halting Expenses - Staff	18,93,881	22,38,421	41,32,302	
Website Maintenance and subscription	6,02,200	6,02,200	12,04,400	
Foreign Exchange loss	17,733	-	17,733	
Total	**568,50,025**	**568,62,694**	**1137,12,719**	

**Salaries includes remuneration to Directors of Rs 85,83,379/- (P.Y. Rs 25,39,733/-) who is also one of the trustees of the trust.*

	For the Year Ended 31st March 2017		
	Learning	**Research**	**Total**
	₹	₹	₹
	37,67,238	36,03,565	73,70,803
	1,71,376	1,71,376	3,42,752
	167,33,953	-	167,33,953
	11,96,819	-	11,96,819
	7,47,945	47,71,339	55,19,284
	-	-	-
	7,03,581	-	7,03,581
	6,14,301	60,429	6,74,730
	2,71,352	10,96,452	13,67,804
	-	-	-
	202,04,450	332,50,022	534,54,472
	11,00,468	-	11,00,468
	7,28,060	1,02,818	8,30,878
	4,08,398	-	4,08,398
	-	19,53,656	19,53,656
	35,02,627	33,50,088	68,52,715
	5,56,426	19,36,260	24,92,686
	20,446	-	20,446
	507,27,440	**502,96,005**	**1010,23,445**

Schedule F

Centre for Advanced Financial Research and Learning

Notes on Accounts annexed to and forming part of the Balance Sheet as at 31st March, 2018 and Income and Expenditure Account for the year ended 31st March, 2018.

A. SIGNIFICANT ACCOUNTING POLICIES

1. Basis of preparation of financial statement

a) The financial statements are prepared under the historical cost convention on the basis of going concern and in accordance with the Generally Accepted Accounting Principles in India (GAAP) and provisions of the Bombay Public Trust Act, 1950.

b) The presentation of financial statements are in conformity with generally accepted accounting principles, requires estimates and assumptions to be made that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities on the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates and the differences between actual results and estimates are recognized in the periods in which the results are known/ materialized.

2. Recognition of Income/Expenditure

Income and Expenditure are accounted on accrual basis. The amount equal to the deficit arising from the activities of the Trust is shown in the Income and Expenditure Account as Deficit for the year reimbursed by RBI.

Training programme fees are recognised as income on completion of the programme. Expenses on outsourced research projects are recognized on completion of the project and submission of final report.

Expenses directly related to Learning and Research activities are classified accordingly and other indirect expenses relating to the objects of the trust are classified based on estimations made by the management.

3. Fixed Asset and Depreciation

Fixed Assets are stated at cost less depreciation. All costs relating to acquisition and installation of Fixed Assets are capitalized. Assets costing less than Rs 10,000/- are not capitalized.

Depreciation on assets is charged on the Straight Line Method for the full year.

4 Foreign Currency Transactions

A foreign currency transaction is recorded, on initial recognition in the reporting currency, by applying to the foreign currency amount the exchange rate between the reporting currency and the foreign currency prevailing on the date of transaction. At the balance sheet date, foreign currency monetary items are reported using the closing rate. Gain or loss if any, is recognised in the Income and Expenditure Account for the year. The gain or loss, arising on account of exchange rate differences between the payment date and transaction date is recognized in the Income and Expenditure Account.

5 Related Party Transaction

Disclosure is made as per the requirement of the AS -18 – Related Party Disclosures and the same is given under Note No.B.2.

6 Operating Leases

Leases of Assets under which all the risks and rewards of ownership are effectively retained by the lessor are classified as operating lease. Lease payments under Operating Leases are recognized as an expense on accrual basis in accordance with respective lease agreements. The disclosure as required by AS – 19 – Lease in respect of operating leases in the books of lessee is given in Note No B.3.

7 Impairment of Assets

An Asset is considered as impaired when at the Balance Sheet date there are Indications of Impairment and the carrying amount of Asset exceeds its recoverable amount (i.e. the higher of the asset's Net Selling Price and Value In Use). The carrying amount is reduced to the recoverable amount and the reduction is recognised as an Impairment loss in the Income & Expenditure Account.

8 Provisions, Contingent Liabilities and Contingent Assets

Provisions are recognized for liabilities that can be measured only by using substantial degree of estimation. These are reviewed at each balance sheet date and adjusted to reflect the current management estimates. Contingent Liability is disclosed in case of possible obligation where the probability of outflow of resource is not certain. Contingent Asset is neither recognized nor disclosed in the balance sheet.

B. NOTES TO ACCOUNTS

1. During the year the cost of staff deputed by Reserve Bank of India amounting to Rs. 58,64,241/- (Previous Year – 1,41,76,862/-)has been reimbursed to Reserve Bank of India and is included under as salaries and staff expenses in Schedule 'E'.

2. Related Party Discourse

Name of the related parties and description of relationship :

1. Key Management Personnel – Dr. Amartya Lahiri, Director
2. Key Management Personnel – Mr. G. Gopalakrishna, Director
3. Key Management Personnel - Dr. Venkatesh Panchapagesan
4. Key Management Personnel - Dr. Ashok Gulati
5. Key Management Personnel - Dr. Ajit Ranade

Details of Related Parties transactions are as under:

Particulars	Key Management Personnel	
	2017-18	2016-17
	₹	₹
Remuneration	85,83,379	25,39,733
Governing Council Fees	1,80,000	1,30,000
Reimbursement of Expenses	-	53,062

3. **Leases - Operating Lease**

The Trust has taken on lease residential premises for Director and Additional Director under Lease Agreements. Lease Rental expenses incurred for the year is Rs. 21,60,471/- (Pervious Year – Rs. 35,81,500/- included in Administration Expenses under Schedule E. The total lease rental payable over the lease period for the residential premises, as detailed below, is Rs. 22,02,000/- (Previous Year – Rs. 6,20,600/-).

Particulars	31st March 2018	31st March 2017
Not later than One Year	22,02,000	6,20,600
Later than One Year and not later than Five Years	-	-
Later than Five Years	-	-
Total Rs.	22,02,000	6,20,600

4. A notice was received from the Office of the Commissioner, Service Tax IV, and Mumbai requiring the Trust to show cause as to why the deficit reimbursed by the Reserve Bank of India during the financial period 2012-13 to 2016-17 should not be considered as a taxable service liable to service tax. A suitable reply has been furnished.

5. Previous year figures have been regrouped wherever necessary.

Signature to Notes A to F

For C N K & Associates LLP
Chartered Accountants
Firm Reg No:101961W/W100036

(Manish Sampat)
Partner
M No.: 101684

Place: Mumbai
Date: 21st September 2018

For Centre for Advanced Financial Research And Learning

(Trustee) (Trustee) (Trustee)

Place: Mumbai
Date: 21st September 2018

ANNEXES

Annex 1

A. Working/published Papers on CAFRAL Website during FY 2017-18 (April 1, 2017 - March 31, 2018)

1. **Relationship Bank Behaviour During Borrower Distress**
Author: Yan Li, Ruichang Lu, Anand Srinivasan
Date: March 09, 2018
Published: Journal of Financial and Quantititative Analysis, forthcoming
Abstract:
This paper provides a comprehensive examination of the time series behavior of relationship banks around and during borrower distress. Relationship and outside loans have similar interest rates during distress, and even two years prior to distress. Relative to outside loans in distress, relationship loans in distress have lower maturity. The fraction of bank lending given by relationship banks reduces during borrower distress. Overall, borrowers in distress do not derive benefits from relationship banks. These findings are inconsistent with models that suggest banks have an implicit commitment to help their borrowers in distress due to reputation concerns.

2. **Bank Dependence And Bank Financing In Corporate M&A**
Author: Sheng Huang, Ruichang Lu and Anand Srinivasan
Date: November 08, 2017
Abstract:
We examine the impact of bank financing of Mergers and Acquisitions (M&As), and its associated benefits and costs to borrowing acquirers. We find that bank-financed deals have higher acquirer announcement returns relative to other cash deals, but such a value certification effect exists only for bank-dependent acquirers. In contrast to the conventional view that bank-dependent firms are more susceptible to hold-up by banks, banks do not impose higher loan pricing, but instead grant even more favorable non-pricing loan contract terms to bank-dependent acquirers relative to non-bank-dependent acquirers. Our findings highlight the specialness of banks to bank-dependent borrowers in certifying their decision making as well as a less-explored positive side of bank dependence for borrowers, i.e., a substitution between banks' informational advantage and loan contract stringency.

3. **Unintended Consequences Of Government Bailouts: Evidence From Bank-Dependent Borrowers Of Large Banks**
Author: Yupeng Lin, Xin Liu and Anand Srinivasan
Date: November 08, 2017
Abstract:
Using the Troubled Asset Relief Program (TARP) as a laboratory, this paper examines the impacts of bank bailouts on bank-dependent clients. We find that large TARP recipient banks reduce credit supply to dependent borrowers in the post-TARP period. Such effect is more pronounced when recipient banks hoard more liquidity ex-post. We further show that a large fraction of credit supply reduction is due to regulatory uncertainty. This negative shock via credit channel causes dependent borrowers to become more constrained financially. Ex-ante analysis also reveals a significant valuation loss for these borrowers around the announcements of their main banks' TARP approvals.

4. **The Effect Of Government Bank Lending: Evidence From The Financial Crisis In Japan**
Author: Yupeng Lin, Anand Srinivasan and Takeshi Yamada
Date: November 08, 2017
Abstract:
We find that increases in lending by Japanese Government Owned Bank (GOB) during the crisis in early 1990's had a strong incremental impact on firm level investment, especially for credit constrained firms. Firms have better future accounting performance when their investment is associated with increases in GOB lending. The impact of increases in private bank lending on real investment is much smaller than that of GOB lending. This is partly driven by the tendency of private banks to support zombie firms and partly due to an increase in precautionary cash

holdings of firms receiving private bank credit. Thus, our results show that direct intervention by GOBs can be effective in mitigating credit constraints and stimulating investment during a crisis, even for publicly traded companies.

5. **Urbanization, Structural Transformation And Rural-Urban Disparities In China And India**
Author: Viktoria Hnatkovska and Amartya Lahiri
Date: November 06, 2017
Abstract:
Over the past three decades India and China have experienced rapid economic growth along with structural transformation. Underneath the overall similarity however was one significant difference: rural-urban wage gaps declined in India, but widened in China. In both countries, the majority of these wage dynamics are left unexplained by worker attributes. We formalize a two- sector-two-location model in which structural transformation and urbanization respond endogenously to productivity shocks. While the structural transformation effect widens the urban-rural wage gap, the urbanization effect reduces it, allowing the model to account for wage convergence in India and wage divergence in China.

6. **Explaining World Savings**
Author: Colin Caines and Amartya Lahiri
Date: November 06, 2017
Abstract:
Data on the world saving distribution reveals that saving rates are significantly different across countries and remain different for long periods of time. This paper provides an explanation for these sustained differences in observed savings. We formalize a model of the world economy comprised of open economies inhabited by heterogeneous agents endowed with recursive preferences. Our assumed preferences imply increasing marginal impatience of agents as their consumption rises relative to average world consumption. Using measured productivity and fiscal shocks as exogenous drivers, we show that the model can not only reproduce the sustained long run differences in average saving rates across countries, but also provides a good fit of the time series behaviour of saving observed in the data between 1970 and 2010.

7. **Urban Sprawl And Rural Development: Theory And Evidence From India**
Author: Viktoria Hnatkovska and Amartya Lahiri
Date: November 06, 2017
Abstract:
We examine the evolution of the fortunes of rural and urban workers in India between 1983 and 2010, a period of rapid growth in India. We find evidence of a significant convergence of education attainments, occupation distribution, and wages of rural workers towards those of urban workers. However, individual worker characteristics account for at most 40 percent of the wage convergence. We develop a two-sector model of structural transformation to rationalize the rest of the rural-urban wage convergence in India as the consequence of urbanization through land reclassification induced by productivity growth.

8. **Effects Of Demonetization: Evidence From 28 Slum Neighbourhoods In Mumbai**
Author: Deepa Krishnan and Stephan Siegel
Date: August 29, 2017
Published: Economic and Political Weekly, Jan 21, 2017 Issue
Abstract:
We survey about 200 families living in 28 slum or lower-income neighbourhoods in Mumbai in early December of 2016 to document and examine the immediate and short-term impact of the November 8, 2016, demonetization decision by the Indian government. The survey elicits changes in families' income, expenditure, and savings following the policy announcement as

well as possible longer-run effects and a subjective assessment of the policy at the beginning of December 2016. We find that the policy led to a drop in income, with an average drop in income during the month of November of about 10% of families' monthly income. The effect varies significantly across different groups, in particular between those receiving a regular salary and those not. The income drop is associated with a drop in consumption as well as changes in families' savings in November. We document a significant difference between past savings behaviour and expected future savings behaviour, with the expected use of bank accounts increasing and the expected use of cash as a storage of value decreasing substantially. Finally, we find that the majority of respondents view the policy overall as positive, including the majority of those that experienced some loss of income in November.

9. **The Effect Of Relationships With Government-Owned Banks On Cash Flow Constraints: Evidence From India**
Author: Anand Srinivasan and Ashok Thampy
Date: July 21, 2017
Published: Journal of Corporate Finance, 2017, Vol 46, 361-373
Abstract:
We examine the effect of maintaining exclusive relationships with Government Owned Banks (GOBs) on real investment by publicly traded companies in India. Firms that maintain such exclusive relationships have an investment cash flow sensitivity that is almost 30% lower relative to other firms. GOB relationships also increase sensitivity of investment to growth prospects. Exclusive relationships with private banks increase cash flow sensitivity while exclusive relationships with foreign banks have no impact. This lower investment cash flow sensitivity by firms with exclusive GOB relationships is not the result of cherry picking of less constrained firms by GOBs. Rather, firms with exclusive GOB relationships are in worse financial condition relative to other firms – thus, GOBs appear to be doing reverse of cherry picking. Surprisingly, the results are driven by the large firms which benefit from GOB relationship and not the smaller firms which are the intended beneficiaries of government directed credit programs.

10. **Loan Delinquency In Banking Systems: How Effective Are Credit Reporting Systems?**
Author: Jugnu Ansari and Saibal Ghosh
Date: June 21, 2017
Abstract:
The role of credit reporting systems in influencing bank loan delinquency has received limited attention in the literature. To address this issue, we combine the staggered timing of credit reporting reforms across countries of Middle East and North Africa (MENA) with bank-level data for the period 2000-2012 to examine its impact on non-performing loans (NPLs). The analysis suggests that credit reporting system reforms is associated with a decline in NPLs by roughly 40%. These results are driven by reforms of credit bureau as compared with public credit registry. The analysis also points to a differential impact on NPLs across bank business models and across countries with differing banking structures.

11. **Are Women Really More Risk-Averse? The Lending Behaviour Of Women-Owned Cooperatives In India**
Author: Jugnu Ansari and Saibal Ghosh
Date: June 20, 2017
Abstract:
Employing a novel dataset of Indian cooperative banks during 2004-2013, we exploit the natural experiment of the financial crisis to examine the lending behaviour of women-owned cooperatives. The findings indicate that these banks increased lending to both agriculture and small-scale industries, especially in high-income states. Further disaggregation reveals that the possible weaknesses in asset quality from lending to these sectors in low-income states could be driving the results. Robustness tests support these findings.

12. **Calibration Of Credit Default Probabilities In Discrete Default Intensity And Logit Models**
Author: Anand Deo, Sandeep Juneja and Akash Kalyani
Date: June 16, 2017
Abstract:
Discrete default intensity based or logit type models are commonly used as reduced form models for conditional default probabilities for corporate loans where this default probability depends upon macroeconomic as well as firm-specific covariates. Typically, maximum likelihood (ML) methods are used to estimate the parameters associated with these models. Since defaults are rare, a large amount of data is needed for this estimation resulting in a computationally time consuming optimization. In this paper, we observe that since the defaults are typically rare, say, on average 1 to 2% per annum, under the Gaussian assumption on covariates (which may be achieved via transforming them), the first order equations from ML estimation suggest a simple, accurate and intuitively appealing closed form estimator of the underlying parameters. To gain further insights, we analyse the properties of the proposed estimator as well as the ML estimator in a statistical asymptotic regime where the conditional probabilities decrease to zero, the number of firms as well as the data availability time period increases to infinity. The covariates are assumed to evolve as a stationary Gaussian process. We characterize the dependence of the mean square error of the estimator on the number of firms as well as time period of available data. Our conclusion, validated by numerical analysis, is that when the underlying model is correctly specified, the proposed estimator is typically similar or only slightly worse than the ML estimator. Importantly however, since usually any model is miss specified due to hidden factor(s), then both the proposed and the ML estimator are equally good or equally bad! Further, in this setting, beyond a point, both are more-or-less insensitive to increase in data, in number of firms and in time periods of available data. This suggests that gathering excessive expensive data may add little value to model calibration. The proposed approximations should also have applications outside finance where logit type models are used and probabilities of interest are small.

13. **The Progress Of Financial Inclusion In India: Insights From Multiple Waves Of Survey Data**
Author: Manuela Kristin Günther
Date: June 05, 2017
Abstract:
How the unbanked can be brought into the financial system remains a question of policy and academic interest. India lends itself as an interesting case study. I use Pan-India data from a survey of 135,147 individuals, and another survey of 16,000 households in four of India's lowest income states to understand the country's trends in financial inclusion. The sample frame (2013-2015) covers a time-period before and after the introduction of the PMJDY scheme, a supply-shock led to the opening of over 260 million new bank accounts. I find that PMJDY scheme has significantly increased the likelihood of owning an account among the previously unbanked, such as the poor and uneducated. While I also observe some progress in the active use of accounts, a reversing effect for the most marginalized is less substantial. I further characterise large regional differences in the progress of financial inclusion

14. **Inattentive Investors And Mutual Fund-Flows**
Author: Apoorva Javadekar
Date: April 28, 2017
Abstract:
Gruber (1996) drew attention to performance-chasing behaviour exhibited by mutual fund investors. In this paper, I uncover a large heterogeneity in fund flow-performance sensitivity (fps) between and within mutual funds after conditioning the results on the prior performance of the fund. I explain this dependence of fps on fund's prior performance using the existence of inattentive investors as hypothesized by Christoffersen and Musto (2002). Further I present various tests to pin down this mechanism by conditioning the results on type of funds, or investment styles, market states which are more likely to attract inattentive investors. I present a novel evidence that funds with poor past performance are more likely to increase fees given their low fps. I further show that this fee increase does not lead to additional fund outflows as it should within rational expectations model.

B. **Policy Note on CAFRAL Website during FY 2017-18 (April 1, 2017 - March 31, 2018)**

1. **NPL Resolution: A Lesson From The Korean Experience**
Author: Raunaq Pungaliya
Date: August 28, 2017
Executive Summary:
This report summarizes the main elements of restructuring of distressed loans in South Korea after the Asian Financial Crisis focusing on the role of the Korean Asset Management Corporation (KAMCO) in alleviating the NPL problem in the aftermath of the crisis. An important similarity to the current Indian NPL problem was that in the Korean Crisis, about 1% of the borrowers (the Chaebols or Korean Business Groups) accounted for almost 90% of the NPLs.

C. **Research Conferences during FY 2017-18 (April 1, 2017 - March 31, 2018)**

1. **CAFRAL conference on Financial system and Macroeconomy in Emerging Economies**
Date: December 07-08, 2017

Opening remarks: Dr. Urjit Patel, Governor, Reserve Bank of India
Uncertainty Shocks, Financial Frictions and Business Cycle Asymmetries Across Countries, Pratiti Chatterjee, UC Irvine
Discussant: Sanjay Chugh, Ohio State University
A Monetary Business Cycle Model for India, Chetan Ghate, ISI Delhi
Discussant: Colin Caines, Federal Reserve Board
The Rise and Fall of India's Relative Investment Price: A Tale of Policy Error and Reform, Alok Johri, McMaster University
Discussant: Chetan Subramanian, IIM Bangalore
Creditor Rights and Allocative Distortions: Evidence from India, Nirupama Kulkarni, CAFRAL
Discussant: Shashwat Alok, ISB
Corporate Debt Structure, Precautionary Savings and Investment Dynamics, Jasmine Xiao, University of Notre Dame
Discussant: Michal Szkup, University of British Columbia
How Important Are Spillovers from Emerging Markets? Ayhan Kose, World Bank
Discussant: Arpita Chatterjee, UNSW
Free Riding in Teams, Krishnamurthy Subramanian, Indian School of Business
Discussant: Igor Livshits, University of Western Ontario and FRB Philadelphia

Plenary talk 1: On Interest Policy and Asset Bubbles by Franklin Allen, Imperial College London
Plenary talk 2: Monetary Easing, Investment and Financial Stability by Dr Viral Acharya, RBI
Plenary Talk 3: Wishful Thinking by John Leahy, University of Michigan, USA
Plenary Talk 4: The Neo-Fisher Effect by Martin Uribe, Columbia University

2. **CAFRAL-RBI-IIM (B) Research Conference on Financial Markets and Macroeconomics in Emerging Economies**
Date: March 09, 2018

Inaugural Address by Dr. Viral Acharya, Deputy Governor, RBI
Session I: Financial Markets
1. Funding Liquidity and Market Liquidity in Government Bonds, by Prachi Deuskar, ISB
2. Costs and Benefits of Regulatory Interventions in Stock Markets: The Case of Minimum Public Shareholding Rule in India, V Ravi Anshuman, IIM (B) (joint paper with Venky Panchapagesen)
Session-II: Macro-finance

1. Credit misallocation and aggregate productivity, Chetan Subramanian, IIM (B) (joint paper with Vipul Mathur)
2. The Unsettling Behaviour of Exchange Rates under Inflation Targeting, Amartya Lahiri, CAFRAL (joint paper with Paul Beaudry)

Session III Credit Markets

1. Bank Recapitalization in a DSGE framework, Pawan Gopalakrishnan, Sakshi Satija and Saurabh Ghosh, RBI (SRU)

Session-IV: Capital Flows and Trade Invoicing

1. Modelling Copula Weights with Penalized Likelihood: Re-solving UIP Puzzle, Indrani Manna, RBI (DEPR)
2. Capital flows and capital account management in selected Asian economies, Rajeshwari Sengupta, IGIDR (joint paper with Abhijit Sen Gupta, ADB)
3. Does Dollar Invoicing Matter for Trade Competitiveness, Apoorva & Shekhar, CAFRAL & RBI (SRU)

D. Research Seminars during FY 2017-18 (April 1, 2017 - March 31, 2018)

1. Global Spillover Effects Of US Uncertainty by Prof. Arpita Chatterjee on July 05, 2017
2. Politics And Credit Allocation by Prof. Anjan Thankor on July 19, 2017
3. Politics, Credit Allocation And Bank Capital Requirements by Prof. Anjan Thankor on July 19, 2017
4. Political Influence On Bank Credit Allocation: Bank Capital Responses, Consumption And Systemic Risk by Prof. Anjan Thankor on July 19, 2017
5. Market Information And Rating Agency Catering by Prof. Radhakrishnan Gopalan on July 26, 2017
6. Methodology For Computation Of Benchmark Forward PREMIA And MIFOR Curve by Golaka Nath on August 16, 2017
7. (Why) Do Central Banks Care About Their Profits? By Prof. Vasso Ioannidou on October 05, 2017
8. Sovereign Debt: Election Concerns And The Democratic Disadvantage by Amrita Dhillon, Andrew Pickering and Tomas Sjostrom on October 09, 2017
9. Treasury Auctions During A Crisis by Prof Rohit Lamba on November 22, 2017
10. Evaluating The Impact Of Rising Emerging Market Corporate Debt by Dr. Madhu Kalimipalli, Professor of Finance, Equitable Life of Canada Fellow, Director, PhD and Research-based Master's Programs in Management, Lazaridis School of Business and Economics, Wilfrid Laurier University, CANADA on December 13, 2017
11. Underwriting Government Debt Auction by Dr. Sudip Gupta, Professor, Fordham University, New York, USA on December 18, 2017
12. Efficiency And Equity Of Land Policy In Developing Country Cities: Evidence From The Mumbai Mills Redevelopment. By Dr. Michael Gechter, Assistant Professor, Economics, The Pennsylvania State University, USA on December 20, 2018
13. Multinational Firms, Trade, And The Trade-Comovement Puzzle by Mr. Gautham Udupa, PhD Candidate, University of Houston on January 24, 2018
14. Stock Market Participation: The Role Of Human Capital by Ms. Urvi Neelakantan, PhD Candidate, Richmond Fed on January 29, 2018
15. The Cost Of Distance: Geography And Governance In Rural India by Mr. Karan Nagpal, PhD Candidate, Oxford University on February 02, 2018
16. Acquiring Failed Banks by Mr. Siddharth Vij, PhD Candidate, NYU Stern School of Business on February 08, 2018
17. Job Specialization And Labor Market Turnover, by Mr. Murali Srinivasan, PhD student, Ohio State University, USA on February 14, 2018
18. Ramsey Taxation In The Global Economy, by Prof. V. V. Chari, University of Minnesota and Federal Reserve Bank of Minneapolis on February 15, 2018
19. External Governance And Debt Structure by Prof. Sreedhar Bharath, Arizona State University, USA on March 08, 2018
20. Trade And Minimum Wages In General Equilibrium: Theory And Evidence by Dr. Arpita Chatterjee, University of South Wales, Australia on March 15, 208

E. Research Brown Bag Seminars during FY 2017-18 (April 1, 2017 - March 31, 2018)

1. The effect of relationships with government owned banks on cash flow constraints: Evidence from India by Dr. Anand Srinivasan in July, 2017.
2. Identity Politics, Targeted Redistribution And Private Investment: Evidence From India'S Silent Revolution by Dr. Subrata Kumar Ritadhi, Manager, Reserve Bank of India on October 26, 2017
3. Shock Diffusion: Does network structure matter by Dr. Shekhar Tomar.
4. Estimating Option-Implied Risk Aversion – A Case For India by Dr. Sonalika Sinha, Manager, International Department, Reserve Bank of India on January 03, 2018
5. Corporate Leverage In Emes: Did The Global Financial Crisis Change The Determinants? by Dr. Snehal S Herwadkar, Director, DEPR, Reserve Bank of India on January 18, 2018
6. Interest Rate Pass-Through From The Weighted Average Call Rate To The Primary Commercial Paper Market In India Using Daily Data: An Empirical Analysis by Mr. Arun Vishnu Kumar, Assistant Adviser, FMOD on January 18, 2018
7. Foreign Safe Asset Demand For U.S. Treasuries And The Dollar by Dr. Apoorva Javadekar, Research Director, CAFRAL on March 22, 2018

Annex 2

1. **Program on Forex Management in Banks**

Date May 11-12, 2017

Venue Mumbai

Coverage Framework for Overseas Direct Investment; Overseas investment by Venture Capital Fund (VCF) / Alternate Investment Fund (AIF) / Mutual Fund (MF), Portfolio Investment, etc.; Framework for ECB: Tracks, prescriptions for borrowers & lenders, maturity, cost ceiling and end-uses; reporting requirements, etc.; Trade Credit for imports in India: prescriptions, maturity, cost, ceilings, guarantees, delayed payment, etc.

Feedback/suggestions:

ECBs :For quicker response to ECB customers, ADs may be delegated to allot Loan Registration Number (LRN) if it is not on approval route; FC-GPR is a pre-requisite for LRN issuance when ECB is from the foreign equity holder. This is a deterrent to overseas companies; Payment of due diligence expenses prior to raising of ECBs should be allowed; Cancellation & rebooking of ECB hedges may be considered by the regulator.

ODI: Regulator may consider allowing corporates to route ODI through any bank with monitoring of limits through the designated AD bank; Remittance may be permitted by any bank subject to reporting to the designated bank for customer convenience; For better forex advantage, AD bank may be allowed to fix rates and other banks can route remittance at that fixed rate.

Masala Bonds: Masala Bonds can be traded by offshore participants; likewise, onshore institutions also may be allowed to buy masala bonds

2. **Program for Non-Executive Directorss on the Boards of Commercial Banks**

Date May 29-30, 2017

Venue Goa

Coverage Governance in banks: Role and responsibilities of Directors; Recovery of non-performing assets: SARFAESI, DRTs and Insolvency & Bankruptcy Code; Indian Financial Markets: Government Securities and Forex dealings, impact of monetary policy, corporate bond market, coordination among regulators; Improving the risk management system in banks: credit risk, RAROC, managment of market risk; Basel III: Capital and Liquidity Risk; Credit appraisal: Financial statements, ratios/ indicators, Financial reporting: NPA disclosures and provisioning integrity, compliance to SEBI guidelines by banks; Business strategies (including IT strategies) in the context of current challenges.

Feedback/suggestions:

Boards must focus on the strategic long term objectives; Boards are responsible for ensuring implementation of the enterprise wide risk management, setting of the risk appetite and promoting a sound risk culture. All policies must be mapped to processes. Risk management practices must go beyond regulatory requirement; Boards must help the Management see the blind spots in high value credit proposals; To meet the Fintech challenge, banks must collaborate with Fintech companies and move forward; Banks must take cognizance of the emerging competition from NBFCs, SFBs, Payment Banks, P2P and TReDS and also consider revitalising RRBs to overcome such challenges; Banks must shift from product push incentives to what is inherently beneficial for the customer and also avoid penalties for possible mis-selling

3. Workshop on Recovery and Resolution of Stressed Assets

Date May 26-27, 2016
Venue Mumbai
Coverage M/s McKinsey & Co, had developed a steel company case study. Participants in the program were divided into groups to discuss the case. An independent bottom-up estimations by both the strategic and financial investor teams indicated that only 50-55 percent of the company's debt level was sustainable which reinforced the premise that effective resolution may require significant haircuts on the outstanding debt. Besides, partial conversion of debt to equity may allow the banks to benefit from the any upside, if the asset eventually returns to profitability.

Feedback/suggestions

A change in approach to stressed assets resolution is required; objective to shift from the traditional recovery maximisation to economic value maximization which is latter a more pragmatic approach. Turnaround plan should focus on maximising "entity value" in the long term; The possibility of revival of an entity is to be evaluated through a holistic approach consisting of: Restructuring the balance sheet to support the turnaround; Identifying the capital required to accelerate the growth; Strengthening the management team where required; Managing the execution with the best turnaround skills. This would involve identifying key technical and commercial criteria for evaluating competitive bids; High weightage should be given to the technical strengths of the bidders, their past turnaround experience, quality of their turnaround team, and the robustness of their turnaround plan; To ensure fair play and avoid over-aggressive or over-optimistic proposals by a few bidders, banks should distribute standard templates to all bidders that lay out standard assumptions for key cost and revenue metrics such as cost of raw materials, cost of finished products, interest rates, and exchange-rate forecasts; Following a standard process as outlined above will ensure that the best turnaround proposal is identified, while remaining compliant with public sector norms and ensuring transparency to satisfy the Central Vigilance Commission.

4. Integrated Risk Management Program

Date July 31 to August 4, 2017
Venue Mumbai
Coverage Global and Domestic trends impacting banks: Macro economy outlook, implications of monetary changes, outlook on credit growth, issues in GFSR, etc; Credit risk management: Regulatory guidelines, Basel prescriptions, BCBS guidance on credit risk, sectoral exposures, internal v/s external rating, risk based pricing, waivers and concessions, interchanging of FB and NFB limits, etc; Project & infrastructure financing: Risk assessment and risk mitigation: Need for specialised skill requirements, higher uncertainty and risks, higher LGD due to lack of tangible security, sector specific risks and their mitigation; Financial distress: Preserving economic value of assets and resolution/recovery, restructuring / refinancing of assets, reasons for lack of success in restructuring of assets, CDR, SDR, S4A, 5/25 scheme, recent developments in securitisation and DRTs, issues and challenges under IBC.

Feedback/suggestions

Concepts of credit concentration, securitisation and VaR were explained in detail. Excel exercises on measurement of credit risk and duration were useful;A training of this type helps to understand the banks' portfolios from a risk perspective; Program gave an insight into the role of the risk department; Created awareness about the latest global / domestic issues, recent developments that are relevant for risk management

5. Program on Digital Banking

Date August 23-24, 2017
Venue Mumbai
Coverage Digitizing customer journeys by SBI; Digital megatrends by BCG; Setting up a Digital Corporate Bank by IDFC Bank; Humanoid robots for Customer Service (Mitra Robot); Digital Initiatives Analytics by Bajaj Finserve; Digital & Cyber Security Framework by RBI; Deception Technique by M/s Smokescreen Technologies; Building Digital Marketing Capabilities by Facebook; Next generation digital: Working with Fintechs to capture new value pools and build low cost banking models; AI; Robotics; Machine Learning; Payment Technologies by NPCI, etc.

Feedback/Suggestions

End-to-end digitisation to enhance employee productivity, reduce costs, improve customer experience; New ways of working in the digital age; Shift to analytics and advanced data management; Go digital for building low cost banking models;Technology is the backbone of a digitally driven bank;Move to next generation digital

6. Stress Testing, Risk Management and Capital Planning

Date August 30-31, 2017

Venue Mumbai

Coverage The program focused on practical implementations of frameworks for stress testing, risk management and capital planning and covered areas such as global developments in Micro and Macro Stress Testing; Basel III Capital Buffers and Capital Planning: International Best Practices; Stress Testing of banks in Europe; Stress Testing of the Indian Banking System by RBI; Key Issues and Challenges in conducting stress tests; Liquidity Risk Management: Supervisory expectations.

Feedback/suggestions

Internationally stress tests have evolved in sophistication since their use started in a big way after the financial crisis. The banks are using stress tests for deciding their business strategy. If a particular business does not look good during a severe stress scenario, then the management looks very closely at those businesses. The supervisory agencies are making enhanced disclosures of the stress test results and are using these to decide the supervisory course of action. In the Indian context, stress testing by banks is being undertaken more as a compliance exercise under Pillar 2 rather than a tool for risk management or capital planning.

7. CAFRAL Advanced Credit Management Program

Date Indian leg – from September 15-16, 2017 and Overseas leg – from September 25-29, 2017

Venue Mumbai and New York City, USA in collaboration with NYU Stern School of Business

Coverage The Indian leg provided inputs on current issues affecting the banks and covered inter alia risk management, asset quality issues, governance, cyber and digital banking.

The overseas leg of the program was conducted in collaboration with Stern School of Business, New York University, USA. The program had renowned speakers / Professors like Edward Altman (corporate bankruptcy), Anthony Saunders (risk management) and Marti G Subrahmanyam (financial derivatives). Topics covered were credit risk management, credit risk models, infrastructure financing, cyber risk, corporate finance and credit derivatives.

Feedback/suggestions

By and large, the participants appreciated the quality of the classroom the class room sessions; in particular, the session on “Financial Distress and Restructuring” by Prof Edward Altman received a special mention in their feedback. The visit to the Federal Reserve Bank, New York gave the participants about central bank functioning whereas at the Citigroup they learnt how the bank transited from the lows of the global crisis period by restructuring their business. Through the discussions related to their card business that followed, the participants could compare their own operations with that of Citigroup. Participants suggested that for bank visits, specific topics may be pre-decided by CAFRAL to make the interaction more beneficial.

8. Training needs analysis - Roundtable for HR Heads / Chief Learning Officers (CLOs)

Date September 21, 2017

Venue Mumbai

Objective To discuss/understand how CAFRAL could play a more effective or distinct role and provide demand-driven learning inputs to the industry and assess the current and future needs of bankers in the background of certification requirement in select areas becoming mandatory.

Feedback/suggestions

Additional Director, CAFRAL gave an overview of the programs conducted by CAFRAL and sought their views on the content, duration and level of participation. Besides, he sought their suggestions on potential programs that CAFRAL could add to its calendar of programs. Participants were of the view that certification would now drive the training needs of bankers till the DGM level or so and there could be a preference of undergoing any kind of training at an accredited institution rather than any institution. Senior Program Director (MPB) assured the participants that CAFRAL would study their suggestions for adoption keeping in mind the mandate of CAFRAL

9. CAFRAL Workshop on Emerging trends in Cyber-Attacks, Response Management & Digital Forensics

Date September 28-29, 2017

Venue Mumbai

Coverage Emerging Trends in Banking & Security landscape; Key Security Themes in the context of recent cyber-attacks; Preventing DDOS attacks; Next Generation SOC; Ransom ware attacks & strategies to mitigate – Case study; Importance of Digital Forensic Readiness Assessment; ATM Attacks & Security – Case Study; Preventive Strategies; Developing a collaborative, multi-stakeholder approach to tackle cyber-attacks.

Feedback/suggestions

Got clarity on mobile banking guidelines & importance of digital forensic; Harnessing the potential of Block chain technology is interesting. Mobile security solution and all related input was a good one to further explore; A cyber risk survey as a risk investigation study needs to be considered seriously; Clarity was received on DBS/DPSS/Rebait requirements and upcoming things. Learnt about the new generation threats and controls available along with the type of new attacks and incident response preparedness; Got detailed information about types of cyber-attacks with the reference to the latest incidents of hacking in financial sector. Insights into the findings of mobile banking and security aspects related to device transactions. Some idea of cyber Insurance. In-depth analysis of security measures to be adopted by banks

10. Program for Non-Executive Directors on the boards of commercial banks and financial institutions

Date October 23-24, 2017

Venue Mumbai

Coverage Role & responsibilities of Directors, regulatory expectations, etc.; Global and Domestic outlook: Macro economy trends, monetary policy implications, credit outlook, GFSR issues, etc.; Indian Banking System: Current issues, challenges and way forward, need for evolving differential business strategies; Recent regulatory developments: Implementation of Basel III and capital planning, asset quality management, KYC & AML; Ind AS 109 and likely implications for banks; Resolution and recovery of stressed assets: restructuring and refinancing schemes, recent amendments to DRT and SARFAESI Act, Insolvency & Bankruptcy Code developments; Risk Management in banks: Risk architecture, liquidity risk management and ALM issues, credit risk management and use of RAROC; Risks in Information Technology environment: cyber risk, data security and FINCERT; Risk management in treasury operations: use of interest rate and forex derivatives for managing market risk; International banking developments: Dodd Frank Act, systemically important banks, BCBS & FSB - work in progress relating to capital regulation.

Feedback/suggestions

The program provided an overall glimpse of critical areas where board can focus;Takeaways are knowledge & right perspective to raise right questions in the board; Understood the twin balance sheet problem and challenges in Ind AS;Risk Based Supervision and cyber security issues were clearly explained and what boards need to do in these areas were very well brought out; Had a good understanding of risk assessment and management. Also the Regulator's perspective on issues like risk assessment, capital, IT security, etc; The role of Boards in guiding the banks - sustaining strategies over medium term and maintaining continuous communication and working equation between Board and the management in banks; Very interactive and good sharing among the participants.

11. CAFRAL-ICAI Workshop on Implementation of Indian Accounting Standards

Date October 25, 2017

Venue Mumbai

Coverage Discussions on Classification and Measurement of Financial Assets; Classification and Measurement of

Financial Liabilities; Hedge Accounting and Derivatives, Fair Value Measurement; Impairment of Financial Assets, Presentation of Financial Statements and Disclosure; De-recognition, Consolidation and Other Residuary Issues.

Feedback/suggestions

Understanding of key concepts and various types of treatment of different categories under Ind AS; Banks will see significant challenge in implementing Ind AS 109, especially ECL computation and provisioning. Other interesting areas from Ind AS 109 are new classification of assets and liabilities, effective hedge accounting; Impact of Ind AS is not only restricted to finance department but also others like loan sanction department and capital management department; ECL Model explanation was excellent.

12. Leveraging Social Media for Financial Awareness and Cyber Security-Interface with Facebook

Date December 4, 2017

Venue Mumbai

Coverage An Interactive Session with Bansari Vyas, Business Head, Banking & Financial Services, Facebook was facilitated by CAFRAL for Department of Communications (DOC) and ReBIT on December 4th, 2017 with the objective of understanding how social media could be leveraged for spreading consumer awareness to a wider audience in a cost effective manner. The program had participation from DOC, Central Office and Regional units (over video conference). CEO ReBIT and CGM, DOC actively participated to assess the metrics of viewership, costing and packaging of the high impact short messages unique to social media.

13. Executive Development Program

Date December 11-12, 2017

Venue Mumbai

Coverage Global and domestic outlook: Monetary policy implications, Credit growth outlook, International banking developments; Corporate governance: Role and responsibilities of directors and senior management, conduct risk, best practices; Financial markets: fixed income, forex and capital market, treasury as a profit centre, coordination among regulators; Risk Management: Basel III Framework, risk rating and pricing, capital planning; Risk Based Supervision-the basic building blocks; Asset quality: issues and challenges, restructuring/refinancing schemes, Insolvency and Bankruptcy Code, legal issues affecting recovery and resolution of stressed assets; Business strategy: Corporate lending v/s Retail lending, emerging competition, mergers & acquisitions; Fintech and digital banking: Challenges and Opportunities.

Feedback/suggestions

Gave overall view of Indian and International economy, Capital planning and challenges; Effective use of IBC in NPA resolution;Great insight into the challenges the banking industry is going to face in the near future; Got an insight of the magnitude of problem of stressed assets and its resolution options available to banking; Issues relating to resolution of stressed assets referred to NCLT under IBC; Good insight into the money market, bond market and forex market; Issues involved in RBS was very informative for improving the internal working; Fintech & Digital banking session was very interesting and informative. Gave insight into happenings under Fintech in banking; Session by IBA Chief Executive gave insight into the work of IBA.

14. Conference on Implementation and Compliance of Know Your Customer (KYC)-Anti Money Laundering (AML) Standards Regime and Financial Crime Management

Date December 19-20, 2017

Venue Mumbai

Coverage In-depth discussion on the critical AML issues like KYC risk rating, customer segmentation, etc. using case studies on STRs filed with FIU. Close interaction with peers and common stakeholders from the industry; Inputs from leading experts from the industry, RBI, Enforcement Directorate, FIU and FATF representatives.

Feedback/Suggestions

Speakers shared their experience on investigation findings on doubtful transactions, channeling of cash through dormant bank accounts, etc;Security and surveillance concerns on Aadhaar linkage of bank accounts; Use of appropriate technology for alert generation and processing; Use of Block chain technology and algorithmic tools for overcoming limitations of the current KYC-AML software tools; Case studies relating to trade based money laundering crimes

15. Cyber Security Awareness Program for Board of Directors and Senior Management of Union Bank of India

Date January 08, 2018

Venue Mumbai

Coverage Regulatory Framework for Cyber Security and Board Oversight Function; Key cyber security trends based on recent cyber attacks; Tips for evaluating bank's preparedness by the Board; Managing people, process and technology for cyber security.

Feedback/Suggestions

Highlighted the oversight responsibilities of Board of Directors and Senior Management of the bank; Created awareness around the evolving threat scenario, best practices for its mitigation and the regulatory requirements and expectations; Emphasised the integrated approach towards managing People, Process and Technology for effectiveness

16. RBI-CAFRAL Conference on Bank Frauds

Date January 09, 2018

Venue Mumbai

Coverage In the context of RBIs proactive measures to bring in increased effectiveness in regulatory and supervisory design relating to bank frauds the Conference was to help in shifting the focus from 'monitoring' to 'mitigation & prevention'.

Feedback/Suggestions

Stressed the necessity of creating an effective framework for plugging frauds; Highlighted the supervisory concerns, governance structure, cyber frauds, loan frauds, etc.

17. Leading in the Digital Age - A joint CAFRAL and Macquarie University Program

Date Indian leg – January 25, 2018 at Mumbai and Overseas leg – from January 29 – Feb 03, 2018

Venue Mumbai and Sydney

Coverage A mix of academicians from Macquarie University and domain experts from the banks, consulting firms, private firms, etc. provided inputs on a variety of topics. The Indian leg, in Mumbai on 25 January 2018, provided perspectives on some of the recent developments in risk management, risk governance and cyber security. The key areas covered in the Sydney leg included: (i) Digital strategy in a rapidly changing world of Fintech, Artificial Intelligence, Block chain and Big Data Analytics; (ii) Risk strategy, governance and culture; and (iii) Hands-on Workshops on financial technology and cyber security issues and risk strategy. International experts, drawing upon their expertise, provided insights into the key topical areas relevant for strategic management of financial institutions in today's context.

18. Conference of Chief Compliance Officers

Date January 29-30, 2018

Venue Mumbai

Coverage Role of CCOs/CROs/CFOs, international best practices & trends, regulatory expectations, etc. as also the finer nuances of Risk Based Supervision by eminent practitioners, international experts and regulators/supervisors. Building and implementing an effective compliance function. Strategising, meeting regulatory expectations & mitigating non-financial risks.

Feedback/suggestions

Provided a platform for exchanging perspectives, resolve difficulties and encourage dialogue amongst the Compliance Heads/Senior Compliance Officers; Importance of effective compliance from the Risk Based Supervision perspective; Case studies of enforcement actions taken by RBI for non-compliance; Emerging global regulatory compliance landscape involving climate, sustainability and environment; Best practices for legal risk management, building compliance culture, compliance capability development, compliance for trade and forex business

19. **CAFRAL – ReBIT Business Leaders' Forum (BLF) on Cyber Security**

Date February 9, 2018

Venue Mumbai

Coverage BLF focused on three key aspects in cyber security preparedness: (i) Situational awareness through discussions on compliance, governance, regulatory requirements and cyber security case studies. (ii) Programs and initiatives for mitigation strategies that can be implemented. (3) Good practices in crafting an optimal response

Feedback/suggestions

Forum addresses the felt need at the management and board level from the point of view of preparedness, experience-sharing and industry benchmarking; There is a need to have effective governance and controls framework for cybersecurity in banks – one that covered the triad of people, process and technology; There is lack of effective threat monitoring mechanism and forensic readiness in some banks; BLF sessions would be beneficial to the individual banks and the industry at large, and a quarterly congregation was considered as ideal.

20. **Conference of Chief Risk Officers and Heads of Risk Management Departments**

Date February 15, 2018

Venue Mumbai

Coverage Role of Chief Risk Officer; credit risk and stressed assets: resolution under IBC; market risk: managing risks in treasury operations; operational risk: cyber risk, loan frauds and IT risk; Risk Based Supervision.

Feedback/suggestions

It gave a platform for discussing various types and aspects of risk management, role of CROs, supervisory expectations from Risk Based Supervision, resolution of stressed assets and improving the risk management systems in banks; Critical observations for improving risk management were discussed and the program provided views on how to upscale the risk management function in banks

21. **Financial Markets Program**

Date March 05-09, 2018

Venue Mumbai

Coverage Financial markets architecture in India; treasury operations and ALM; capital market developments; government securities market; liquidity management framework; inter-linkages between money, bond, equity & forex markets and the impact of International developments on these segments; challenges in corporate bond market; role of FIMMDA, etc.

Feedback/suggestions

Provided insights into the functioning of financial markets & treasury operations of a bank; Visits & interactions with the International Division of SBI and BSE were useful; The unique mix of policy inputs and insights on operational issues shared by regulators, market makers and senior officials from banks were useful.

22. **Program for Non-Executive Directors on the Boards of Banks and Financial Institutions**

Date March 16-17, 2018

Venue Mumbai

Coverage Current issues & challenges in Indian Banking System, role of directors in governance and business strategy, risk management - credit, market and operational risk; asset quality management, compliance, social banking.

Feedback/suggestions

Benefited from discussions on risk, governance and compliance issues; Strengthening the compliance and control systems is very important part of managing risks in banks and FIs.

23. Program on Final Basel III Regulatory Reform for Banks

Date March 26-27, 2018

Venue Mumbai

Coverage The Program mainly covered the micro prudential aspects for banks such as raising the level and quality of capital; leverage ratio; increasing the robustness and risk-sensitivity of the Standardised Approach for Credit Risk, Credit Valuation Adjustment, Operational risk; constraining the use of internal models such as the IRB Approach for Credit Risk; Leverage Ratio buffers for Global Systemically Important Banks; and the output floor based on the Revised Standardised Approaches.

Feedback/suggestions

For implementing the revised Standardised Approach for Credit Risk Regulatory Capital, banks should develop mechanisms for due diligence for corporate and bank exposures to ensure that external credit rating of counterparty appropriately reflect its creditworthiness. The implementation of Standardised Approach for operational risk regulatory capital would require close coordination of finance and risk function as banks need to collect “operational risk loos data”. The implementation of IFRS 9 and IRB Approaches have close interlinkages but might lead to different estimates of expected losses. Basel III output floor limits the incentives for moving to the Advanced IRB Approach.

Annex 3

CAFRAL Team, as on August 1, 2018

1. Amartya Lahiri, Director
2. Chandan Sinha, Additional Director (Learning & Administration)
3. Anand Srinivasan, Additional Director (Research)
4. Urvi Neelakantan, Senior Research Director
5. Nirupama Kulkarni, Research Director
6. Apoorva Javadekar, Research Director
7. Gautam Udupa, Research Director
8. Amarendra Mohan, Senior Program Director
9. M.P.Baliga, Senior Program Director
10. Pramod Panda, Senior Program Director
11. Janaki Ravindran, Senior Administrative Officer
12. Vasanti V Panshikar, Administrative Officer (Research)
13. N.P.Khemani, Private Secretary to Additional Director
14. Biswanath Chakraborty, Private Secretary to Director
15. Vinita Jain, Program Officer
16. Pushpalata Nadar, Program Officer
17. Madhusudan Dutta, Program Officer
18. Nimesh Gopiyani, Accounts Officer
19. Anup Sonawane, Web Content Manager
20. Trupti Kanade, Junior Accounts Officer
21. Kushboo Khandelwal, Research Associate
22. Sumedha Rai, Research Associate
23. Bhavika Nanawati, Research Associate
24. Rishab Devnani, Research Associate
25. Bhavya Agarwal, Research Associate
26. Muskan Chawla, Research Associate
27. Sudipta Ghosh, Research Associate
28. Sujan Bandyopadhyay, Research Associate
29. Anmol Agarwal, Research Associate
30. Jay Prakash Nagar, Research Associate
31. Mahendra Singh, Research Associate
32. Hariharan Jayashankar, Research Associate
33. Ramprasad Verma, Research Associate
34. Kedar Kelkar, Research Associate
35. Manya Malik, Research Associate

Notes

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CAFRAL

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