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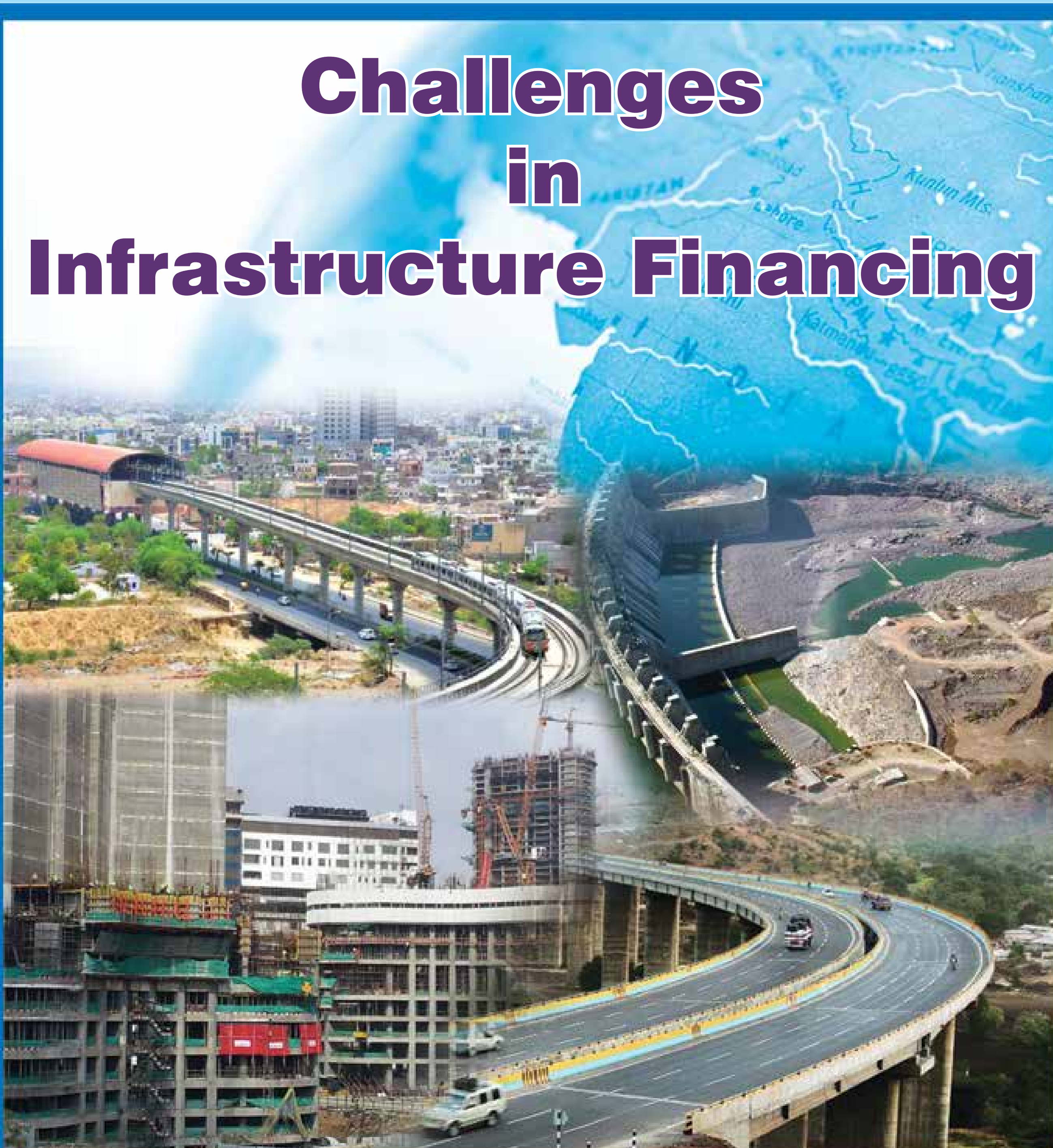
Challenges in Infrastructure Financing

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MISSION

The mission of the Institute is to develop professionally qualified and competent bankers and finance professionals primarily through a process of education, training, examination, consultancy / counselling and continuing professional development programs.

ध्येय

संस्थान का ध्येय मूलतः शिक्षण, प्रशिक्षण, परीक्षा, परामर्शिता और निरंतर विशेषज्ञता को बढ़ाने वाले कार्यक्रमों के द्वारा सुयोग्य और सक्षम बैंकरों तथा वित्त विशेषज्ञों को विकसित करना है ।

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editorial

Dr. J. N. Misra

Chief Executive Officer,

IIBF, Mumbai

The Indian Economy is currently going through a challenging phase as GDP growth has not grown to match India's potential. Infrastructure spend in India is likely to have a positive spiral and multiplier effect to our GDP growth and is likely to be one of the main devices to unleash India's economic growth potential.

Indian Infrastructure sector faces critical financing issues in terms of high cost of capital, challenges in obtaining non-recourse funding and dearth of long term funding sources due to the asset liability mismatch. There is a need for implementing a comprehensive strategy for addressing the issue of infrastructure financing in India involving efficient and innovative financing mechanism based on the emerging sectoral trends.

In this background, the Institute felt that, if the Bank Quest issue focus on this aspect, it may be useful. Keeping this in view, the current Bank Quest issue is based on the theme 'Challenges in Infrastructure Financing'

The first article of the issue is on the topic "Challenges in Infrastructure Financing - Perspective from a Development Banker" by G. Ananthakrishnan, Retired General Manager, NABARD wherein, the author has made an attempt to look at the whole gamut of infrastructure financing in India from the perspective of a social banker The author is of the opinion that infrastructure is a critical catalyst in accelerating growth, benefiting stakeholders such as producers, consumers, rural households, industries and marginalised sections of the society.

The second article is on "Stalled and Delayed Infrastructure Projects: the strategic approach" authored by Mr. B.N.V. Parthasarathi, Ex-Vice President and Branch Head, Bank of Bahrain and Kuwait, Hyderabad and Dr. A.R. Aryasri, Professor, School of Management Studies, Chaitanya Bharati Institute of Technology, Hyderabad. Through this paper the authors have shared their insights on importance of improvement in the existing project monitoring mechanism by the Project Monitoring Groups and shift the excessive focus of the banks from financial data to time and cost over runs by effective usage of tools like PERT and CPM. The article also highlights the importance of 3Es of project management - Economy, Efficiency and Effectiveness as operational strategies.

The third article is on "Term Loan Appraisal with DSCR" authored by V. Sundararajan, Assistant General Manager (Faculty), Union Bank Staff College. In this article, the author has shared his viewpoint that Banking being the backbone of the Indian economy, when we understand the fundamentals of credit appraisal in general and term loan appraisal in particular, the future of banking will be bright for the industry and for the future leaders of banking.

The fourth article on "Financing Rural Infrastructure: Banks need to change track" authored by Dr. M.R. Das dwelves into the current status of how and to what extent bank finance in India has been utilized for developing rural infrastructure over time and assessing who have benefitted in the said process. The paper also discusses on few of the policy issues to make bank financing of rural infrastructure more effective.

The fifth article is on the topic "Bad Loans in Infrastructure Sector and Ordinance on New NPA Resolution Policy" authored by Dr. V.S. Kaveri, Professor (Retd), NIBM, Pune. In this article the author has discussed on the possible impact of the ordinance on the NPA resolution strategy, to deal with mega bad loans.

We also carry a Hindi article on "प्लास्टिक मुद्रा के प्रयोग से जुड़ी चुनौतियाँ written by Dr. Saket Sahay.

We are confident that the articles included in this edition will stimulate your interest.

Your valuable suggestions and feedback for improving the contents are welcome.

Dr. J. N. Misra

Challenges in Infrastructure Financing : Perspective from a Development Banker

G. Ananthakrishnan*

"The Journey of thousand miles begins with a single step" - Lao Tzu

Abstract

India continued its journey as one of the fastest growing economies in the world during the current year despite global economic turmoil accompanied by unprecedented domestic challenges such as demonetisation locally. Our achievement under Gross Domestic Product (GDP) stood at 7.2 per cent in 2014-15 and touched 7.6% in 2015-16. Latest data available indicate that the trend will continue during the current year also. Infrastructure development is sine quo non for rapid economic growth, human development and poverty alleviation. It has huge potential for propelling India's overall development. The sector can ensure positive spiral and multiplier effect to GDP besides being a lever to unlock the growth potential of India. When it comes to funding big projects under infrastructure, International Capital markets have the size, technology and the wherewithal. Yet several factors inhibit them from supporting such projects. Unfinished reforms, absence of risk mitigation framework, weakness of local capital markets and uncertain political climate, besides changing economic environment are some of the factors which impact the enthusiasm of global players. Viewed from this background, meeting the ever growing infrastructure needs remains a key challenge for policymakers. While budgetary support accounts for 50% of funding, Commercial Banks, International Agencies, NABARD, NBFCs, Mutual Funds and capital markets have contributed the rest. This article is an attempt to look at the whole gamut of infrastructure financing in India from the perspective of a social banker. Development of our social and physical infrastructure warrants that a conducive policy framework and friendly investment climate are in place. The article lists challenges as also suggestions such as Creating Single Window system wherever possible, apart from Consortium financing aiming at risk spread, Establishing transparent rules, Development of local capital markets, Developing viable public-private risk mitigation measures, Focus on completing the ongoing projects rather than starting new projects, getting the right projects, adopting the principle of "promise less and deliver more", going for more smaller projects rather than failing in giant projects, Identifying areas where private sector will deliver faster, Takeout financing, Setting up Infrastructure Debt Funds, Innovative financing options through equity, debt and other hybrid instruments, Making use of 5/25 scheme in terms of which, banks are allowed to fix longer amortisation period for loans to projects in infrastructure or core industries sector for, say, 25 years, with periodic refinancing, say, every 5 years, learning from the success of RIDF funding for addressing the challenges are other options available. Successful remedial measures to address the challenges will unlock the potential of international capital market and will enable smooth and adequate flow of capital to India for infrastructure financing.

1. Introduction

Infrastructure is the driver of growth and the life line of any country and its economy is intricately woven into it. Human and economic development index is determined largely by country's level of achievement in providing adequate physical and social infrastructure. GDP largely depends on physical infrastructure while education level, skill and health depend on good social infrastructure. India even after 70 long years

* Retired General Manager, NABARD.

of independence and under self-rule is carrying the tag “Developing country” while a few other nations despite being smaller in size, have achieved the status of “Developed Nation” long ago. To name some, Germany, France and Japan are already under “Developed” category. India continues to be a ‘developing country’ despite innumerable steps taken by Governments through all the successive Five Year Plans. In fact, the 12th Five Year Plan has projections touching around ₹65 lakh crore (in current prices) for “Infrastructure Development”. Yet, we lag behind in sectors such as roadways, electricity, airports, railways, river connectivity and major irrigation infrastructure. Major land masses under cultivation in India are rain fed and to ensure self-sufficiency in food, we must look at the irrigation infrastructure with much more focus. Inter-linking the major rivers has been the task which hits the headlines now and then, but gets relegated. Research and studies have proved that one third of our fruits and vegetables go waste every year. To avoid such wastages, post harvest infrastructure assumes even greater importance. We as a nation keep grappling with the historic challenge of providing enough electricity for our burgeoning population and booming economy. Huge potential lies in financing for renewable sources. Under Jawaharlal Nehru National Solar Mission, it is proposed to build 20000 MW of solar power by 2020 nationwide. All these require huge funding.

2. Present status

India is ranked 39 among 160 countries as per World Economic Forum’s Global Competitiveness Index (GCI). The recent jump of 16 places by India was due to a slew of reform initiatives of the present Government to unclog the system, efforts to bring in investments and reforms in the financial sector and contain inflation. When we take pride in show casing our achievements in most of the categories, the flip side is we have not fared well in health and primary education. PURA (Providing Urban infrastructure in Rural Areas) advocated by Former President Dr. A.P.J. Abdul Kalam is relevant even today and needs to be taken up with more vigour. 12th Five Year Plan document makes a relevant point that infrastructure provides the basic support system for other sectors in expanding capabilities. Traditionally public sector had been the major stakeholder as far as infrastructure financing is concerned. The Plan document also indicates that India’s Domestic Savings rate is high and can finance much of the infrastructure investment needs. However, financial intermediations of these savings on a large enough scale need a well-diversified and complex financial system, suitable products apart from depth and liquidity of the capital markets providing long term funding. However, the growing need is beyond the public sector’s capacity. Thus there is enough space for private sector to play its role. Of late the private sector has become an important player contributing as much as 40% towards infrastructure investment. The World Bank has been supporting the India Infrastructure Finance Company Limited (IIFCL) through financing PPP so as to increase the availability of long term funds. The other players in the infrastructure space are ADB, EBRD, EIB, IBRD/IDA, IDB, IFC, MIGA etc.

3. Fund Requirement

3.1. We have seen earlier that the requirement under infrastructure during the 12th five-year plan will be ₹65 lakh crore. 50% thereof was assumed to be from budgetary resources while the rest ₹32.5 lakh crore needs to be met through debt and equity. As per the plan document, project funding by various sources amounts to ₹17.89 lakh crore leaving a funding gap of around ₹14.6 lakh crore. Various policy and regulatory recommendations have been made recently that will enable a greater flow of funds. Accordingly, it is estimated that ₹8.89 lakh crore will flow from Commercial Banks, while ₹4.38 lakh crore from NBFCs, ₹6.03 lakh crore from Insurance, ₹0.54 lakh from ECBs and ₹6.78 lakh crore will be raised through Equity and FDI. Thus revised estimate indicates a total inflow of ₹26.62 lakh crore. In case the budgetary support, assumed at ₹32.5 lakh crore is not met fully, the gap in resources will expand accordingly.

3.2. The Honourable Union Minister for Road Transport and Highways and Shipping Mr. Nitin Gadkari has announced the Government’s target of ₹25 trillion investments in infrastructure over a period of 3 years. This includes ₹8 trillion for developing 27 industrial clusters and an additional ₹5 trillion for road, railway and port connectivity projects. Other developments in this regard as indicated by "India Brand Equity Foundation" are as follows: -

1. We need ₹31 trillion over next 5 years for power, roads and urban infrastructure segments.
2. The Asian Development Bank (ADB) has approved US $ 631 million loan to develop Vishakapatnam-Chennai industrial corridor which is expected to bring manufacturing and export industries to the east coast.
3. Silver Spring Capital Management, a Hong Kong-based equity hedge fund plans to invest over ₹2000 crore in Hyderabad-based infrastructure developer Transstroy India Ltd. for construction of highways in the country.
4. Sovereign wealth funds and global pension funds plan to invest up to US $ 50 billion in Indian infrastructure sector over the next 5 years.
5. Airports Authority of India (AAI) plans to develop city side infrastructure at 13 regional airports across India with help from private players for building hotels, car parks and other facilities and thereby boost its non-aeronautical revenues.
6. Asian Development Bank (ADB) and Government of India signed a loan agreement of US $ 80 million under the North Eastern Region Capital Cities Devt. Investment Prog. for improving water supply, solid waste management and sanitation.
7. Maharashtra State Govt. plans to launch infrastructure projects worth ₹73,367 crore for coastal road, trans harbour link, metro rail, airport and road projects.
8. Govt. of India has earmarked ₹50,000 crore to develop 100 smart cities across the country.
9. France has announced a commitment of Euro 2 billion to convert Chandigarh, Nagpur and Puducherry into smart cities.

4. Policy initiatives

4.1. We continued our journey as one of the fastest growing economies in the world during the year 2016-17 despite global economic turmoil accompanied by unprecedented domestic challenges such as demonetisation locally. Our achievement under Gross Domestic Product (GDP) stood at 7.2 per cent in 2014-15 and touched 7.6% in 2015-16. Latest data available indicate that the trend will continue this year also. A number of policy initiatives including increased reorientation of Government spending on public infrastructure besides strong domestic demand, low inflation and a favourable current account balance helped achieving robust growth in three consecutive years.

4.2. Government plans to invest over ₹7000 crore during 2016-17 to develop its network in the north eastern region for better connectivity. It also plans to boost regional connectivity by setting up 50 new airports over the next 3 years.

4.3. NITI Aayog has instructed central public sector units to release 75% of the amount due to construction contractors and concessionaires of Govt. projects which is expected to release over ₹40000 crore for projects that are under dispute. This is a huge boost for the investors.

4.4. As per the Ministry of Urban Development - "Smart Cities: Mission Statement and Guidelines", emphasis is on the need for a comprehensive development of physical, institutional, social and economic infrastructure for improving the quality of life and attracting people and investments to 100 small cities, leading to the virtuous cycle of growth and development during 2015-2019. Public entities such as Municipalities/Corporations are major stakeholders in financing, development and delivery of infrastructure services in India. Their creditworthiness will ensure their access to domestic capital and attract private equity under PPP. According to RBI, this will pave the way for revival of Municipal Bond market as a source of funding urban infrastructure projects. It is pertinent to add here that despite their weak finances, none of the municipal bond issues have defaulted in repayment. Another major step taken by India has been the introduction of tax free infrastructure bond which has largely helped in mobilising low volume high value savings from the public.

4.5. Willingness of Private sector in infrastructure financing is determined by sector specific regulations and concessions under the national laws. They provide policy framework for building, financing and managing infrastructure assets and to collect tolls and tariffs. Local Government will have to consciously build an environment for more confidence and trust rather than confidence deficit in applying the regulations in the field. This can be demonstrated through more transparent procedures for project selection, appraisal and awarding of contract and concessions.

5. RBI's outlook in infrastructure financing

5.1. For quite some time, the decline in asset quality under infrastructure financing has been a key area of concern for the banking sector in general and the Public Sector Banks in particular. Accordingly, several regulatory measures to de-stress the balance sheets of banks have been taken in recent times by RBI. These measures have helped in large measure in building confidence among the banking community to have a fresh look on infrastructure financing which was facing a huge cash crunch. In his keynote address on "Financing for infrastructure: Current Issues & Emerging Challenges", Shri H.R.Khan, Deputy Governor of RBI highlighted the need for "creating an enabling atmosphere that fosters competition and improves ease of doing business". In pursuit of the same, the policy makers in India have been striving to fix the fault lines so as to increase the confidence level among international and domestic investors. RBI's proactive steps in regard to currency convertibility and transferability have improved the capital inflow into our country. It has paved the way for more flexible exchange rate regimes.

5.2. In its endeavour to attract funds, RBI has allowed companies in the infrastructure sector to raise External Commercial Borrowings with a minimum maturity of five years and with an individual limit of US $ 750 million for borrowing under the automatic route. It has also notified 100% foreign direct investment under automatic route in the construction development sector.

6. Direction stemming from Budget 2017

Honourable Finance Minister Mr. Arun Jaitley had underlined the importance of infrastructure in his scheme of things for the economy while presenting the Union Budget in Parliament. According to him, the agenda for 2017-18 is to transform, energise and clean India with increased allocation for rural areas, infrastructure and the total allocation for infrastructure at record level of ₹3.96 lakh crore. It is definitely a defining moment so far as infrastructure is concerned in India. The Finance Minister also emphasised that the country is getting a big boost from foreign funds in its bid to build up its infrastructure. The salient features of budget in regard to infrastructure are as follows: -

1. **100% electrification of villages by May 2018**
2. **133 km. Road per day being constructed**
3. **A new metro rail policy to be announced which will open up new jobs for youth**
4. **Two new All India Institute of Medical Sciences to be set up in Jharkhand and Gujarat**
5. **New airports in tier II cities on PPP mode**
6. **Railway line of 3500 km. to be commissioned in 2017-18**

7. Infrastructure and Social implication

"Eradicating extreme poverty and hunger", "Ensuring Environmental Sustainability" and "Global Partnership for Development" form part of the Millennium Development Goals. The Goals formulated by UNDP assumed that large investments in health, education and other social outcomes would unleash the potential for growth and development. Although we have done extremely well under these goals, hunger and sanitation still remain tough challenges. Infrastructure Development is the key for overall development of hitherto undeveloped areas. This direction from UN helps international investors to play their role in funding for this sector in India. Roads and railways which are life line of people every day are ageing. Progress in infrastructure development has been painstakingly slow. A well-developed physical connectivity in terms of rail and/or road network can help the producers and consumers in price discovery resulting in the overall well-being of communities. Basic infrastructure such as transportation, communication, electric systems coupled with access to finance through a well-developed financial infrastructure will go a long way in providing better job opportunities to rural youth resulting in overall economic and social growth. Viewing from the social perspective, the following areas are enablers for overall development of India: -

1. Promoting productive and sustainable agricultural production that safeguards natural resources
2. Unlock territories, economies,
3. Promote development of rural areas
4. Support job creating enterprises
5. Strengthen human capital
6. Increased regional integration

8. Rural Infrastructure Development Fund (RIDF)

8.1. Rural Infrastructure Development Fund (RIDF) constituted with the National Bank for Agriculture and Rural Development (NABARD) has emerged as an important source of funding for almost all the state Governments for building up critical rural infrastructure. The assistance under RIDF constituted about one fifth of the investments by the various state Governments in the rural infrastructure space. Several factors have contributed to the popularity as also the effectiveness of RIDF as a source of public funding which include timely appraisal and sanction, quick release of funds, prioritisation of projects, constant and continuous monitoring by a High Power Committee chaired by Chief Secretary of the State Govt. at State level and District Collector at District level and District Development Manager of NABARD at the field level. These investments have helped in creation of additional irrigation potential and construction of network of rural road and bridges for better connectivity in far flung areas. Social sector projects under RIDF have brought improvement in quality of rural life through education, health and sanitation, drinking water supply apart from recurring and non-recurring employment generation.

8.2. RIDF – A big boost for rural infrastructure :

The RIDF was set up during 1995-96 with a corpus of ₹2000 crore with a view to funding rural infrastructure projects related to medium and minor irrigation and watershed development which were lying incomplete for want of financial resources, and has come a long way in the last 21 years and presently its XXII tranche is ongoing. As on 31st March 2016, the fund is maintained by the National Bank for Agriculture and Rural Development (NABARD). The cumulative allocation had reached ₹2.425 lakh crore against which sanctions and disbursements were ₹2.60 lakh crore and ₹1.90 lakh crore respectively. The fund is supported by deposits from scheduled commercial banks with shortfalls in lending to priority sector. RIDF now covers 36 activities listed below which can be classified under three broad categories i.e. (i) Agriculture and related sectors (ii) Rural connectivity and (iii) Social sector. Thousands of completed or on-going projects have touched the lives of rural communities positively in various spheres. RIDF has a significant share in public investment in rural infrastructure constituting nearly one fifth share. RIDF has not only emerged as an attractive financing option for the State Governments but has also helped in redirecting the bank credit meant for rural and priority sectors back to the rural economy. Studies have revealed that investments have enabled expansion of rural financial markets and usher in inclusive growth in the disadvantaged regions of the country. NABARD has introduced strict monitoring procedures and has also ensured that there is social monitoring so that the people own up the project and the social audit in regard to timely completion is also ensured to a greater extent.

The various activities, for which the RIDF projects are sanctioned are as follows: -

A. Agriculture and related sectors (RIDF loan: 95%)

RIDF XXI: More equitable RIDF allocation for Eastern & North Eastern Regions

RCC Bridge over River Dholeswari

1. Minor Irrigation / Micro Irrigation projects
2. Soil Conservation
3. Flood protection
4. Watershed Development/Reclamation of waterlogged areas
5. Drainage
6. Forest Development
7. Market Yard, Godown, Mandi, Rural Haat, Marketing Infrastructure
8. Cold storage, Public/Joint sector cold storage at various exit points
9. Seed/Agriculture/Horticulture farms
10. Plantation and Horticulture
11. Grading/certifying mechanisms; testing/certifying laboratories
12. Community irrigation wells for the village as a whole
13. Fishing harbour/jetties
14. Riverine Fisheries
15. Animal Husbandry
16. Modern Abbattoir
17. Medium Irrigation Projects
18. Mini Hydel Projects/Small Hydel projects (up to 25 MW)
19. Major Irrigation Projects (already sanctioned and under execution)
20. Village Knowledge Centres
21. Desalination plants in coastal areas
22. Infrastructure for IT in rural areas
23. Infrastructure works related with alternate sources of energy viz. Solar, wind etc. and energy conservation
24. 5/10 MW Solar photo voltaic power plants
25. Separate Feeder Lines
26. Establishment of dedicated rural industrial estates.

B. Social Sectors (RIDF LOAN 85% / Hill and NE states 90%)

1. Drinking water
2. Infrastructure for Rural Education Institutions
3. Public Health Institutions
4. Construction of toilet blocks in existing schools, specially for girls
5. “Pay & Use” toilets in rural areas

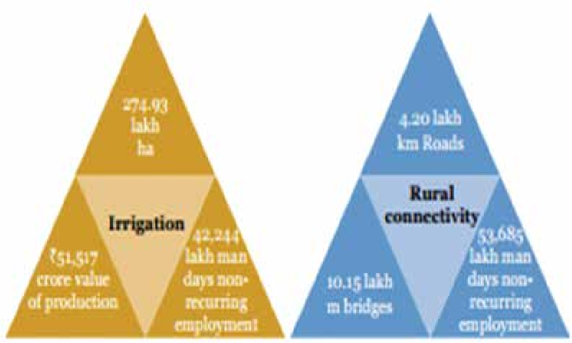
6. Construction of Anganwadi centres
7. Setting up of KVIC industrial estates/centres
8. Solid Waste Management and Infrastructure works related with sanitation in rural areas.

C. Rural Connectivity (RIDF loan: 80% / Hill & NE states 90%)

1. Rural Roads
2. Rural Bridges

8.3. It is worth mentioning that Rural connectivity including rural roads and rural bridges, had the highest share at 42% followed by agriculture and related sectors at 40% and social sector projects at 15%.

Irrigation and rural connectivity projects—estimated physical potential and generation of rural employment



Source: NABARD

8.4. Social Monitoring of RIDF projects

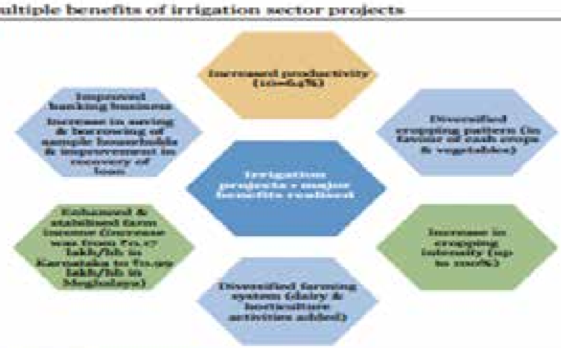
The unique feature of NABARD RIDF projects is social monitoring. It is ensured by making available basic details of projects in public domain and generate awareness among the ultimate beneficiaries, media, banks etc. As part of social monitoring, suitable project display boards are erected at prominent places indicating physical and financial details of the project financed, preferably in local language. Display of such boards at prominent places serve the twin purposes of social monitoring (to bring out a sense of belonging among the rural populace in implementation) as well as creating social awareness about participation of NABARD in the implementation. Further, there are Project Monitoring Committees at the State and the District Level to thrash out issues in non-starter and slow moving projects. Thorough review is done on non-starter and slow moving projects and remedial actions are taken. In case of unresolved issues, they are duly escalated and sorted out.

8.5. NABARD has completed 12 impact evaluation studies in irrigation and rural connectivity sectors in collaboration with institutions such as IIMs in Ahmedabad and Shillong and IITs in Kharagpur and Guwahati covering nine states including Himachal Pradesh, Gujarat, West Bengal, Tamilnadu. The study results validated the significant gains in rural income levels, diversification of rural livelihood activities, improvement in quality of life of rural population and greater traction for rural banking business. The study findings are as follows: -

Multiple benefits of projects on rural roads and bridges

Source: NABARD

Multiple benefits of irrigation sector projects



Source: NABARD

9. Challenges in infrastructure financing

High capital intensity, low operating cost, higher gestation period, near absent risk mitigation measures, difficulties in getting environment clearance, inability to generate direct adequate income streams to self-finance are some of the challenges in infrastructure financing. These adversely impact the private sectors' appetite to commit long term capital. Private financiers' confidence level has been dented due to issues relating to stressed assets, land acquisition, rehabilitation, environment etc. As per one estimate, nearly 50% of infrastructure projects languish at various stages of implementation due to variety of regulatory hurdles and sector specific bottlenecks leading to significant time and cost over runs. The silver line, however, in India, is its resilience in the face of recent domestic macro-economic shocks and international financial crises. This resilience underscores the robust macroeconomic stability in India. The administrative restrictions and local unfriendly regulations are challenges which remain even today. Some of the critical issues in infrastructure sector are:

1. Emerging legal and procedural issues
2. Issues in Land acquisition and environmental clearances
3. Planning and execution issues
4. Persistent high inflation
5. Mounting current account deficit
6. Financial and non-financial issues
7. Growing stressed assets in infrastructure financing resulting in growing aversion towards this sector.
8. Asset Liability Mismatch – sourcing short term funds to finance long term assets – issue of lending at floating rates linked to MCLR.
9. Capacity of small banks to perform independent credit appraisal of such large projects and also to withstand credit risk from these loans.
10. Confidence deficit among the international and domestic investors
11. Market volatility

10. Way forward

The International Monetary Fund (IMF), the World Bank and the Asian Development Bank have predicted robust growth for our country during 2017. IMF has projected our growth rate @ 7.5 per cent for 2017 supported by stronger domestic demand. Our country stands out as one with huge potential for growth compared to the developed and other emerging market economies including other BRICS nations. However, the challenges indicated above impact adversely the risk appetite of investors as well as lenders. There is no one size-fits-all-solution. Yet, some suggestions to overcome the challenges are as follows: -

1. Creating Single Window system, wherever possible.
2. Consortium financing aiming at risk spread
3. Establishing transparent rules enabling investor form estimates of future returns, assess risks and have assurance that contracts will be enforced (unlike Dabhol Power Project) and availability of legal framework to get remedies in case of any default.
4. Development of local capital markets as a source of long term finance and as a hedging instrument against currency risk.
5. Developing viable public-private risk mitigation measures and appropriate legal framework in the public domain and financing instruments capable of addressing a host of credit, currency, contractual, political and regulatory risks.
6. Focussing on completing the ongoing projects rather than starting new projects. Experience in the field shows that many projects started years back have not been completed owing to reasons such as cost overrun, time overrun, deviation from the original design, funds crunch experienced by the contractors due to delay in release, design flaw, social upheaval which was not factored earlier, change in Government, lack of coordination by various departments etc. These are only a few challenges but by no means insurmountable. Timely intervention at the appropriate level and firm commitment from the implementing agencies will see the projects through.

7. Focussing on getting the right project. In our country funds are not scarce to come by. Insurance companies and pension funds are eager to invest in infrastructure. Government's policy framework also encourages this. Development Banks such as NABARD, IDBI, SIDBI, SBICAP, International investors and multilateral development banks are eager to contribute. It is therefore imperative to focus on well-structured projects and realistic projections.

8. Let us not promise more and deliver less - In our enthusiasm to be popular, we tend to promise more by way of lavish benefits, shorter completion schedule whereas in reality, delayed completion and time overruns are order of the day. Further, we should not overstate the yields/benefits. Infrastructure projects take more time to start yielding but their economic life cycle is longer. It makes more sense to promise less and deliver more.

9. Advisable to go for smaller projects rather than fail in giant projects – Infrastructure must meet the needs of local communities rather than focussing on sheer size and popularity. Large projects make good headlines but the outcome fall far short of expectations. In smaller projects, incidence of crisis point is much less and easily surmountable compared to larger ones which need more time to overcome. For instance, small culverts at appropriate land parcels tend to benefit more local communities on a continuous basis within months of initiating the projects compared to large dams which remain incomplete for decades.

10. Identifying areas where private sector will deliver faster – It is common knowledge that wind energy where private sector is the major player has consistently performed over the years whereas large projects like Kudankulam Nuclear Plant had embroiled itself in controversies from the beginning and had to overcome social upheavals on a continuous basis.

11. Takeout financing – leading to release of long term funds.

12. Setting up Infrastructure Debt Funds (investment vehicles which can be set up as NBFCs and are used for investments in infrastructure projects)

13. Innovative financing options through equity, debt and other hybrid instruments

14. Making use of 5/25 scheme in terms of which, banks are allowed to fix longer amortisation period for loans to projects in infrastructure or core industries sector for, say, 25 years, with periodic refinancing, say, every 5 years.

15. Learn from the success of RIDF funding by NABARD.

11. Conclusion

Infrastructure is a critical catalyst in accelerating growth benefiting stakeholders such as producers, consumers, rural households, industries and marginalised sections of the society. Hurdles in financing infrastructure, given its special characteristics, such as long gestation, huge capital outlays and exposure to policy and procedural uncertainties make this sector all the more risky. However, policy makers in India are alive to these challenges as indicated in the above paragraphs and have taken many proactive measures such as creating conducive political atmosphere, friendly administrative procedures, opening single window clearance, activating bond markets as an alternative source of funding, opening up newer and innovative channels of financing, municipal bonds etc. to encourage capital flow in India. International agencies, let us assume, will take note of these positive measures and prevailing conducive atmosphere to take part in the India growth story. After all, the journey of a thousand miles starts with one single step in the right direction.

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Stalled and Delayed Infrastructure Projects: The Strategic Approach

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Abstract

The need and scope for infrastructure development in India is enormous. However, delays in implementation of the projects are not only resulting in time and cost escalations but also leading to abandonment of the projects midway. It is estimated that if the bottlenecks in infrastructure development are properly addressed, India has the potential to increase its GDP by 1%-2%. This paper attempts to (i) suggest improvement in the existing project monitoring mechanism by PMG (ii) shift the excessive focus of the banks from financial data to time and cost over runs by effective usage of tools like PERT and CPM (iii) highlight the importance of 3 Es of project management (Economy, Efficiency and Effectiveness) as operational strategies and (iv) Emphasize the need for PPP models in infrastructure projects in general and road projects in particular. The authors are confident that the above proposed strategic approach towards the stalled and delayed infrastructure projects would speed up the execution of projects reducing the time and cost overruns in addition to fixing the responsibility and accountability on the respective stakeholders of the projects.

Key words: PPP Models, Project Monitoring Group, BOT Road projects, Toll Plazas, 3 Es of Project Management.

Introduction

Delays in implementation of major infrastructure projects has led to ₹524.45 billion (bn) escalation in their original cost estimates from ₹1452.71 bn to ₹1977.16 bn as on 31st May 2012 .

Cost escalation in major infra projects as on 31st May, 2012 (Table 1)

Category	No of projects	Original cost	Revised estimates	Net increase in cost	Percentage of upward revision
Power	28	866.82 bn	996.54 bn	129.72 bn	15%
Railways	36	250.89 bn	624.83 bn	373.94 bn	149%
Roads	84	335.00 bn	355.79 bn	20.79 bn	6%
Total	***148***	***1452.71bn***	***1977.16bn***	***524.45 bn***	***36%***

(1)

Cost escalation in central infrastructure projects (projects costing ₹1500 million and above) (Table 2)

Period	Total No. of Projects	No. of stalled projects	Original cost (INR)	Revised estimates (INR)	Net increase in cost (INR)	Percentage of upward revision
30th August, 2014	720	295	5488 bn	6053 bn	1015 bn	18.5%
31st December, 2014	738	315	9776 bn	11848 bn	2072 bn	21%
31st December, 2016	1186	287	14600 bn	16264 bn	1664 bn	11.39%

(2)

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Out of the 295 projects mentioned above the road sector accounted for the maximum of 92 delayed projects with total cost overrun of ₹19.75 bn.

In March 2015, 302 projects worth ₹1847 trillion were under consideration by PMG (Project Monitoring Group) that were held up due to various clearances and approvals. By June 2015 this number swelled to 404 projects with an estimated investment of ₹1900 trillion. Value of these delayed projects constitutes around 8% of GDP. As of December 15, 2015, there were 65 stalled projects in the power sector. These stalled projects cost over ₹2,500 billion($37.9 billion). In the coal sector, there were 13 stalled projects costing over ₹300 billion ($4.5 billion). The number of stalled projects in roads and highways were 34, and cost over ₹500 billion ($7.6 billion). In railways, the number of stalled projects is 84, which amounts to over ₹900 billion. (The data regarding the stalled projects is from the Government of India's Ministry of Statistics and Programme Implementation's report.) Costs and time overruns are mounting up like white elephants, many times defeating the very purpose of the execution of infrastructure projects.

India's road network (Table 3)

Type of roads	Length in Kms
Express ways	200
National highways	96,260.72
State Highways	1,31,899
Major District Roads	4,67,763
Rural and Other Roads	26,50,000
Total Length	33 lakhs kms (Approx)

(3)

There are 638,588 villages in India as per the 2011 census. 40 percent of villages in India do not have access to all weather roads. Indian roads carry around 90 percent of the passenger traffic and 65% of the freight traffic. Therefore, road net work is the main back bone of Indian economy. Studies also reveal that the penetration of proper health care, education, banking and other non banking financial services in villages is directly proportional to the presence of proper road network. It is not surprising that around 66% of rural population does not have access to critical medicines and 31% of the people in rural India have to commute more than 30 KMs to obtain healthcare facilities.

During the last decade National Highway Authority of India (NHAI) has gone for construction of national highways and express ways under public private partnership (PPP) wherein the road contractors initially fund the road construction cost and recover the same in due course through toll revenues under BOT(Build, Operate and Transfer) models. State governments have also followed the NHAI by opting for the PPP models under BOT for construction of state highways. To insulate the road contractors from short falls in toll revenue collections under the BOT-Toll models, govt. has started encouraging BOT-Annuity wherein the contractors are assured of certain agreed minimum annual toll revenues by the govt., when there are shortfalls in toll revenue collections.

The actual expenditure incurred in the road sector during the 10th and 11th Five year plans and the proposed expenditure during 12th Five year plan is as under (Table 4)-

Plan period	Total infrastructure expenditure (INR Trillion)	Total road sector expenditure (INR Trillion)	% of road sector in total infrastructure expenditure
10th Five year plan	9.1	1.3	13.8
11th Five year plan	20.5	2.8	13.6
12th Five year plan	40.9	4.9	12.0

(4)

The estimated funding requirement for the national highways and expressways including the special packages for the 12th Five year plan is likely to be ₹4,809.89 bn. The share of the private sector in this total funding requirement is estimated at ₹1,782.53

bn. Share of private sector assumes importance since several projects are executed under PPP model.

PPP Models have been used popularly in the road sector in both the Centre and the States during the 11th Five year plan. As per the approach paper to the 12th Five year plan prepared by the erstwhile planning commission in October 2011, the PPP Model will remain an important instrument in the 12th five year plan as well. India is second only to China in the number of ongoing public-private partnerships (PPPs) and second only to Brazil in PPP investments.

Share of private sector in central sector roads (Table 5):

Plan period	Total amount (INR bn)	Private sector share (INR bn)
11th Five year plan	1,906.06	867.92
12th Five year plan (estimates)	3,237.74	1667.38

(5)

Current system of monitoring infrastructure projects

Statistics ministry monitors central infrastructure projects costing ₹1500 mio and above on time and cost overruns. The Govt., has also setup standing committees in the administrative ministries for fixation of responsibility for time and cost overruns and central sector projects coordination committees in States under chief secretaries for removal of bottlenecks and for speedy implementation of major projects. PMG (Project Monitoring Group) was set up in January, 2013 as a secretariat to the cabinet committee on investments to resolve the pending issues and to track the progress of projects of the size of ₹10 bn and above in both public and private sector. So far the PMG has facilitated resolution of pending issues in 612 projects worth ₹2515 bn till date. (https://esuvidha.gov.in/cabsec/showpdf_perf.php). Post budget 2015-16, 42 projects worth ₹115 bn have been resolved by PMG out of which highway road projects constitute around 50%. However, as on date there are 251 projects worth ₹10760 bn that are held up due to lack of various approvals and clearances. Out of this 71 projects relate to road transport and highways amounting to ₹1435 bn. Two years ago the task of monitoring the projects has shifted from Department of Financial Services in the Finance Ministry to PMG. PMG is headed by additional secretary and consists of several sub groups having representation from project developers and joint secretaries in the sponsoring and recipient ministries as members.

U Turn in road projects from PPP models to EPC or hybrid annuity?

The govt. has gone for PPP models to replace EPC (Engineering, Procurement and Construction) mechanism in road sector mainly due to paucity of funds and to avoid the burden of time and cost overruns by shifting these risks to private sector. Since under the BOT Toll models the revenue risk is fully with the contractors, Government has introduced BOT Annuity models undertaking to compensate the contractors when the actual toll revenue collections fall short of the assured minimum toll revenues. However, multiple changes in the scope and design of projects, delays in approvals from various govt. agencies leading to time and costs overrun have adversely impacted the smooth take off of PPP models even under BOT Annuity models. As the private sector is shying away from PPP models due to the above reasons, the govt. has recently mooted the idea of footing 40% cost of BOT road projects to lure the contractors under a hybrid annuity model. This measure will reduce the overall financial burden of the contractors to 60% of the project cost. Additionally a minimum assured annual toll revenues comfort would also be offered to the contractors. It is expected that this proposed hybrid annuity model (a mix of EPC and annuity features) will act as VGF (Viability Gap Funding) to insulate the contractors from shortfalls in toll collection estimates in addition to bringing down the exposure of the contractors on the overall project cost to 60%. While this may encourage the contractors to go for BOT road projects through the proposed hybrid annuity model, indirectly this amounts to admission of costs overruns and uncertainty of toll revenue estimates in the projects by the government.

Critics argue in favor of EPC models citing the inordinate delays involved in execution of projects under BOT models but this argument can be countered by the following facts-

1. Govt. does not have the resources to fund the massive infrastructure projects.
2. One of the main reasons behind the delays in execution of projects (i.e., both under BOT as well as EPC models) is due to issues involved in land acquisition, law and order, environment and forest clearances and other govt. approvals particularly from railways for ROB (Rail Over Bridges) and RUB (Rail Under Bridges), shifting of utilities like-electric lines, water pipelines, sewer lines, telecommunication lines etc. in the case of road projects.

Therefore, the major reason behind the delays in execution of infrastructure projects lies with the govt. and in this context whether the project is under BOT or EPC model is immaterial. Effective monitoring of the achievement of targets by standardized periodical reporting, removing the hurdles in execution of the projects, fixing accountability and ensuring transparency are the key factors the Govt. needs to focus on, rather than making a U turn from BOT models to EPC mechanism.

Measures suggested for reducing time and costs overruns

Coming to the specific issue of delays in execution of infrastructure projects in general and BOT road projects under PPP models in particular, the following measures are the need of the hour.

The current system of statistics ministry monitoring the central infrastructure projects costing ₹1500 mio and above on time and cost overruns has just proved to be a mere statistical exercise without being effective, though in the last two years some progress is visible after the task has been fully entrusted to PMG. The various Standing committees and central sector projects coordination committees mentioned earlier will be meaningful only when all the stake holders of the infrastructure projects (i.e., representatives of contractors, concerned Govt. agencies, banks and FIs and NHAI in the case of road projects) are made members/observers in these committees and actively involved in this exercise so that the reasons for costs and time overruns are identified at periodical intervals and necessary steps are taken for elimination of the bottlenecks by the concerned stake holders who are responsible for the same. It is suggested that projects above ₹10 bn size each to be monitored on monthly basis by PMG, whereas projects between ₹5 bn -₹10 bn to be monitored every two months and projects of the size between ₹1500 mio to ₹ 5 bn to be monitored on quarterly basis. Incidentally the project funding Banks and FIs though are one of the key stakeholders, currently they are not part of the PMG. It is suggested that these Banks and FIs may be included in the PMG meetings as observers/invitees.

Govt. has already initiated the process of sharing the data of PPP projects of all sectors in the website-pppinindia.com, which is mostly a statistical exercise. It is suggested that NHAI and pppinindia.com start sharing the above information on line in public domain, along with the reasons for the costs and time overruns and details of the stake holders responsible for such overruns/ delays. This mechanism will lead to greater accountability by fixing responsibility on the concerned stake holders and reduce the delays in project implementation. There is a general misconception that time overruns that do not involve any additional costs are acceptable by normal standards. However, if one goes by the concept of time value of money then even those projects that do not prima facie involve additional costs but have only time overruns would prove to be in fact much costlier. Added to this when one computes the notional loss to the society for being deprived of the benefits of the projects due to delays, then in many cases it may not be surprising to realize that projects with time over runs are perhaps more costlier than those with costs overruns! Taking these aspects into account the real costs of projects with time overruns to be measured and disclosed to the public by the govt. in public domain as per the mechanism suggested above.

If this system is implemented then the road sector which accounted for the maximum of 71 delayed projects with total cost overrun of ₹1435 bn (as on 31st December, 2016), would improve its performance by reducing the time and costs over runs, since this would bring in greater transparency and accountability.

Automation of all toll plazas

There are currently 363 toll plazas across the country in national highways. NHAI has floated Indian Highways Management Company Limited to manage the toll collection of national highways across the country. Efforts are on to introduce electronic toll collection all over the country and the pilot projects have recently started. However, there is a long way to go since all vehicles plying on highways need to have their number plates linked with RFID (Radio Frequency Identification) and bank account or debit/ credit cards or prepaid toll cards for ensuring on line toll collection. This mission has to be completed and the project to be implemented on priority basis. This will eliminate the current gaps existing in sharing the toll collection data by the contractors with NHAI and banks since the same can be shared online on real time basis once this is fully operational. This measure will also strengthen the escrow mechanism to capture the toll revenue collections effectively by the banks, avoiding diversion of funds. Tracking of vehicles, monitoring the traffic movements for controlling accidents and other safety measures can be taken up effectively through advanced technology when all the vehicles on highways are primarily tagged to RFID.

Gaps in project review/monitoring by banks

It is a known fact that project monitoring methods of banks and FIs have certain lacunae. Early warning signals of problems noticeable in projects are missed out on several cases and site visits/inspections are mostly of ritualistic nature. Banks to have in place systems to capture the account level early warning signals by designing simple software to monitor the turnover in the account and link the same to project receivables, payables and inventory to ascertain any diversion of funds or dilution of security of project assets charged to the bank. It is suggested that projects above ₹10 bn size each to be reviewed on monthly basis, whereas projects between ₹5 bn–₹10 bn to be reviewed every two months and projects between ₹1500 mio to ₹5 bn to be reviewed on quarterly basis for detecting the early warning signals from account operations. This project review/ monitoring mechanism by banks then will be in uniformity with the measures suggested to monitor the costs and time overruns by Standing committees and central sector projects coordination committees formed by the govt.(including PMG) as mentioned earlier in the article, leading to effective coordination by various agencies for an overall cohesive approach. Project site inspections at periodical intervals by banks and financial institutions should also include NHAI and other related government agencies so that the collective responsibility of all stake holders in project review and monitoring is reflected in letter and spirit.

To shift the focus from excessive financial data to time and costs overruns:

There is an excess focus by the banks on financial data and its analysis rather than ascertaining the reasons behind the time and cost over runs in execution of the projects, leading to missing the wood for the trees. Therefore, tools like PERT (Project Evaluation and Review Technique) and CPM (Critical Path Method), applied by the contractors for project planning, execution, review and monitoring, has to be an integral part of project appraisal and monitoring mechanism of banks in order to properly identify the factors behind delay in project implementation and to keep track of the costs and time overruns during the project execution. It is suggested that the above information may be obtained by the banks as a part of FFR 1 and FFR II (Financial Follow up Report) from the contractors on quarterly basis. This methodology will enable the banks to shift the excessive focus from financial data to planning and allocation of resources in the project and to ascertain the factors/people/institutions responsible for time and cost overruns so that timely corrective measures can be initiated.

Infrastructure lending by banks, issues and challenges

- **Bank credit to infrastructure sector (Table 6)**

Year	₹ Bn
1999-2000	72.43
2012-2013	7860.45

Bank funding to infrastructure sector grew by 43.41 percent (CAGR) over the last thirteen years during 1999-2000 to 2012-2013. In March, 2016 bank funding to infrastructure sector stood at ₹9853 bn.

% of infrastructure finance to gross bank credit (Table 7)

2001	1.63
2013	13.37

In March, 2015 the % of infrastructure finance to gross bank credit increased to 15.3%.

- **Gross NPAs and restructured standard advances to total infrastructure sector advances (Table 8)**

2009	₹121.90 Bn	4.66 %
2013	₹1369.70 Bn	17.43%

The stressed advances ratio of infrastructure sector stood at 16.7% in March, 2016.

Between March 2008 and March 2013 alone, banks' exposure to infrastructure has grown by more than three times.

- According to CRISIL report (August 2012) the portfolio of restructured loans are to the tune of ₹1.6 Trillion in 2012 and first quarter of 2013; and these loans mostly relate to power, infrastructure and construction activities.
- During 2012-13 the restructured loan portfolio of Indian banks under CDR (Corporate Debt Restructuring) mechanism is estimated at ₹710 bn compared to ₹400 bn in the year 2011-12. The Gross Non-Performing Advances (GNPA) ratio of SCBs (scheduled commercial banks) stood at 8.2% in March, 2016.
- Net Non-Performing Advances ratio of SCBs stood at 4.6% in March, 2016.

As can be seen from the above data, NPAs in infrastructure lending is one of the main issues faced by banks currently. The gaps in project appraisal and monitoring, inability to detect the early warning signals and excess focus on financial data vis-à-vis time and costs overruns are some of the major factors that have an impact on the quality of asset portfolio in infrastructure lending. These issues have to be addressed in order to manage the NPAs in infra lending effectively.

Infrastructure projects are highly technology driven and becoming more and more complex in nature in view of rapid changes in technology. Banks run the risk of excessive dependence on outside agencies to evaluate the techno economic viability of the projects unless they enhance the technical skills of their own staff and nurture and develop adequate expertise internally. Therefore, human capital adequacy is the need of the hour to address this future challenge by the banks. This calls for concerted efforts by the HR divisions of the banks to devise a methodology to compute the human capital adequacy by mapping the actual skill sets of the staff to the required skills of the job profile, identify the gaps and take appropriate measures to bridge the same. This also requires alignment of the staff training and transfers to match the job profile and skills and competencies of the people. These measures will go a long way in nurturing talent, competencies and gain expertise in handling complex infrastructure projects by the banks.

3 Es of Project Management

Economy:

Optimum utilization of the resources is one of the keys to successful project implementation. Avoiding wastage of resources and putting the resources to the best use are the twin operational strategies to achieve economy in resources utilization.

Efficiency:

Meeting the time schedules in various stages of project implementation is yet another important factor for successful completion of the project. Efficiency in operations (ie., speed and accuracy) is a prerequisite to ensure adhering to the project timelines and achieving the milestones.

Effectiveness:

Infrastructure projects have certain basic objectives like creation of a facility to deliver a service, utility to the people or provide communication, connectivity between the regions or facilitate mobility of resources from one place to another in order to address a need or remove bottlenecks so that it ultimately results in greater economic development and better standards of living of the people. Therefore, effectiveness is a measure of attainment of these basic objectives on completion of the project and commencement of its activities.

A project can be termed as successful only when all the 3 Es mentioned above (i.e., Economy, Efficiency and Effectiveness) are given due weightage in execution and maintenance of the project. For example if a project results in costs over run (uneconomical), then even though there may not be time over runs (Efficiency) and the project probably proves to be useful (Effectiveness), it does not make the project successful in the overall analysis since it has become cost wise expensive. Similarly when a project results in time over run (inefficiency) even though there may not be costs over run (Economy) and the project though proves to be useful (Effectiveness), in the overall analysis it may lose out from the angle of social cost benefit analysis more particularly when the time value of money and notional loss of benefit due to delay in project implementation are duly factored. In the same manner, a project may be executed well within its budget (Economy) and still meets its time lines in completion (Efficiency) but if it does not serve its purpose (say for example a fly over constructed to clear traffic congestion but if it finally results in more traffic jams or when people prefer not to use it because a much better alternative route is now available) then in the final analysis this project would be a failure.

One can conclude that these 3Es of project management are crucial for both project execution as well as maintenance of the same. The operational strategies in project management covering project execution and maintenance should primarily focus on these 3Es so that the project can become successful.

Conclusion

There is a need and vast scope for infrastructure development in India. However, several projects though launched ambitiously, are delayed due to various reasons and the Indian government has set up a PMG (Project Monitoring Group) in January, 2013 to oversee and ensure speedy implementation of large value infrastructure projects that are of national importance. In spite of this initiative by the Govt., the progress in speedy implementation of the projects is not very significant. The need of the hour is to have a strategic approach to identify the factors that cause delays by actively involving all the stake holders in project monitoring group (especially in road projects) and take the necessary corrective measures by fixing the responsibility and accountability on the concerned stake holders. The reasons behind the delay in execution of the projects that are being monitored by PMG as well as the people/institutions responsible for such delays should be displayed on the public domain by the agencies like- PMG, NHAI and State Governments concerned. Banks and financial institutions need to address the gaps in project appraisal and monitoring and also focus on nurturing the skill sets of their human capital. Also the operational strategies of project management should focus on 3 Es- Economy, Efficiency and Effectiveness in order to ensure that both project execution and maintenance are done successfully. The authors are confident that the strategic approach suggested in this article would ensure infrastructure projects (particularly BOT road projects under PPP models) becoming more successful so that the government does not take a U turn from PPP models to EPC since this is neither advisable nor feasible considering the pros and cons.

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Term Loan Appraisal with DSCR

V. Sundararajan*

Introduction:

Many younger generation officers are joining the banks like never ending waves year after year. Unlike olden days the percentage of people joining the bank with commerce back ground is becoming a rare commodity. Now seeing MBAs, Engineering graduates, etc. are common in the work place. In this juncture the need for certain basic appraisal functions of banks and hidden meanings in that process is well pronounced. Many a times the youngsters are learning banking through trial and error or turning the book and leaning the work. Banking being the backbone of the economy of any country, when we understand the fundamentals of credit appraisal in general and term loan appraisal in particular, the future is bright for the industry and future leaders of banking.

Term Loan in commercial banks:

The Term Loan as a regular concept is inducted in the commercial bankers precisely after the landmark year in the banking industry i.e., 1990-91,the year of globalization and privatization introduced by Dr. Manmohan Singh, the then finance minister. Earlier to that there was a clear cut demarcation between commercial bankers and term lending institutions. The banking industry itself was clearly segmented into Term Lending institutions and Commercial Banks. The Term Lending institutions were taking care of long term funding of term loans through their expertise in this field; the commercial bankers were happy with their bread and butter, the working capital finance. Post Liberalization, Privatization and Globalization (popularly known as LPG), the demarcation of Term Lending institutions and Commercial Banks were removed. Introduced amidst this chaos with which banking industry was going through, the Public Private Partnership known as BOOT BOT BOLT and in other various names to fund the infrastructure specifically. They were opened with a new concept term lending without actual security except future receivables. While the regulator Reserve Bank of India, gradually but steadily removing the clutches of directions and control, one of the last such decontrol measures viz. decontrolling the Savings Banks Interest rate was also introduced.

In the initial period after removal of the barrier between Term Lending Institutions and Commercial Banks in their nature of financing the economy, the Term Lending Institutions started opening commercial banks and commercial banks took up to Term Lending in a big way. While the switchover from Term Lending to Commercial banking was a cake walk for the term lending institutions, it was a double edged sword for commercial banks. For Term Lending an institution with the advantage of computerization from day one and learning the nuances of working capital was simpler as they had the experience of foreseeing the future of the industry while scheduling their repayment. For commercial banks the peak of computerization started during this turbulent period and forecasting for a period of 15 years a normal repayment for a PPP project was something never heard of. Further majority of their liabilities were

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demand in nature viz. Current Account and Savings account (CASA)

In this background, the clear idea of Term Loan appraisal is more important for the commercial banks especially the important points about their nature and how to assess them is highly needed for the young generation.

What is Term Loan?

A Term Loan is normally for creation of assets and repayment of which starts with a minimum of 3 years period. Other than infrastructure and core industries, the usual repayment period the commercial banks accustomed with is for 84 months. For any business entity whether it is Manufacturing, Producing, Trading and Servicing, the loans are basically converted into creation of fixed assets and using those fixed assets to generate profits. To a proper understanding let us say that this is "Starting"/"Establishing" the business and "Running" it are two different entities. While all the term loans sanctioned by banks are generally for creation of assets, there is a distinct difference between the term loans. One type of Term Loan is called Asset Financing and another is called Project Financing.

The basic difference between Asset Financing and Project Financing is to be seen in fixing their mode of repayment. In simple terms if the repayment is going to be out of existing cash flows, then it is asset financing and if it is out of future cash flows, that is going to be generated out of using such assets created by our Term Loan then it is Project financing. It can be explained in a simple example of purchasing a car for personal use and purchasing the same car for running a taxi business. The repayment is normally decided by two factors in case of asset financing i.e., willingness to pay and capacity to pay whereas in case of project financing the entire gamut of personal integrity, technical appraisal, managerial appraisal, environmental appraisal, financial appraisal, competition etc.

This is the prime reason why normally asset financing is with Equated Monthly Installment (EMI) as an option and project financing is with moratorium and repayment of interest and installment separately. It means only when the profit start accruing in the business after achieving the Date of Commercial Production.

What we are going to bother about?

There are plenty of academic books to enlighten the participants about the various types of appraisal viz., Personal, Technical, Managerial, Financial, Environmental appraisals. So, what we are going to study in this article from a banker's point of view are the following:

1) Soft Cost and Hard Cost
2) Subordination of debts other than bank's term loan.
3) Difference between Discounted and Non Discounted methods of repayment, its proper understanding and from whose point of view these are important.
4) Clear understanding of DSCR, the fulcrum of the appraisal when it comes to Project Financing.
5) What actually depreciation is and how it can be used to siphon off the funds?

1. Soft Cost and Hard Cost

When we see the Cost and Means or Sources and Uses of a Project, the costs are generally bifurcated in the following major heads.

- Land and Buildings
- Plant and Machinery
- Furniture and Fixtures
- Preliminary Expenses
- Pre-Operative Expenses
- Consultancy Costs

- Contingency
- Interest During Construction
- Margin for Working Capital

When it comes to cost, it is segregated into Hard and Soft Costs. The difference of these lies in the nature of security that is available for our security. It can be said as availability of tangible security as Prime Security to the bank's Term Loan. The first three expenses/investments definitely create an asset which is tangible. The assets created by other types of expenses are not generally creating any tangible assets as security for the banks. In case of pre-operative expenses, the companies act permits certain expenses to be capitalized and other than that the rest of the expenses are not creating any tangible security. In case of working capital all the security available for the bank finance is current assets which by nature of definition are convertible into cash at short notice. In case of Term Loan the security is the main concern of the banks when it comes to tangibility of assets. Since these soft costs do not generate any tangible assets normally as a banker we exclude these items from the point of financing them. This is the prime reason why the margin in the project is always higher than the stipulated margin, as these soft costs are to be fully borne by the promoters. The credit processing officer should not fall in this trap like asset financing. In asset financing we normally see the cost and prescribe the margin for the entire costs. Normally in big projects this will be restricted to a spread of 3 to 5% with Interest during Construction at the actuals. In small projects like Start Up India, the guidelines are in place with a maximum of 25% of the project cost towards these soft costs. Except for few corporate houses, normally the big Projects are never completed within the scheduled date as such it invariably results in time overrun. When time overrun happens, it has to result by default in cost overrun. As a limited recourse, these type of unexpected expenses are to be financed by the promoters for which bankers always take a declaration to this effect.

2. Subordination of debts other than bank's Term Loans:

The usual bifurcation of sources or means side of the project can be divided into three main categories:

- Promoter's Capital
- Bank's Term Loan
- Other secured and unsecured loans

Many business entities which are applying for the Term Loan are usually in the form of corporate concerns. It may be private, closely held private, listed private or public enterprises. There are some business activities where the entire capital cannot be brought in as shares. With PPP module, the Special Purpose Vehicle (SPV) clearly states that once the project is over and amount recovered then it will be dismantled at the time of handing over the project assets to the appropriate government authorities. In specific cases like this, the capital is always brought in by minimum capital and rest infused as unsecured loans. The most important factor the banker has to consider is the prioritization of the repayments. As long as the bank's dues are pending, the promoter should not be allowed to withdraw his loan. This can be taken care by stipulating conditions like "Dividend" should not be declared without prior permission in the initial periods. The best option to check early removal of profits from the system towards repayment of unsecured loans is to subordinate all unsecured loans from friends, relatives, directors or any other source to our bank's term loan. There cannot be any repayment of interest and/or repayment of unsecured loans when there is a due for bank's interest and/or installments.

There is also another drawback played by the borrowers in projecting these unsecured loans as Quasi Capital. In case of industries like Commercial Real Estate where the borrower exits the scene once the project is over, this request is understandable and acceptable. This request as routine matter of fact cannot be accepted by banks. There are certain banks which have taken proactive and preemptive actions to check this menace. Due to practical difficulties when the amount is introduced as unsecured loan, then the distribution of profit should be equally towards repayment of term loan interest and installments first, then to the owners. In case of regular capital this can be declared as "dividend" and in the years where there is no profit is made then it is not possible to declare "Dividends". Taking this fundamental principle into account some bankers introduced that the unsecured loans to be treated as Quasi Capital should not rank for any payment of interest. If this check is not in place, then even without making any profit in the system, they will be taking out their loan on priority basis in the name of interest.

3. **Discounted and Non discounted methods of determining repayment or taking back the investment.**

Any term loan by the banks is a long term investment decision which is beyond doubt. In most of the cases the maximum contribution towards financial assistance in the form of term loan is done by the banks only. Rather it is our investment which is more in any project compared to the owner's investment by way of capital and / or unsecured loan. As such the psyche of bankers and borrowers are totally poles apart. The bankers are more bothered about the repayment of their principal while interest is to be paid separately over the years. The present money value concept is taken care by fixing appropriate interest and tenor premium into interest cost. Resultantly the bankers prefer Non Discounted method of repayment fixing. What is Non Discounted Method of repayment is, we are taking the future cash flows projected as it is without discounting it to its real value as of today. Say for example, if the borrower says he will be making ₹5 lakhs profit 3 years down the line, we take that amount as it is. So for the bankers, Debt Service Coverage Ratio (DSCR) is the prime instrument in determining the repayment period with appropriate repayment holiday for principal repayment known as "Moratorium" period. If we talk of bankers they are comfortable with Non Discounted method of repayment through the dual formulae DSCR and Fixed Assets Coverage Ratio (FACR).

For the borrower he is more bothered about his investment in the project and taking back the investment with acceptable minimum profit after meeting all his costs. Borrower's line of thinking is if I invest ₹1 lakh in the project then how much future profit the investment decision gives during the total yielding period of investment. In other words, if the borrowers invest ₹1 lakh today in Reinvestment Certificate and he gets ₹2 lakhs as total return over a period of 5 years he is approximately getting 12+% as interest. To say, ₹1 lakh today has become ₹2 lakhs in the course of 5 years and the value of ₹2 lakhs in future is equal to today's investment of ₹1 lakhs. The yield is 12+%. Assuming the average project cost is working out to 13% and all the future incomes discounted to today's value is marginally equal to the cost then the unit stands no chance of worth investing. Literally he discounts all the future income alongwith the residual value of investment to today's investment. This is also called as Internal Rate of Return (IRR). If he is getting a decent return over and above the average project cost then there will be an inclination to invest in the project. Since the borrower is discounting the future income / profit / cash flows of the project to the present value of money, this is called as discounted value of investment.

Though the investment / loan for the project is by both borrower and banks, the determination of viability of the unit in terms of loan repayment / taking back the investment through discounted and non-discounted methods of repayment are serving varied interests of the parties involved. It is like chalk and cheese in comparison. While the method of "Non Discounted" approach is for bankers, where the return for the bank is determined by the suitable interest cost including tenor premium, "Discounted" approach is for the borrower to determine whether he is getting real return by discounting it to today's value of all future income.

4. Clear understanding of DSCR formula:

The two formulae for the bankers available to fix the repayment and ensure proper loan to value ratio are Debt Service Coverage Ratio (DSCR) and Fixed Assets Coverage Ratio (FACR). The formula for DSCR is

$$DSCR = \frac{\text{Profit after Tax(PAT)} + \text{Depreciation} + \text{Interest on Term Loan}}{\text{Installment of Term Loan} + \text{Interest on Term Loan}}$$

Through this formula the banker is analyzing the profit generated by the project and whether it is sufficient to meet the payment obligation of the borrower. The PAT is without an iota of doubt is the final cash flow available with the borrower after meeting all his revenue expenses. The Depreciation is nothing but a book entry to adjust the books of accounts as per Accounting Standards to provide for wear and tear of the plant and machinery. Please note that there is no depreciation for land which is always appreciating. The interest on Term Loan is added back. There are two reasons. In repayment terms it is clearly mentioned that "Interest" is to be paid for the term loan as and when debited whereas the installment is determined after commercial production and accrual of profits into the system. A question may arise as to how the borrower is paying the interest till Date of Commencement of Commercial Operation, the answer is available in the fact that there is a cost called "Interest During Construction". This interest cost in IDC is to be checked for parlance at the time of process/disbursement of loan. Since the borrower is paying the interest after commercial production alongwith the commencement of principal repayment only out of real profit accrued in the system, the same is added back to know the real position of the cash accruals available as inflows. There is no difference of opinion when it comes to denominator where both interest and installment are only outflows. The average DSCR is normally expected at 1.5 as average for the entire repayment period and a minimum DSCR of 1.2 for any particular year. Credit Officer has to remember another basic fact that average DSCR is averages of DSCR but Total inflow / Total outflow for the entire repayment period. DSCR is also not calculated for the moratorium period, as literally there is no inflow for the business entity.

Fixed Assets Coverage Ratio is another tool used extensively by the banker for the entire repayment period to ensure that the margin which was originally available at the time of sanction of loan, is maintained till the repayment of entire time loan.

FACR = (Assets – Depreciation)/Long Term Debt outstanding (for the assets created out of the Term Loan)

5. What is Depreciation and how it can be used for siphoning of the funds:

Depreciation is actually a book entry to account for the erosion of value of fixed uses. The profit which is a real cash inflow is debited to the extent of depreciation and reduced profit is shown. On the other side to the extent of provided depreciation, the value of fixed assets is reduced. Though the balance sheet is tallied, the real profit has never come down. In other words to know the exact profit generated in the system in real terms it is always advisable to add depreciation back to PAT which is giving the true cash accrual in the system.

Depreciation as per Accounting Standard 6, is actually an amount debited to P&L account and permitted to be written off with Fixed Assets value as per Companies Act to account for erosion of value in the Fixed Assets due to wear and tear. This may be by way of Straight line method or Written Down Value method. A Straight line method in simple terms is assuming a fixed percentage of depreciation after assuming the maximum period upto which the machinery is to be used without replacement. Let us assume that if the machinery is going to serve for 5 years after which it needs replacement, then a flat 20% depreciation is provided. Supposing if the machinery will be having a residual value then the same is reduced to fix the percentage of depreciation. Written down value method is assuming a fixed percentage of depreciation till the machinery is replaced. If a machinery is bought for ₹1,00,000 and the depreciation percentage is 10% then on first year it will be provided with the depreciation of ₹10000, next year ₹9,000, followed by ₹8100 etc.

While this method is playing a crucial role as per the Companies Act, it also permits to change the depreciation method from one to another by the borrower. By changing the method from Straight line to WDV his book profit will be boosted up and if he wants to reduce the profit for tax, then he will change from WDV to Straight line in bumper years of profit. In Straight line to WDV excess depreciation provided is added back to profit and vice versa; in the other method it reduces the profit. Either way the banker should be careful while dealing with the Depreciation not only during the time of processing but also during subsequent years during the tenure of the term loan.

We should also probe a question; normally we take into account only Balance Sheet and Profit & Loss account for deciding the repayment capacity of the borrower to the Term Loan. Surprisingly in both these statements, there is no entry called as "Repayment of Term Loan Installments". Then the question should arise, how he is repaying the term loan installments. If we dissect further, it will be crystal clear that "Depreciation" is nothing but the repayment of Term Loan Installments in disguise. Now let us see through a simple example how this can be manipulated in taking away the profit from the system.

Let us assume a Term Loan with repayment period of 5 years and at a 20% margin is sanctioned for ₹5 lakhs which includes the margin. Now the composition of the balance sheet at the end of various years is described as below.

Year 0	TL		FA
Bank's Term Loan	₹4,00,000	Fixed Assets	₹5,00,000
Promoters Margin	₹1,00,000		

Year 0	TL		FA
Year 1	TL		FA
Bank's Term Loan	₹3,20,000	Fixed Assets	₹4,00,000
Promoters Margin	₹80,000		
Profit	₹1,20,000		
To Depreciation	₹1,00,000	By Depreciation	₹1,00,000
Surplus in P&L	₹20,000		
Year 2	TL		FA
Bank's Term Loan	₹2,40,000	Fixed Assets	₹3,00,000
Promoters Margin	₹60,000		
Profit	₹1,60,000		
To Depreciation	₹1,00,000	By Depreciation	₹1,00,000
Accumulated Surplus in P&L	₹80,000		
Year 3	TL		FA
Bank's Term Loan	₹1,60,000	Fixed Assets	₹2,00,000
Promoters Margin	₹40,000		
Profit	₹1,60,000		
To Depreciation	₹1,00,000	By Depreciation	₹1,00,000
Accumulated Surplus in P&L	₹1,40,000		
Year 4	TL		FA
Bank's Term Loan	₹80,000	Fixed Assets	₹1,00,000
Promoters Margin	₹20,000		
Profit	₹2,00,000		
To Depreciation	₹1,00,000	By Depreciation	₹1,00,000

Year 0	TL		FA
Accumulated Surplus in P&L	₹2,40,000		
Year 5	TL		FA
Bank's Term Loan	₹Nil	Fixed Assets	₹ Nil
Promoters Margin	₹Nil		
Profit	₹2,40,000		
To Depreciation	₹1,00,000	By Depreciation	₹1,00,000
Accumulated Surplus in P&L	₹3,80,000		

Ideally the promoter's margin which he would have inducted by way of Unsecured Loan is reducing in sync with the bank's loan. At the end of the five years he can replace the machinery with the accumulated surplus in P&L. If the borrower wants to siphon off the money at a rate faster than the repayment of bank, of course through legal book entries, then let us see how it is going to change in the above equation.

Year 0	TL		FA
Bank's Term Loan	₹4,00,000	Fixed Assets	₹5,00,000
Promoters Margin	₹1,00,000		
Year 1	TL		FA
Bank's Term Loan	₹3,20,000	Fixed Assets	₹3,80,000
Promoters Margin	₹60,000		
Profit	₹1,20,000		
To Depreciation	₹1,20,000	By Depreciation	₹1,20,000
Surplus in P&L	₹0.00		
Year 2	TL		FA
Bank's Term Loan	₹2,40,000	Fixed Assets	₹2,60,000
Promoters Margin	₹20,000		

Year 0	TL		FA
Profit	₹1,60,000		
To Depreciation	₹1,20,000	By Depreciation	₹1,20,000
Accumulated Surplus in P&L	₹40,000		
Year 3	TL		FA
Bank's Term Loan	₹1,60,000	Fixed Assets	₹1,40,000
Promoters Margin	₹-20,000		
Profit	₹1,60,000		
To Depreciation	₹1,20,000	By Depreciation	1,20,000
Accumulated Surplus in P&L	₹80,000		

Now exactly at the end of three years, he would have drawn ₹1,20,000 against his margin of ₹1,00,000 whereas the term loan outstanding balance will be ₹1,60,000. This is only an example how a simple legal book entry can be used either to repay his margin faster or his other term loan outstanding faster, leaving the bank in lurch. Exactly this is where we have an unwritten rule in fixing the repayment. We have a golden rule, "When DSCR is high reduce the repayment period as he is making more profits, if it is low try to improve the repayment period within the permissible maximum repayment period making his DSCR to improve". Since we are adding back the Depreciation, a disguise for repayment of Term Loan, we are exactly able to fix the correct repayment period.

Conclusion:

As a smart credit processing officer who is dealing with term loan appraisal, they have to take into account the above finer points in their mind. The above steps are not one time measure like processing of a term loan but a continuous process till the term loan is fully repaid. Through this we confirm to the borrower that we are working smart not working hard. This makes him to work hard to meet the commitments than to work smart by playing with figures.

☯

Financing Rural Infrastructure:
Banks need to change track

Dr. M.R. Das*

Introduction

Academic interest in rural infrastructure could be traced back to the development economists in the fifties and sixties like Arthur Lewis, Rosenstein-Rodan, Ragner Nurkse, Albert Hirschman and Gunnar Myrdal. The Nobel Laureate, Myrdal, in his magnum opus Asian Drama: An Inquiry into the Poverty of Nations (1968), recommends increasing infrastructure investment in rural areas, especially in the Indian context.[1] However, of late, the interest on rural infrastructure, worldwide, has waned following the tilt in development focus toward rapid urbanization. This is evidenced by our Google search for 'Rural Infrastructure' which returned only 11 PDF documents in a list of 160 entries displayed for the period 2012 to 2017 (April).

Infrastructure projects, rural or urban, are traditionally characterized by massive initial investments, long gestation periods, low returns, and vulnerability to cost and time overruns. Thus, being risky, infrastructure, world over, is built and serviced by the government or public sector. In Development Economics, infrastructure is referred to as 'social overhead capital'. However, over time, with increasing demand for modern, expensive infrastructure on one hand and the governments' commitments to keep fiscal deficits under leash on the other, private investment is being allowed in several forms. Commercial banks also partner in these ventures.

Research Problem

Against the above-mentioned backdrop, the basic research issue investigated in the paper is: *In India, how and to what extent bank finance has been utilized for developing rural infrastructure over time and assessing who have benefitted or lost in the process*. The paper, based on its findings, also discusses a few policy issues to make bank financing of rural infrastructure more effective.

The rest of the paper is structured as follows: Section 1 is devoted to reasoning out several misconceptions about infrastructure or rural infrastructure including definitional issues; Section 2 presents a snapshot of the infrastructure scene in general; Section 3 examines, in depth, the contribution of banks to fostering rural infrastructure; and Section 4 discusses the policy implications emerging from the analysis.

Section 1: Basic Conceptual Issues

Although by popularity of usage, the word 'Infrastructure' is ranked among top 10% of words, it is an amorphous term in many ways. This has resulted in people underrating its potential in the economy building efforts. Therefore, at the outset, the word needs some explanation.

Etymologically, the word "infrastructure" is composed of the Latin prefix "infra", meaning "below", and "structure". It has been in use in French since 1875 and in English since 1887. Originally used in a military sense, it meant "The installations that form the basis for any operation or system"[2].

While giving a literary meaning of 'infrastructure', the editor of Merriam-Webster adds that "the infrastructure … include roads, bridges, dams, the water and sewer systems, railways and subways, airports, and

[1] *As gleaned from "'Asian Drama': The Pursuit of Modernization in India and Indonesia" by Tim Lankester, Asian Affairs, Vol. XXXV, No. III, November 2004.*

[2] *The Online Etymological Dictionary.*

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harbors. These are generally government-built and publicly owned."

The academic debate is old and intense. We concentrate on a few important interpretations, especially in the context of rural infrastructure. Lewis (1955) includes public utilities, ports, water supply and electricity as infrastructure. According to Hirschman (1958), any infrastructure needs to satisfy four conditions: (a) the services provided should facilitate or are basic to economic activity, (b) the services are usually public goods because of economic externalities, (c) these services cannot be imported and (d) these investments tend to be indivisible or 'lumpy'. The sixties witnessed, in addition to the above, emergence of agricultural research, extension and rural financial institutions as important components of infrastructure following realization that agriculture played a critical role in economic development and agricultural infrastructure contributed significantly to agricultural growth (de Vries 1960 and Ishikawa 1967).

Wharton (1967) classifies agricultural infrastructure into three categories: (a) Capital intensive (irrigation and public water supply facilities, transport, storage and processing facilities), (b) Capital extensive (extension education services, agricultural research, credit and financial institution) and (c) Institutional infrastructures (formal and informal education, legal, political and socio-cultural nature). Wharton is one among the pioneers who recognized that agricultural development is determined not only by the "economic behaviour of the producers," but also by the environment, which, according to him, comprises physical-climatic, socio-cultural and institutional elements.

Fosu et al. (1995) decompose 'agricultural infrastructure' into as many as 11 components: irrigation and public access to water, means of transportation, storage services, commercial infrastructure, processing infrastructure, public services, agricultural research and extension services, communication and information services, land conservation services, credit and financial institutions, and health and education services.

While updating its global rural development strategy "From Vision to Action", the World Bank (2001) focuses on rural transport, rural water supply and sanitation, rural energy, and rural telecommunication and information. Drawing on rural infrastructure within the development context of Africa, the strategy presents the characteristics of rural infrastructure and the emerging approaches to infrastructure delivery systems.

Thus, the traditional definition of 'infrastructure' encompasses 'physical' structures on the 'surface' of the earth as well as 'institutional' establishments and arrangements, and therefore, most of the infrastructure efforts hitherto have concentrated on these. However, a new genre of infrastructure has emerged in the wake of dynamic developments in Information and Communication Technology as also advancement in Robotics and Artificial Intelligence (AI). We call this 'modern' infrastructure which is defined to include: (a) the 'invisible' infrastructure, i.e., 'spectrum' which is at the root of the digital or mobile technology revolution[3] and (b) the trend towards increasingly exploiting the space above the surface of the earth for creating infrastructure. For example, Unmanned Aerial Vehicles (UAVs) - commonly known as drones - are being increasingly used for transport of goods insomuch as Amazon intends to have flying warehouses that will deploy drones to deliver parcels in minutes, and countries are launching unmanned cargo space-crafts.

Riding on Robotics and AI, driverless vehicles are increasingly making inroads, and flying ones are not far behind. Further, exploration is on for future use of robots in the creation, inspection, repair and maintenance of critical infrastructure across broad domains including civil infrastructure, transport (rail, road and sea), offshore energy, space and nuclear. Sooner or later, the rural infrastructure approaches will be compelled to embrace these unstoppably growing trends.

Section 2: General Infrastructure Scene in India

It is widely acknowledged that despite several efforts over the Five-Year Plans in terms of strategies and outlays, India's infrastructure status is woeful. In a

[3]For instance, the JAM (abbreviation for Jan Dhan-Aadhaar-Mobile) trinity of the Government of India initiative to plug the leakages of government subsidies.

word, the country's decision to plunge into big-ticket infrastructure space sans necessary wherewithal proved, on net, costly. For instance, the comatose bank lending today is reckoned as a collateral damage of the unsustainably high stressed loans in the infrastructure segment.[4] The stark reality today is that, the infrastructure deficit in the country is of humongous proportion - the plethora of available estimates varies only in degrees. Nevertheless, two recent statements by the finance minister Arun Jaitley are illustrative; first, the existing infrastructure gap could take nearly two decades to bridge and second, the estimated unmet need for infrastructure investment is as high as INR 43 trillion, i.e., USD 646 billion over the next five years, out of which seven-tenth will be required for developing the power, roads and urban infrastructure.[5,6]

Section 3: Rural Infrastructure

Linkage with Rural Development: Empirical Evidence

A bevy of empirical literature related to India and other countries demonstrate that infrastructure has large multiplier effects in the economy and improves agricultural production and productivity. Space constraint restricts us to present the cross-country evidences in this regard; however, the summary findings of a few India-specific scholarly studies follow. *Binswanger et al*. (1993), in a study of 13 States, find that investments in rural infrastructure lower transportation costs, increase farmers' access to markets and lead to substantial agricultural expansion. Besides, better roads reduce transaction costs of credit services resulting in increased lending to farmers, higher demand for agricultural inputs and enhanced crop yields. Investment in road construction facilitates market integration, primary education and technology adoption (Aggarwal 2017). Gulati (1997) demonstrates the positive impact of irrigation intensity on the composite index of economic development at the district level. Thorat and Sirohi (2002) indicate that transport, power, irrigation and research infrastructure are four critical components that significantly influence agricultural productivity. Barnes and Binswanger (1986) note direct impact of rural electrification on farm productivity via significant use of electric pumps by farmers.

The Government Endeavour

As already mentioned, the governments have a primary role in providing infrastructure facilities. It is noteworthy that the rural infrastructure development efforts began right from the First Five-Year Plan, i.e., much before its urban counterpart. Moreover, many rural infrastructure development efforts implicitly weaved in poverty alleviation as one of their objectives by way of employing villagers in the construction work and paying them wages. One such dual-objective plan dates back to November 2004, when the National Food for Work Programme was launched with focus on work relating to water conservation, drought proofing and land development. The programme is now subsumed in National Rural Employment Guarantee Act (NREGA). The Mahatma Gandhi NREGA works are intended to create permanent assets in the rural areas for future needs. Also, a special, time-bound initiative named Bharat Nirman was implemented during 2005-08 for upgradation of rural infrastructure.

Despite the plans and programmes, rural infrastructure suffers from several quantitative and qualitative inadequacies which is reflected in a "fracture" of the economy akin to the Nobel Laureate Paul Krugman's industrialized "core" and an agricultural "periphery" model (1991). Illustratively, lack of proper rural infrastructure often manifests in (a) distress sale of farm products or wastage in rural areas as against concurrent high food inflation and shortage in urban areas, (b) massive rural-urban migration, (c) simultaneous occurrences of floods and droughts in several regions, (d) constrained access to safe drinking water and sanitation in rural areas, (e) high incidence of financial exclusion and (g) poor standard of electricity supply despite near total rural electrification.

[4] *Infrastructure stressed loans ratio stood at 16.7% at March-end 2016. As per the latest available RBI data (as on February 17, 2017), the outstanding infrastructure advances comprising power, telecommunications, roads and other infrastructure stood at INR 8,984 billion comprising 34.5% of the gross bank credit to all industries.*

[5] *Inaugural speech at the second annual meeting of the New Development Bank on April 1, 2017.*

[6] *Speech at the inauguration of the regional office of European Investment Bank on March 31, 2017.*

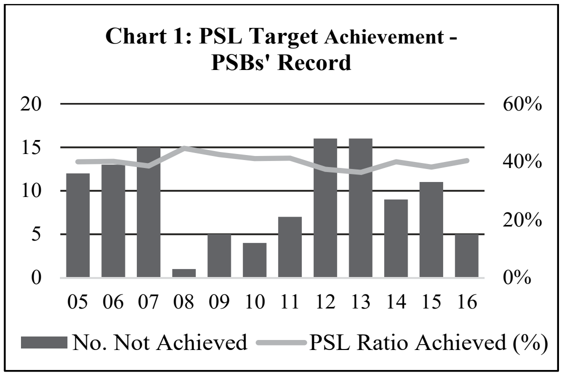
The prominent rural infrastructure programmes currently in vogue include: Accelerated Irrigation Benefits Programme, Deen Dayal Upadhyaya Gram Jyoti Yojana for providing 24x7 uninterrupted power to all homes, Gramin Bhandaran Yojana for building scientific storage capacity for farm inputs and outputs and Pradhan Mantri Gram Sadak Yojana (PMGSY) for providing good all-weather road connectivity to "eligible" unconnected habitations.

Banks and Rural Infrastructure Development

The tryst of banks with rural infrastructure dates back to the introduction of the Priority Sector Loans (PSL) programme in 1972, with a part of the loans earmarked for indirect agricultural advances which, inter alia, included some infrastructure-related activities[7]. Besides, small rural transport formed a part of direct lending under the programme. However, decomposed data on indirect PSL are not publicly available to compute the trend in lending for infrastructure purposes.

The PSL guidelines have undergone several deep changes in 1979, 1985, 2007, 2012 and 2015. The modifications incorporated many new activities from time to time and brought about changes in the computational framework for the 40% stipulated target, which together facilitated banks to achieve the same. However, banks continued to default on reaching the target due to a multitude of factors which, inter alia, include diminishing credit absorption capacity in rural areas, large incidence of default, excessive politicization including the menace of loan waiver, cumbersome procedure, fading enthusiasm among banks, and last but not least, the proclivity to swallow the 'bait' of the Rural Infrastructure Development Fund (RIDF).

The incidence of non-accomplishment is evidenced from the self-explicit Chart 1 which presents the number of PSBs which fell short of the 40% stipulated target during the 12-year period 2005 to 2016 along with the actual PSL ratio achieved by all PSBs together.



Source: Based on on-line RBI database.

The current version of the PSL programme (2015), contains three components of infrastructure. First, Agricultural Infrastructure: (a) construction of storage facilities (warehouses, market yards, godowns and silos) including cold storage units/cold storage chains designed to store agriculture produce/products, irrespective of their location, (b) soil conservation and watershed development and (c) plant tissue culture and agri-biotechnology, seed production, production of bio-pesticides, bio-fertilizers and vermi composting. Second, Social Infrastructure: schools, health care facilities, drinking water facilities and sanitation facilities in Tier II to VI centres. Finally, the Renewable Energy Infrastructure: solar- and biomass-based power generators, wind mills, micro-hydel plants and non-conventional energy-based public utilities like street lighting systems and remote village electrification.

Rural Infrastructure Development Fund

RIDF has been playing a key role in developing rural infrastructure. The Fund was set up with NABARD pursuant to the announcement in the Union Budget 1995-96 speech by the then finance minister Dr. Manmohan Singh who deplored the pathetic state of rural infrastructure. As the name suggests, the objective was to mobilize financial resources to be dedicated to the development of infrastructure facilities in the rural areas. RIDF is funded by those

[7] *The distinction between direct and indirect finance under PSL programme has been done away with since 2015.*

banks, which fail to attain the stipulated targets for lending to the Priority Sector. Every year, the Union Budget announces the allocation to RIDF after which RBI prepares the list of bank-wise allocations based on the PSL shortfall by each bank. RIDF I was allocated funds from the shortfall in sub-target (18%) for agriculture under PSL with a ceiling of 1.5% of Net Bank Credit (NBC). From RIDF II to XIV, allocations were made from the shortfall in overall PSL (40%) and/or agriculture (18%). From RIDF XV onwards, the allocations are being met out of shortfall from the overall priority sector and/or agriculture and/or weaker section (10%).

RIDF lends to the State governments on behalf of departments or corporations for the proposals recommended and routed through their finance departments. Thus, bank funding in the rural areas is ensured, albeit indirectly, which would otherwise have been lent to the non-Priority sectors.

Conceptually, it was a win-win arrangement for banks as well as the State governments; however, whether the 'negative-incentive' to banks, which resulted in many banks 'delegating' their financial intermediation function vis-à-vis the rural borrowers was, or is still, warranted is a moot issue. Equally debatable and worth exploring is why banks could not lend directly to the States, instead of via NABARD.

Allocations to States are based on the prescribed criteria taking into consideration: (i) rural population, (ii) geographical area, (iii) composite infrastructure development index, (iv) utilization index and (v) inverse of rural credit-deposit ratio.

The interest rates payable to banks on RIDF deposits as well as loans disbursed from RIDF to States are linked to the prevailing Bank Rate (BR). The current position as to the former is given in Table 1. The lending rate stands at BR minus 1.5 percentage points (pps).

Table 1: Interest Rates for RIDF Deposits

Shortfall in Overall PSL Target	Rates
Less than 5 pps	BR - 2 pps
5 and above but less than 10 pps	BR - 3 pps
10 pps and above	BR - 4 pps

Repayment period for RIDF loans is seven years including the two-year grace period. Interest demand is raised with quarterly rests and is payable even during the grace period.

RIDF deposits are included under Schedule 11 - 'Other Assets' under the subhead 'Others' of the Balance Sheet of banks and categorized as 'Held-to-Maturity' investments. The deposits are suitably crafted into computation of Capital to Risk Weighted Assets Ratio.

RIDF Operations

RIDF, which started with a corpus of INR 20 billion, initially aimed at rejuvenating the incomplete medium and minor irrigation, and watershed development projects. Today, with enlarged focus, it encompasses 36 activities belonging to three broad areas: (a) Agriculture and allied sectors, (b) Rural connectivity and (c) Social sector. There have been 21 tranches of RIDF out of which I to XIV have been closed and XV to XXI are going on. Funding through RIDF constitutes almost a fifth of the public investment in rural infrastructure. Besides, its share in outstanding liabilities of the States steadily increased during RIDF I to XXI.

Cumulatively, at March-end 2016, 5,85,660 projects have been sanctioned involving over INR 2,451 billion. According to the sectoral break-up presented in Table 2, agriculture (including irrigation) commanded a lion's share of nearly 42% followed by roads (over 29%) and social sector projects (15%).

Table 2: Cumulative Sanction under RIDF

(Amount in INR billion)				
Purpose	Projects		Sanction	
	No.	Share in Total	Amount	Share in Total
Agriculture (other than irrigation)	47,039	8.0%	291.1	11.9%
Irrigation sector	2,94,708	50.3%	730.9	29.8%
Rural Bridges	20,028	3.4%	284.3	11.6%
Rural Roads	1,13,465	19.4%	717.0	29.3%
Social Sector	1,06,176	18.1%	368.2	15.0%
Power Sector	769	0.1%	25.0	1.0%
Rural Godowns/ Warehousing	3,475	0.6%	34.5	1.4%
Total	**5,85,660**	**100.0%**	**2,451.1**	**100.0%**

Source: Based on NABARD Annual Report, 2015-16. Excludes INR 185 billion sanctioned for Bharat Nirman.

The tranche-wise allocation figures revealed that between RIDF I and IX the allocations moved up, but sluggishly, from INR 20 billion to INR 55 billion, multiplying 2.75 times, whereas between RIDF IX and XXI the ascent was rather sharp, multiplying over 4.5 times to INR 250 billion.

For the closed tranches, i.e., I to XIV, the utilization (to phased loans) ratio was 91%. Among the on-going tranches, the ratio was 84-89% for XV to XIX, and 178% and 525% respectively for XX and XXI. For Bharat Nirman, it was 100%.

RIDF disbursements are dotted with regional skewness: two regions, namely, northern and southern commanded 53% of the total, whereas the remaining four regions shared 47%. The central and north-eastern (including Sikkim) regions received a paltry nine and four percent respectively.

Performance of RIDF

Qualitative Evidence

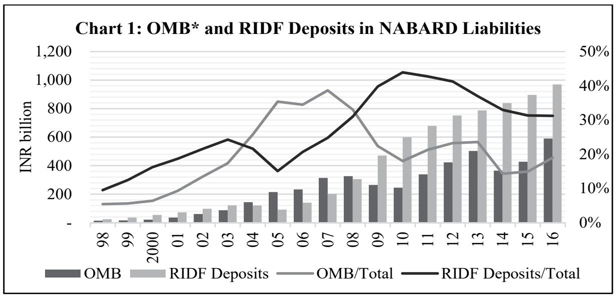
NABARD regularly conducts in-house evaluation studies of the RIDF projects. During 2015-16, it commissioned 12 impact evaluation studies in irrigation and rural connectivity sectors in collaboration with nine institutions of national repute encompassing nine States. These studies confirm the salubrious impact of RIDF projects in terms of "significant gains in rural income levels, diversification of rural livelihood activities, improvement in quality of life of the rural population and a greater traction for rural banking business."[8]

Quantitative Evidence

Our analysis covers the 18-month period 1998 to 2016. Data have been sourced from the NABARD Balance Sheets of various years as reproduced in the RBI Handbook of Statistics on the Indian Economy, 2015-16. All the data relate to March-end.

Significance of RIDF Deposits

Chart 2 highlights the growing significance of RIDF deposits in the sources of funds for NABARD.



*OMB – Open Market Borrowings comprising borrowings from the central government, money raised via Certificates of Deposits (CDs), Commercial Papers (CPs), Collateralized Lending and Borrowing Obligations (CBLO) and term money. Absolute values on Primary axis and ratios on Secondary axis.

The two main sources of funds for NABARD were: (a) OMB and (b) RIDF deposits. At March-end 2016, both accounted for over half of the funds raised from all sources, down from a peak of 64.5% at March-end 2014. As can be observed from Chart 1, up to March-end 2008 the former was more predominant than the latter, but thereafter, the latter rapidly overtook the former. As proportion of total liabilities, the ratios tracked their respective absolute values.

[8]*NABARD Annual Report (2015-16), pp.111.*

In a word, RIDF deposits gradually emerged as the major source of funds for NABARD perhaps due to cheapness of these funds vis-à-vis OMB. This aspect has been analyzed in greater detail later.

The Compound Annual Growth Rates (CAGRs) for OMB and RIDF deposits over the 18-month period were close to each other: 23.2% and 22.8% respectively. However, the period comprises two distinct phases: (a) 1998 to 2008 when CAGR (OMB) at 37.3% towered over CAGR (RIDF deposits) at 29.0% and (b) 2008 to 2016 when CAGR in respect of the latter at 15.5% was over twice that of the former at 7.7%.

Further, in terms of average per annum, RIDF deposits stood at nearly INR 392 billion, almost 57% above that for OMB.

Significance of RIDF Loans

Charts 3 to 5 present the growth trajectories in respect of three important uses the NABARD resources were put to.

Chart 3: Refinance*

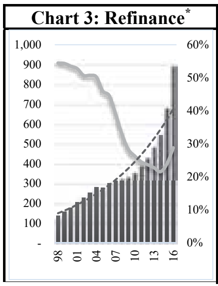


Chart 4: GLC$

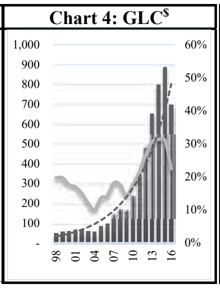
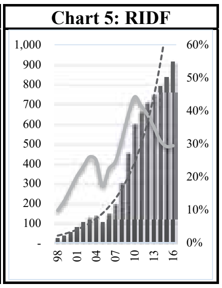


Chart 5: RIDF



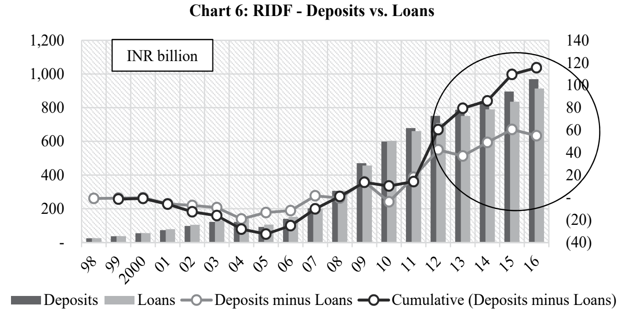
*Refinance outstanding (Medium- and Long-term). GLC$ - General Line of Credit (Short-term). Primary axis – Amount in INR billion represented by bars. Secondary axis - Ratio to Total Assets represented by lines. The dotted lines indicate the exponential trend lines.

The amount of refinance, GLC and RIDF loans, no doubt, grew at exponential rates. However, the growth rate was the highest in respect of RIDF loans at 20% followed by GLC at 17.7% and refinance at 8.4%. Secondly, in terms of ratio to the total assets, refinance rapidly dwindled; GLC, though fell initially up to 2004, moved up, but sluggishly, from 2005 onwards before crashing in 2016; and RIDF loans, in contrast, increased significantly and rapidly, although, it slid from its peak of over 44% attained in 2010 afterwards.

RIDF – Deposits vs. Loans

Chart 6 illustrates the extent of utilization of RIDF deposits for RIDF loans, on outstanding basis.

Chart 6: RIDF - Deposits vs. Loans



Deposits and Loans (Primary Axis). Deposits minus Loans (Secondary Axis).

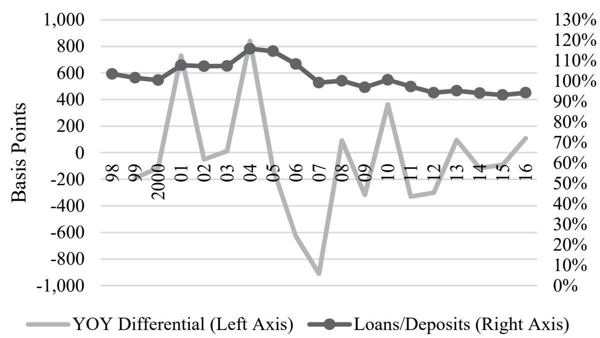
During 1998 to 2006, the outstanding RIDF loans outstripped the outstanding RIDF deposits in the range of INR 0.27 billion to INR 11.68 billion. Thereafter, in the remaining years (barring 2008 and 2010), the outstanding RIDF deposits far exceeded the outstanding loans: the excess varying in the range of INR 14.07 billion to INR 60.58 billion, and, by and large, displaying an increasing trend over time. In other words, RIDF deposits were not being fully utilized for disbursing RIDF loans. One of the prominent reasons for this phenomenon was the inability of States to come up with suitable projects as also arrange for their part of finance.

The gap magnified when cumulated year on year. On outstanding basis, RIDF loans exceeded RIDF deposits 11 times during the 18-year period with the excesses totaling INR 73 billion, and RIDF deposits exceeded RIDF loans seven times with the excesses totaling INR 278 billion, which was 3.8 times the former.

In terms of yearly average, during 1998 to 2016, the outstanding RIDF loans were below the outstanding RIDF deposits by almost three percent, whereas during 2009-16, the gap widened to almost 4.5%.

Consequently, the ratio of (outstanding) RIDF loans to deposits, which had reached a peak of 116% at March-end 2004, dropped almost steadily to a little over 94% at March-end 2016 after hitting a bottom of about 93% at March-end of the preceding year. The YOY variations indicated that the trajectory was marked by seven ups and 10 downs. The largest fall was in 2007, when the ratio crashed 910 bps (Chart 7).

Chart 7: RIDF Loans/Deposits Ratio - YOY Variations



An Opportunity Benefit-Cost Analysis

The analysis seeks to find answer to, if NABARD had not received RIDF deposits, then what would have been its costs/gains from market borrowing and compare those with the actual rate paid on RIDF deposits. The same for banks would read as, if banks had not given RIDF deposits, then what would have been their costs/gains from alternative channels of deployment and compare those with the actual rate received on RIDF deposits. The analysis has been carried out for the period 2012 to 2016. The actual rate paid/received by NABARD/banks on RIDF deposits have been computed by dividing the interest paid on RIDF deposits in a year by the two-year (previous year and current year) moving average of RIDF deposits. [Methodologically, averaging is done to ensure 'stock-flow' compatibility].

Data pertaining to interest paid on RIDF deposits have been sourced from Schedule 14 of the NABARD Balance Sheet. The representative rates for the sources/channels of borrowing/deployment for NABARD/banks, computed on the basis of figures available in the RBI on-line database, are mentioned respectively in Table 3 and Table 4 containing the results of the analysis.

Table 3: Benefit/Cost - NABARD

Source of Borrowing	Representative Rate	11-12	12-13	13-14	14-15	15-16
Central Government	10-year G-Sec yield	8.36%@	8.16%	8.34%	8.33%	7.74%
CDs	Mid-point of annual average of minimum and maximum interest rates	9.54%	9.06%	9.19%	8.79%	7.79%
CPs		11.28%	11.14%	10.54%	10.29%	9.61%
CBLO	Annual average of weighted average rates				8.08%	6.99%
Term Money		9.40%	7.87%	9.17%	8.66%	7.53%
Actual Rate Paid by NABARD on RIDF Deposits		5.70%	5.74%	5.95%	6.10%	6.15%

@ Relates to November to March.

Table 3 makes it crystal clear that NABARD received RIDF deposits at substantially lower rates than if it had gone for market borrowing. Therefore, there were implicit benefits for NABARD.

Table 4: Benefit/Cost - Banks

Use of Fund	Representative Rate	11-12	12-13	13-14	14-15	15-16
Call Money Market	Annual average of the weighted average call money rates	8.13%	8.08%	8.35%	7.96%	7.03%
Reverse Repo	Annual weighted average#	7.01%	6.97%	6.55%	6.93%	6.04%
Commercial Lending	Lending Rate$	11.93%	10.38%	10.75%	10.13%	9.50%
Treasury Bills – 91-Day	Annual average of primary yield	8.79%@	8.20%	8.90%	8.50%	7.42%
– 182-Day		8.66%@	8.17%	8.86%	8.53%	7.46%
– 364-Day		8.47%@	8.05%	8.64%	8.49%	7.44%
Actual Rate Received by Banks on RIDF Deposits		5.70%	5.74%	5.95%	6.10%	6.15%

Weights used are number of weeks for which the Reverse Repo rate remained unchanged. $ Weighted average lending rate for agriculture (2011-12 to 2013-14) and mid-point of the range of the lending rate of five major banks (2014-15 onwards). @ Relates to November to March.

Commercial banks provided RIDF deposits to NABARD at cheaper rates than if they had deployed the shortfall amount in other avenues. Therefore, they did bear an implicit cost. Further, the arrangement has the potential to make banks complacent against 'direct' participation in PSL. No doubt, depositing the shortfall in RIDF saves banks several non-financial headaches in terms of processing and follow-up of loans that require time and manpower which banks can otherwise utilize for more profitable business opportunities.

There are implicit costs to borrowers and benefits to State governments as mentioned below.

Borrowers

Potential PS borrowers lose on two counts: (a) to the extent banks under-achieve their PSL targets (direct lending) and (b) to the extent RIDF loans lag RIDF deposits. It is estimated that in 2015-16 itself, nearly 2.5 million farmers were deprived of PSL from banks which failed to achieve their PS targets. It may be argued that since the 40% PSL target is achieved in aggregate, this should not be a cause for worry; however, over- and under-achievement by banks lead to unequal distribution of PSLs across regions, akin to uneven monsoon rains, temporal or spatial.

State Governments

State governments benefit because RIDF loans substitute, to some extent, their expenditure on rural infrastructure thereby ameliorating their budget constraints for building rural infrastructure, which often resulted in sub-optimal utilization of RIDF loans.

Thus, the outcome of RIDF has not been entirely win-win.

Section 4: Policy Implications

Banks

If farmers' income is to be doubled by 2022, as envisaged by the government, banks need to deploy PSL more 'directly', and therefore, it would make more sense if they contribute less and less to RIDF and prune the implicit cost borne by them. Perhaps, the process has begun with the 2015 amendments to PS guidelines which abolish the distinction between direct and indirect lending and shift the focus to infrastructure lending, as already mentioned. As a result, at March-end 2016, the number of PSBs defaulting on PSL targets dropped to five from 11 in the preceding year. Besides, during 2015-16, the outstanding PSL jumped by over 13%, and, as proportion of NBC, improved by 218 bps to 40.4%.

However, keeping in view our 'modern' infrastructure argument made in the beginning, the activities for which rural infrastructure lending under PSL is being made merit further revision. The immediate need is to provide more finance for building the digital infrastructure, which will help the banking system as well as government accomplish their digitalization goals. Digital connectivity, besides transport connectivity, tops the list of "Growth Enablers" in the NITI Aayog's 2031-32 Vison, Strategy and Action Agenda. For instance, banks can provide credit support to the government's e-NAM project which enables online trading of agricultural commodities. Another instance could be laying of optical fiber cables, especially in the light of the government's BharatNet Project.

Secondly, against the backdrop of benefits accruing from roads, a part of PSL can be used for supplementing investments under PMGSY, though it is a fully centrally-sponsored programme.

Thirdly, infrastructure lending may be provided to institutions which are engaged in skill building exercises in rural areas.

Going forward, infrastructure lending under PSL needs to be enlarged to embrace usage of UAVs for agricultural purposes as well as activities related to mitigating the impact of climatic changes on agriculture. A recent MIT Technology Review paper identifies six ways in which drones are revolutionizing agriculture: soil and field analysis, planting, crop spraying, crop monitoring, irrigation and health assessment.[9]

NABARD

Increasing achievement of PS targets by banks in future will diminish NABARD's access to relatively cheap and ample availability of RIDF deposits, following which the latter must find other cost-effective sources of funds. Secondly, NABARD may consider including repayment performance of the States as a parameter for determining RIDF loans to them. Thirdly, NABARD will have to restructure the activities being financed under RIDF to embrace some of the contemporary infrastructure segments.

Borrowers

Borrowers need to inculcate a culture of financial discipline in the form of regular repayment of loans. However, this requires considerable legwork on the part of banks as well as the government to make them financially literate so that they understand the concept of 'recycling of funds' which is the basis of Banking. Political parties should show magnanimity by abstaining from announcing waivers which pollute the entire credit environment, failing which the Election Commission of India should intervene appropriately.

Finally, at the extreme end of the band of options, one may consider phasing out the PSL programme, though it will be politically arduous. In fact, the Narasimham Committee - I (1991) had recommended for reducing the scope of directed credit under priority sector from 40% to 10% (Paragraph 3.32) which was not accepted. However, following economic rationale, instead of 'directed' lending, one should let the rate of interest be the fulcrum, which, coupled with availability of investible opportunities, and timely and adequate credit dispensation should decide resource allocation. In fact, RBI moved somewhat in this direction by deregulating all loan rates above INR 2,00,000. Thus, there could be 'market matching' in PSL also.

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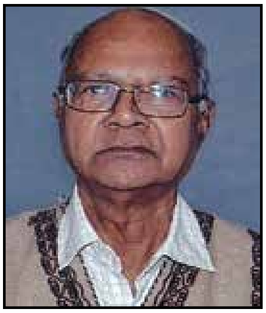
BANK QUEST
THEMES FOR COMING ISSUES

The themes for next issues of “Bank Quest” are identified as:

- Influences/Challenges for Banks post Demonetization: July – September, 2017
- Micro Research Papers 2017: October – December, 2017
- Cyber Security in Banks: January – March, 2018
- International Banking: April – June, 2018
- Risk Management: July – September, 2018



Bad Loans in Infrastructure Sector and Ordinance on New NPA Resolution Policy

Dr V.S. Kaveri*

Abstract:

As per the S&P Global Ratings, Indian banks' stressed assets are likely to increase to 15% of total loans by March end, 2018. Top 50 bad loans of corporates engages in core and infrastructure sectors have been identified by Reserve Bank of India (RBI) who's over dues are as high as ₹4.5 lakh crore forming 85 percent of the total bad loans of public sector banks. Recognizing this growing concern of the banking industry and recovery measures to be undertaken on a war footing, the Government has recently come out with an ordinance on NPA Loan Policy Resolution. The ordinance aims at amending two laws namely, the Banking Regulation (BR) Act, 1949 to tackle the menace of massive stressed assets in the banking system granting more specific powers to the RBI and the Prevention of Corruption (PCA) Act ,1988 to encourage bankers to take commercially bold decisions, especially on haircuts on toxic assets, without fear of subsequent prosecution. As follow up of the ordinance, the RBI has issued a directive bringing certain changes to the existing regulations on dealing with stressed assets, besides planning to reconstitute the over sight committees and exploring the feasibility of rating assignments being determined by itself. Many more initiatives are expected from RBI to resolve top 35-40 stressed assets. While the ordinance is far superior to earlier initiatives to resolve stressed assets in terms of its unique provisions and proposed arrangements proposed by RBI and Government, its success in implementation depends on coordination among all stakeholders including banks, Asset Reconstruction Companies, rating agencies, Insolvency and Bankruptcy Board of India and PE firms. In this context, it is necessary to develop a fair understanding of the ordinance by all stakeholders dealing resolution of corporate stressed assets in core and infrastructure sectors. Towards this end, the present article makes an overview of the ordinance to deal with mega bad loans.

Introduction:

Gross Non- Performing Assets (NPAs) of just 37 listed banks were as high as ₹ 7.1 lakh crores as at March end, 2017 as against ₹ 5.7 lakh crores in the last year (1). About 50 top stressed corporate accounts, mostly engaged in core and infrastructure sectors, have been identified by Reserve Bank of India (RBI) as being under the watch list of the Government. The total loan amount due from these top stressed assets is around ₹ 4.5 lakh crore which is almost 85 percent of the total bad loans of public sector banks(PSBs). Hence, both RBI and Government have taken several measures since 2002, starting with setting up of Asset Reconstruction Companies (ARCs) for purchase of bad loans, making amendments in Corporate Debt Restructuring(CDR) mechanism after accepting recommendations of the Mahapatra Working Group, installing a framework for monitoring of Special Mention Accounts (SMAs), coming out with Flexible Restructuring of Long Term Project (5/25) scheme, introducing Special Debt Restructuring (SDR) scheme, initiating Scheme for

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Sustainable Structuring of Stressed Assets (s4a), enacting Insolvency Bankruptcy Code (IBC) etc. Despite these and many other measures, the level of NPAs in corporate and infrastructure sectors is now unprecedented. Appreciating this growing concern of banks, the Government has now come out with an Ordinance on NPA Policy Resolution which seems to be an effective tool by granting more powers to RBI and also building up confidence in the minds of bankers in taking decisions on huge write off/ write downs as part of resolution of mega problematic projects. Although this is considered to be a onetime exercise to resolve mega top stressed loan assets, the Ordinance is expected to create a conducive environment for further lending to other corporate and infrastructure projects. In view of the new era to begin with the introduction of Ordinance, it is necessary for bankers at this stage to develop a fair understanding of the new Ordinance by going through its historical background, initiatives taken by RBI and Government during the recent past, features and likely impact of the Ordinance. Towards the end, the present article makes an overview and offers suggestions for effective implementation of the Ordinance. To begin with, let us study the need for introduction of Ordinance.

Mounting Bank Over dues from Corporates - Historical Background:

For better understanding of non-performing assets (NPAs) resolution of corporate and infrastructure projects in India, it is necessary to study the origin of NPA problem for which reference to Economic Survey 2016-17 report is more appropriate, sharing certain interesting piece of information. The origin of the NPA problem arose when decisions taken by corporates, mostly engaged in core (industrial and service) and infrastructure sectors, based on a set of assumptions went wrong during the mid-2000s. To elaborate, during that period, economies all over the world were maintaining high GDP growth which was around 9-10 percent per annum and, India was no exception to this. Consequently, corporate profitability in India was very much impressive. So, the corporates started hiring labour aggressively for expansion and diversification of business activities which in turn sent wages soaring. Encouraged from high GDP growth, corporates also launched new and mega projects particularly in infrastructure-related areas such as power generation & steel, and telecoms, setting off the biggest investment boom in the country's history. In the span of just three years running from 2004-05 to 2008-09, the amount of non-food bank credit was doubled. It was also observed that corporates were highly debt burdened to take advantage of anticipated growing business opportunities. But assumptions made for forecasting higher growth did not materialize. As corporates were taking on more risk, things started to go wrong. Cost soared far above the budgeted level, as securing land and environmental clearances for infrastructure projects proved much more difficult and time consuming than expected. At the same time, budgeted revenue collapsed after the Global Financial Crisis (GFC); projects that had been built around the assumption that growth would continue at double-digit levels were suddenly confronted with growth rates half that level. As if these problems were not enough, financing costs also increased sharply. Corporates that borrowed domestically suffered when the Reserve Bank of India (RBI) increased interest rates to contain double digit inflation. Further, the corporates that had borrowed abroad when the rupee was trading around ₹40/dollar were hit hard when the rupee depreciated, forcing them to repay their debts at exchange rate closer to ₹60-70/dollar. Thus, high direct cost, low revenue and increasing financing cost squeezed corporate cash flow, quickly leading to debt servicing problems and thereby banks witnessing high level of NPAs in corporate sector(2).To resolve NPA problems relating to corporate and infrastructure projects , both Reserve Bank of India (RBI) and Government took initiatives, calling for a review.

Initiatives taken by RBI and Government to Resolve Bad Loans from Corporates - A Review:

To start with, the RBI introduced CDR mechanism in 2002 to give corporates more time to repay. To elaborate, debt restructuring refers to reallocation of resources or change in the terms of past and future loans involving reduction in interest rates, waiver of penal charges, re-scheduling of unpaid loan installments, conversion of irregularity in cash credit into working capital term loan (WCTL), sanctioning of fresh loan etc. For infrastructure projects, additional concessions were offered in terms of reduction in provisions to be made. Thus, CDR mechanism is an adjustment made by both the debtor and the creditor to smooth out temporary difficulties in loan repayment by entering into Debtor Creditors Agreement (DCA). It is also an arrangement among the creditors to assist cash troubled corporates by entering into Inter Creditors Agreement (ICA). Appreciating relevance of CDR mechanism, the RBI made changes in it in the wake of the Mahapatra Working Group recommendations. Thus, if the CDR process is to be judged from an independent perspective, it is a beneficial process which endeavors to help viable corporates to come out of financial crisis which may be faced by them due to several external factors and also creditors to recover their dues by debt restructuring. Though the CDR mechanism is well designed and amended from time to time, the financial position of the stressed corporates continued to deteriorate despite restructuring. Hardly 15 percent of corporates came out of CDR successfully (3). Therefore, the RBI thought of other measures to resolve NPAs. In this context, in the same year, ARCs were allowed to be set up in the private sector under SARFAESI Act, hoping that they would buy up the bad loans of the commercial banks. In that way, there could be an efficient division of labour, as banks could resume focusing on their traditional deposit-and-loan operations. This strategy, however, has had only limited success. By now, as many as 16 ARCs have been created, but they have solved only a small portion of the problem, buying up only about 5 percent of total NPAs at book value (Economic Survey 2016-17). The problem is that ARCs have found it difficult to recover much from the debtors. Hence, they have only been able to offer low prices to banks. Further, it is disheartening to note that just half of the SRs issued were redeemed completely by ARCs, indicating, liquidity problems of ARCs on account mismatch in cash flows due to slow loan recovery(4).

While efforts were on to resolve bad loan, the RBI paid attention to arresting slippage in loan asset quality and undertake timely preventive action by strengthening credit monitoring system in banks. In February 2014, the RBI came out with a Framework to monitor SMAs more effectively (5). Under the Framework, Standard Assets are classified into three categories : SMA-0, SMA-1 and SMA-2 based on the period of default of up to 30 days, 31-60 days and 61-90 days respectively. Under the Framework. lenders are asked to form Joint Lenders Forum (JLF) and prepare Corrective Action Plan (CAP) for SMA-2 accounts with a total debt of more than ₹100 crores. For restructuring of debt of more than ₹500 crores, Technical Evaluation Viability (TEV) study should be prepared by professional agencies identified by Indian Banks association (IBA) and approved by JLF creditors with super majority of more than 75 percent of value (total debt)and 60 percent of creditors in number. Based on reduction in slippage in the asset quality during the recent past, this Framework has come to stay and is found to be a useful tool for monitoring of SMAs. But the age old high value NPAs from corporates continued to remain in the books of banks due to difficulties in resolving them through legal measures. Therefore in July 2014, the RBI introduced 5/25 scheme which involves flexible structuring of long term project loans to infrastructure and core-sector industries (6). Under the scheme, banks can extend a loan for a period of 20-25 years in such a way that it matches with the cash flows. The term 5/25 is used since the loan, with maturity up to 25 years, would be subject to refinancing every 5 years. However, both lenders and the borrowers have to adhere to certain conditions which were found to be difficult to fulfill. Consequently, there is hesitancy on the part of banks to associate with such long term projects due to their perception of high credit risk.

As a next step towards strengthening the NPA resolution, in June 2015, the RBI introduced SDR to bypass legal hurdles faced by the bank while taking over a defaulting company by converting part / full of its debt into equity to acquire management control and finding a new buyer for equity holding within 18 months. However, if the bank does not get the new buyer during the period, the asset has to be classified as an NPA(7). After introduction of this scheme in few cases, very soon banks realized that the period of 18 months was too short to comply with the requirements. Further for resolution of large corporate accounts which are facing severe financial difficulties, it also requires coordinated deep financial restructuring which calls for a substantial write-down of debt and/or making large provisions towards bank sacrifice. Hence, banks made a representation to RBI for allowing more time to write down the debt and make the required provisions in cases of resolution of large core and infrastructure projects, which was not considered. As a result of this, while two dozen cases were entered into negotiations under SDR, only two cases have actually been concluded as of end-December 2016 (Economic Survey 2016-17). Appreciating difficulties faced by banks in implementing in SDR with special reference to acquiring management control, in June 2016 the RBI came out with yet another measure i.e. s4a to facilitate the resolution of large accounts (8). For being eligible for resolution of large accounts under the scheme, certain conditions need to be fulfilled which include : (i) The project must have commenced commercial operations.(ii) The aggregate exposure should be more than ₹500 crores. (iii)The debt should meet the requirement of test of sustainability of debt i.e. a portion of total debt can be serviced over the same tenor as that of the existing facilities even if the future cash flows remain at their current level and, (iv) The sustainable debt should not be less than 50 percent of current funded liabilities. Under the Resolution Plan, it is not necessary to change the management. Regarding formalities, the JLF shall, after an independent TEV, bifurcate the total bank debt of the borrower into two parts: Part A debt (subordinated debt) and Part B debt i.e. total debt minus Part A debt. For Part A debt, there will be no fresh moratorium granted on interest or principal repayment and extension of the repayment schedule or reduction in the interest rate. Part B debt shall be converted into equity/redeemable cumulative optionally convertible preference shares, the fair value needs to be calculated by following the prescribed methodologies. JLF shall engage the services of credible professional agencies to conduct the TEV and prepare the resolution plan. The resolution plan should be agreed upon by a super majority i.e. minimum of 75 percent of lenders by value and 60 percent of lenders by number. At individual bank level, the bifurcation into Part A debt and Part B debt shall be in the proportion of Part A debt to Part B debt at the aggregate level. Overseeing Committees (OCs), comprising eminent persons were also constituted by Indian Banks Association (IBA) in consultation with RBI. The resolution plan shall be submitted by the JLF to the OC which will review the processes involved in preparation of the resolution plan etc. for reasonableness and adherence to the provisions of these guidelines, and opine on it. The success of s4a , however, has been limited due to several reasons and one of them is delay in decision making by JLF due to failure to fulfill the super majority criterions for approval of Corrective Action Plan (CAP) by lenders . Hence, the RBI subsequently reduced the minimum stake of creditors for super majority from 75 percent to 60 percent by value and from 60 percent to 50 percent by number (9). Under s4a, hardly only one case been cleared by National Company Law Tribunal (Economic Survey 2016-17). Hence to facilitate the process NPA resolution, it was felt necessary to undertake a more serious measure to enact a new law..

Insolvency and Bankruptcy Code was enacted in 2016 since there was no single law that deals with insolvency and bankruptcy in India for individuals and corporates. A timeline of 180 days which can be extended by another 90 days, in all 270 days, by the adjudicating authority in exceptional cases, for dealing with applications of insolvency resolution. The IBC envisages a competitive industry of insolvency professionals, insolvency professional agencies and information utilities. These will be regulated by an insolvency regulator namely, Insolvency and Bankruptcy Board of India (IBBI), to regulate insolvency professionals and agencies (9). Regarding the process is concerned, during the insolvency resolution period of 180/270 days, the management control will be passed on to a resolution professional who will come up with an insolvency resolution plan which has to be approved by lenders with super majority and also by the adjudicating authority. If rejected, the adjudicating authority will order for liquidation. Under the OBC , Debt Recovery Tribunal (DRT) and National Company Law Tribunal (NCLT) are deployed as the adjudicating authority. While NCLT will deal with rehabilitation and restructuring matters, DRT will look after loan recovery if not found feasible for rehabilitation and restructuring. About the process to be adopted during the period of 180/270 days, the regulatory authority appoints the administrator to take the control of the assets and management of the firm and prepare a resolution proposal about information asymmetry between creditors and debtors about the financial status of the company, it is proposed to set up an industry of information utilities so that decision on turnaround strategy or bankruptcy shall be taken up quickly. It is also proposed to strengthen DRTs since they are already overburdened with insolvency cases by increasing their number. Further, secured creditors with more than 75 percent share in total debt will be allowed to file an application for the rescue of the company at a sufficiently early stage, rather than wait for the same to have defaulted on 50 per cent of its outstanding debt, as currently provided for in the Companies Act, 2013. Even unsecured creditors representing 25 per cent of the total debt shall be allowed to initiate rescue proceedings against the debtor company. Further, workers will get last one year's salary first and then payments shall be made to secured lenders, followed by others. Lastly, all existing laws that deal with insolvency of registered entities will be removed and replaced by this single Code. Since the regulatory authority has just begun its functioning, NPA resolution of projects in core and infrastructure sectors under IBC can not be expected in a big way in the near future. Hence, the Government thought it to appropriate to amend existing Debt Recovery Laws, while execution under IBC will continue.

Debt Recovery Laws requiring amendments include: Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act 2002, Recovery of Debts Due to Banks and Financial Institutions (RDDBFI) Act- 1993, Indian Stamp Duty Act- 1899 and Depositories Act- 1996. In May 2016, the Enforcement of Security Interest and Recovery of Debt Laws and Miscellaneous Provisions (Amendment) Bill, 2016 was cleared by the Parliament to amend Debt Recovery Laws (11) Under SARFAESI Act, RBI will conduct inspection of the ARCs annually. Central Registry will record details of all secured assets to avoid multiple finance against the same property. More importantly, priority will be given to bank dues over all other debts and claims

. Lastly, foreign investor shall sponsor an ARC after observing 'fit and proper' norms of RBI. All these amendments are expected to ensure more recovery under the Act. Under RDDBFI Act, time for filing an appeal to the Appellate Debt Recovery Tribunal (DRAT) is cut from 45 days to 30 days. Similarly for appeal, the deposit amount of 50% of bank dues by the aggrieved borrower is cut down to 25%. These would reduce the time involved in disposal of DRT cases. Regarding Indian Stamp Act, sale of assets to ARCs is exempted for payment of stamp duties which was one of major constraints in promoting business of ARCs.. Regarding miscellaneous amendments , banks shall provide further time to the borrowers to pay dues if 25% of the same is paid. Protection will be provided to any officer of banks , RBI, Central Registry etc. for action taken in good faith.

To sum up, despite various initiatives taken , banks have continued to witness a very high level of stressed assets particularly in core and infrastructure sectors .The problem is simply that initiatives like SDR, s4a and IBC are new, and financial restructuring negotiations under these mechanisms inevitably take some time. But the country cannot wait till then since over dues from the corporates are mounting. Hence, the Government thought it inevitable to come out with an Ordinance on New NPA Resolution Policy in May 2017 to resolve the age old high value corporate NPAs once for all.

Features of Ordinance :

The Ordinance aims at amending two laws namely, the Banking Regulation (BR) Act, 1949 to tackle the menace of massive stressed assets in the banking system granting more specific powers to the RBI and the Prevention of Corruption (PCA) Act ,1988 to encourage bankers to take commercially bold decisions, especially on haircuts on toxic assets, without fear of subsequent prosecution(12). To state specific amendments to BR Act, a new Section i.e. 35AAis inserted to empower the government to authorize the RBI to issue directions to banks as it deems fit to initiate insolvency process in case of a default under the provisions of the IBC . Further, another section i.e. Section 35AB is included in the Act to grant power to the RBI to specify one or more authorities or committees (called as Oversight Committees- OCs) to advise banks on resolution of stressed assets. These OCs will be able to help banks in decision-making and also to monitor the progress in resolving stressed assets (gross non-performing assets and restructured standard advances).Thus, the central bank could monitor specific cases, especially the more difficult ones in core and infrastructure sectors , even when the resolution process through the IBC is under way. Bankers could also pursue the IBC mechanism more vigorously if other mechanisms to deal with the NPA issue does not succeed. Immediately upon the promulgation of the Ordinance on May 22, 2017, the Reserve Bank issued a directive bringing certain changes to the existing regulations on dealing with stressed assets. It was clarified that CAP also includes flexible restructuring, SDR and s4a. With a view to facilitate decision making in the JLF, the consent required for approval of a proposal is now changed to 60 percent by value instead of 75 percent earlier, while keeping that number at 50 percent. Banks who were in the minority on the proposal approved by the JLF are required to either exit by complying with the substitution rules within the stipulated time or adhere to the decision of the JLF. Participating banks have been mandated to implement the decision of JLF without any additional conditionality. Lastly, the Boards of banks were advised to empower their executives to implement JLF decisions without further reference to them. The RBI has made clear to the banks that non-adherence would invite enforcement actions. It has also been decided to reconstitute the OC under the aegis of the RBI and enlarge it to include more members so that the OC can constitute requisite benches to deal with the volume of cases referred to it. While the current members will continue in the reconstituted OC, names of a few more will be announced soon. The RBI is planning to expand the scope of cases to be referred to the OC beyond those under s4a as required currently. It is also working on a framework to facilitate an objective and consistent decision making process with regard to cases that may be determined for reference for resolution under the IBC. The RBI has already sought information on the current status of the large stressed assets from the banks. It would also be constituting a Committee comprising majorly of its independent Board Members to advise it in this matter. The current guidelines on restructuring are under examination for such modifications as may be necessary to resolve the large stressed assets in the banking system in a value optimizing manner. This envisages an important role for the credit rating agencies in the scheme of things and, with a view to preventing rating-shopping or any conflict of interest, is exploring the feasibility of rating assignments being determined by the RBI itself and paid for from a fund to be created out of contribution from the banks and the central bank. More importantly, this calls for coordination with and cooperation from several stakeholders including banks, ARCs, rating agencies, IBBI and PE firms. In this regard, the RBI will make further arrangements.

Likely Impact of Ordinance:

With the introduction of the Ordinance, banks would be able to identify NPAs early and initiate loan recovery proceedings without waiting for an account to be formally classified as non-performing. Under the present RBI prudential guidelines on asset classification, an advance becomes non-performing when interest or installment of principal remains overdue for more than 9o days. But under the Ordinance, the default will be considered as per bankruptcy law, which means if the payment is missed, it turns into a default the next day itself. Further, it would enhance transparency in NPA resolution of high value NPAs since RBI and OCs will be directly engaged in NPA resolution and monitoring the performance of JLF. This would also improve the quality of NPA resolution which will be performed the guidance of RBI and OCs by ensuring collective and coordinated efforts. In view of the long drawn process involved in NPA resolution particularly in core and infrastructure sectors, it is unlikely that the recovery mechanism will improve substantially this year only, but credit growth will certainly pick up due to better quality NPA resolution. Similarly, this pick up in credit growth would bring down the share of bad loans as a percentage of total advances. Further, it is quite likely that the next fiscal i.e. 2018 would be much better in terms of asset quality than the current fiscal 2017. It seems that the government is all out war against NPAs in core and infrastructure sectors which will help in cleaning the balance sheet of state- owned banks and expedite fund raising via markets to meet the global Basel III capital adequacy norms. As part of NPA resolution plan, the RBI proposes to involve rating agencies to rate assets charged and assess viability of the project. It is also exploring the feasibility of rating assignments being determined by the itself and these rating agencies would be paid from a fund to be created out of contributions from the banks and the RBI. With the central bank paying for the rating engagement, it would give space for independent opinion to avoid problems in information disclosure by the company. Thus, the Ordinance would produce many more benefits being a very effective mechanism for NPA resolution in core and infrastructure sectors. .

Suggestions:

With the RBI directly is coming into the picture in NPA resolution besides being a regulator, it will also have to play a role of a banker to take decisions on commercial considerations. Similarly, the success of NPA resolution will depend on the selection of the members of the OCs, based on professional expertise and sufficient experience in commercial banking with special reference to sanction and loan recovery of mega and infrastructure projects. In the wake of resolving high value NPAs, it is necessary for banks and also for RBI to set a target for loan recovery from mega NPA borrowers for each of the next 3-5 years so that it is possible to review achievements periodically. Further, the time consumed in making NPA resolution decisions relating to IBC is critical because if it is done in a piecemeal fashion the measures considered for resolution may not produce desired results. Hence, timelines need to be fixed for processes under the bankruptcy law to be competed timely, besides ensuring coordinated efforts. It is also important that the back-end infrastructure should be in place. In this regard, RBI should have enough manpower to handle matters concerning NPA resolution under the Ordinance. Similarly, the legal system should be well equipped to take on this challenge by ensuring early disposal of cases. If we are targeting only the top 35-40 defaulters in core and infrastructure sectors , then the job may be easier. But if all mega NPAs to be addressed, a planned approach is called for and, implementation should be done in a true spirit by involving all stakeholders.

Conclusion:

For RBI, the Ordinance is an additional tool available to take a targeted approach and deal with the top 35-40 non-performing assets in core and infrastructure projects that can be resolved quickly. It can break the deadlock and get the banking system to gain further by resolving bad loans. The OC can use its powers to restart the process of NPA resolution more professionally with due respect to compliance and get rid of the old problem when bankers were afraid of investigations against them in deciding huge debt write off / write down. The government's approach towards resolving the issue of NPAs has been remarkable and the various schemes brought out are part of the fine-tuning mechanism where lessons of the failure of the existing mechanisms have been improvised. The present dispensation appears to have reached the so-called last mile and definitely looks superior to the other attempts. But the execution would have to be planned meticulously to move towards a successful conclusion. The RBI is also working on a framework to facilitate an objective and consistent decision making process for cases that may be determined for reference for resolution under the IBC. As per news reports, the Reserve Bank has already sought information on the current status of the large stressed assets from the banks. It would also be constituting a committee comprised majorly of its independent board members to advise on the subject(13). The success in implementation of the Ordinance would require coordination among all stakeholders including banks, ARCs, rating agencies, IBBI and PE firms. Thus, the challenge is to effectively implement the Ordinance . Quite likely, we have a long way to go in this regard.

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प्लास्टिक मुद्रा के प्रयोग से जुड़ी चुनौतियाँ

डॉ. साकेत सहाय*

तकनीक, जोखिम और परिवर्तन को एक ही सिक्के के दो पहलू माना जा सकता है। इतिहास गवाह है कि दुनिया के तमाम बड़े परिवर्तन बदलती आवश्यकता के परिप्रेक्ष्य में समय, तकनीक एवं आवश्यकता के समन्वय के आधार पर हुए हैं और अधिकांश परिवर्तनों के साथ मानवीय सुविधा एवं समन्वय जुड़े हुए होते हैं। बीते दशक की बैंकिंग भी इन ऐतिहासिक बदलावों, परिवर्तनों से अछूती नहीं रही है। यह बैंकिंग तकनीक में आए बदलाव का ही असर है कि आज बैंकिंग सेवा किसी-न-किसी रूप में 24x7 उपलब्ध है। इन बदलावों, परिवर्तनों से बैंकिंग सेवा में हर रोज नए बदलाव परिलक्षित हो रहे हैं, जिससे आम जनता के साथ-साथ देश की अर्थव्यवस्था भी लाभान्वित हो रही है।

हम सभी इस तथ्य से परिचित हैं कि विकसित अर्थव्यवस्था की पहली पहचान है नकदी विहीन अर्थव्यवस्था, क्योंकि यह काले धन के प्रवाह को नियंत्रित करती है। साथ ही, देश की कर-व्यवस्था को मजबूती प्रदान करती है। जैसे-जैसे भारतीय अर्थव्यवस्था विकासशील से विकसित होने की ओर अग्रसर हो रही है, यहाँ नकदी विहीन अर्थव्यवस्था एवं भुगतान व्यवस्था को एकीकृत करने पर जोर दिया जा रहा है। भारतीय अर्थव्यवस्था में प्लास्टिक मुद्रा यानि डेबिट/क्रेडिट कार्ड के प्रयोग पर जोर दिया जा रहा है। युवा वर्ग भी प्लास्टिक मुद्रा के इस्तेमाल में अधिक सुविधा का अनुभव करता है। इसी का नतीजा है कि आज सभी बैंक ग्राहकों को प्लास्टिक मुद्रा प्रयोग करने पर जोर दे रहे हैं। नकदी के बिना किए जाने वाले लेन-देन के लिए भी इन कार्डों का उपयोग लगातार बढ़ता जा रहा है। इन सभी का एकमात्र सार है: आधुनिक युग में प्लास्टिक मुद्रा या इलेक्ट्रॉनिक मुद्रा, वास्तविक मुद्रा का मजबूत विकल्प बनते जा रहे हैं।

बीते 08 नवंबर, 2016 को केंद्र सरकार द्वारा भ्रष्टाचार, कालाधन और जमाखोरी जैसी समस्याओं से छुटकारा पाने हेतु घोषित की गई विमुद्रीकरण या अखबारी शब्दों में कहें तो नोटबंदी ने बैंकिंग सेवा का एक नया रूप पेश किया है। देश में 1000 और 500 रूपए के नोट बंद होने पर हर तरफ मचे हड़कंप से निपटने में बैंकिंग क्षेत्र ने कारगर भूमिका निभाई है। नोटबंदी की वजह से नगदी की समस्या से जूझ रही जनता को भी प्लास्टिक मुद्रा के रूप में बेहतर विकल्प दिखाई दिया। यही कारण है कि सरकार भी इस विकल्प को अपनाने पर ज्यादा जोर दे रही है। पर, इस काम में कई बड़ी चुनौतियाँ हैं। बड़े शहरों में तो प्लास्टिक मुद्रा का चलन है लेकिन छोटे शहरों और ग्रामीण क्षेत्रों में लोग अभी भी इसके इस्तेमाल से कतराते हैं। सरकार ने बैंकिंग

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से जुड़ी कई महत्वाकांक्षी योजनाओं की शुरूआत की है, जिससे आम जनता को बैंकिंग की मुख्यधारा से जोड़ा जा सके। इसके बावजूद भारत में प्लास्टिक मुद्रा को जन-जन तक पहुंचाने के लिए अभी कई बड़ी चुनौतियाँ हैं। साइबर क्षेत्र के विशेषज्ञों के मुताबिक, प्लास्टिक मुद्रा हो या फिर डिजिटल लॉकर - इन सभी में सूचना की सुरक्षा एक प्राथमिक जरूरत है।

आर्थिक मामलों के जानकारों के मुताबिक प्लास्टिक मुद्रा की प्राथमिक जरूरत एटीएम, कार्ड स्वैपिंग मशीन, अच्छी इंटरनेट स्पीड और सुरक्षा के फीचर्स हैं। अगर समुचित संसाधनों की पूर्ति होगी तो शहरी ही नहीं, ग्रामीण क्षेत्रों में भी लोग इसे स्वीकारेंगे। विशेषज्ञों के मुताबिक, इनके प्रयोग से कई बड़ी चुनौतियाँ जुड़ी हुई हैं। ऐसे में बैंकिंग की इस नई सुविधा के प्रति लोगों को जागरूक करने की आवश्यकता है। इन कार्डों के प्रयोग में वृद्धी से जुड़ी सबसे प्रमुख चुनौती है, प्लास्टिक मुद्रा पर आसानी से विश्वास नहीं करना तथा इससे जुड़ी कई प्रकार की भ्रांतिया रखना। प्लास्टिक मुद्रा भले ही लेन-देन हेतु एक सुविधाजनक माध्यम है। साथ ही, धोखाधड़ी एवं जालसाजी इन कार्डों के व्यापक प्रयोग वृद्धी में एक बड़ी समस्या है। इसके बढ़ते प्रयोग के साथ-साथ इससे जुड़े जोखिम भी बढ़ते जा रहे हैं। प्रस्तुत आलेख में हम उपर्युक्त वजहों को विस्तार से समझने का प्रयास करेंगे।

प्लास्टिक मुद्रा का कम इस्तेमाल

जनधन योजना से अधिकतर लोगों तक बैंकिंग सुविधा पहुंचाने के बावजूद देश में डेबिट और क्रेडिट कार्ड का इस्तेमाल करने वालों की संख्या कम है। भारतीय रिज़र्व बैंक की एक रिपोर्ट के मुताबिक वर्ष 2016 की शुरूआत तक देश में लगभग 23 करोड़ क्रेडिट कार्ड धारक हैं जबकि डेबिट कार्ड की पहुंच 64 करोड़ लोगों तक ही है। आंकड़ों से जाहिर है कि प्लास्टिक मुद्रा का चलन सीमित है।

25 फीसदी लोग बैंक से दूर

रिपोर्ट के मुताबिक भारत में 75 फीसदी लोग बैंक खाताधारक हैं जो कि बैंकिंग सेवा का प्रत्यक्ष रूप से बैंक में जाकर पैसा निकालने और जमा करने के तौर पर इस्तेमाल करते हैं। ऐसे में बड़ी संख्या में लोगों को प्लास्टिक मुद्रा की तरफ मोड़ना बहुत बड़ी चुनौती है। नोटबंदी की घोषणा के समय मे भी सरकार ने इस तथ्य को महसूस किया। 500 और 1000 के नोटों को बदलवाने की बजाय अगर जनता केवल अपनी जरूरत के हिसाब से पैसा बदलती और बाकी पैसा अपने खाते में जमा करती, तो विमुद्रीकरण के समय उत्पन्न आसन्न संकट से एक हद तक बचा जा सकता था। लोग अपनी मेहनत से जमा किए गए पैसे को बदलवाने के लिए घबरागए। अगर ऐसे लोग अपने खाते का महत्व समझते तो इन पैसों को अपने खाते में जमा कर सकते थे और प्लास्टिक मुद्रा यानि एटीएम के अलावा पीओएस, मनी ट्रांसफर या पेटीएम के विकल्प का प्रयोग कर सकते थे। हालांकि इसके प्रयोग से दूसरी चुनौतियाँ भी जुड़ी हुई हैं, जिस पर चर्चा हम आगे के उद्धरणों में करेंगे।

नेट बैंकिंग की समझ न होना

देश भर में लोग ऑनलाइन बैंकिंग को अभी भी शक की नजरों से देखते हैं। ये लोग पैसों के लेनदेन के लिए अपने पारंपरिक तरीकों जैसे चेक, ड्राफ्ट और कैश इस्तेमाल करते हैं। देश में कुल सक्रिय बैंकिंग

सेवा धारकों में से 7 फीसदी लोग ही ऑनलाइन बैंकिंग का इस्तेमाल करते हैं।

स्वैपिंग की सुविधा का सीमित होना

भारतीय रिज़र्व बैंक के आंकड़ों के मुताबिक देश भर में वर्ष 2016 के शुरूआत तक सभी व्यावसायिक बैंकों द्वारा कुल 12,36,933 स्वैपिंग मशीन जारी किए गए थे; जो कि अधिकतर टियर-1 और टियर-2 शहरों में लगे हुए हैं। स्वैपिंग मशीन की कम उपलब्धता भी प्लास्टिक मुद्रा के इस्तेमाल में एक बड़ा रोड़ा है।

धोखाधड़ी और जालसाजी का डर

देश में बैकिंग की नई टेक्नोलॉजी को लेकर अभी भी कई प्रकार की भ्रांतियां हैं, जिससे लोग ऑनलाइन बैंकिंग और प्लास्टिक मुद्रा पर आसानी से विश्वास नहीं करते। बैंकिंग की नई सुविधाओं के साथ लोगों को जागरूक करने की जरूरत है। धोखाधड़ी एवं जालसाजी इन कार्डों के प्रयोग में बहुत बड़ी बाधा है। प्लास्टिक मुद्रा लेनदेन हेतु एक सुविधाजनक माध्यम है। इसके बढ़ते प्रयोग के साथ-साथ इससे जुड़े जोखिम भी बढ़ते जा रहे हैं। इन जोखिमों में शामिल हैं- क्रेडिट कार्ड और डेबिट कार्ड के प्रयोग से संबंधित धोखाधड़ी। इसी जोखिम की कड़ी में हाल में देश भर में तकरीबन 32 लाख एटीएम के पिन चोरी होने की आशंका की खबरों से डेबिट कार्ड की सुरक्षा को लेकर नए प्रश्न उभरे हैं, जो क्रेडिट कार्ड के मुकाबले कहीं ज्यादा सुरक्षित माने जाते थे।

भारत में सभी तरह की खुदरा भुगतान प्रणालियों का शीर्ष संगठन, भारतीय राष्ट्रीय भुगतान निगम (एनपीसीआई) के अनुसार चोरी किए गए एटीएम-डेबिट कार्ड के डेटा की मदद से 19 बैंकों के 641 ग्राहकों को साइबर अपराधियों ने 1.3 करोड़ रूपए का चूना लगाया। यह मामला इसलिए भी उल्लेखनीय है कि इसमें ग्राहक की बिना गलती के एटीएम-डेबिट कार्ड डेटा चुरा कर बड़े पैमाने पर भारत में धोखाधड़ी का पहला मामला सामने आया। ज्ञात हो कि इसमें उन्नीस बैंकों के एटीएम -डेबिट कार्ड के डेटा चुराने की खबर अखबारों में आई थी। यह खबर पिछले अक्टूबर, 2016 में तब सुर्खियों में आई जब इस खबर के आने के बाद भारतीय स्टेट बैंक ने अपने छः लाख एटीएम-डेबिट कार्ड्स को ब्लॉक कर दिया। मीडिया माध्यमों में इस दुर्घटना से प्रभावित एटीएम-डेबिट कार्ड की संख्या पैंसठ लाख तक बताई गई।

मीडिया रिपोर्टों के मुताबिक, चीन के हैकरों ने यह सेंधमारी की है जिससे निजी एवं सार्वजनिक क्षेत्र के बैंकों के 32 लाख से अधिक डेबिट कार्ड के प्रभावित होने की आंशका है। डाटा में यह सेंध कुछ एटीएम प्रणालियों में साइबर मालवेयर हमले के रूप में बताई गई। फिलहाल, मालवेयर नामक वायरस को सेंधमारी का कारण माना जा रहा है। इस घपले के बाद एटीएम-डेबिट कार्ड का क्लोन बना कर देश व विदेशों से पैसों की निकासी या ऑनलाइन खरीदारी की बात सामने आई तथा विदेश में सबसे ज्यादा क्लोन कार्ड्स के इस्तेमाल का मामला चीन में रिकार्ड किया गया।

इस घटना के बाद सरकार एवं बैंक दोनों ही ग्राहक की सुरक्षा को लेकर सतर्क हो गए हैं तथा एहतियाती कदम के रूप में सभी प्रभावित बैंकों ने संदेहास्पद एटीएम-डेबिट कार्डों पर रोक लगा दी तथा ग्राहकों को इनके इस्तेमाल से पहले अपना पासवर्ड बदलने

की सलाह दी। नोटबंदी की वजह से मीडिया माध्यमों ने इस घटना को उतनी तवज्जो नहीं दी परंतु इस घटना ने भारत में वित्तीय सुरक्षा के लिए चेतावनी का संकेत जरूर दे दिया है तथा बैंकिंग उद्योग को इससे निपटने का समय भी दिया है।

आमतौर पर विश्व के अधिकतर वित्तीय संस्थानों की प्लास्टिक मुद्रा से जुड़ी शर्तों में धोखाधड़ी का शिकार होने पर मुआवजा देने की व्यवस्था नहीं होती हैं। साथ ही ग्राहक भी ऐसी सुविधा लेने के समय बैंक द्वारा प्रभारित शर्तों को ठीक से पढ़ते तक नहीं है। परंतु, भारत में स्थिति इतनी बुरी नहीं है। भारतीय रिज़र्व बैंक ने 11 अगस्त, 2016 को जारी अपने एक परिपत्र (सर्कुलर) में साफ तौर पर कहा है कि यदि किसी बैंक की सूचना प्रौगिकी की कमजोर सुरक्षा प्रणाली की वजह से कोई ऑनलाइन धोखाधड़ी होती है, तो उसकी जवाबदेही ग्राहक की न होकर संबंधित बैंक की होगी और धोखाधड़ी की भेंट चढ़ी राशि का हर्जाना बैंक को पीड़ित ग्राहक को देना होगा। परंतु, इस प्रकार की सूचना ग्राहक को तीन दिनों के भीतर बैंक को देनी होगी।

प्लास्टिक मुद्रा के प्रयोग से जुड़े खतरे :

आलेख में ऊपर दिए गए आंकड़ों से स्पष्ट है कि प्लास्टिक मुद्रा का चलन सीमित वर्ग तक है। पर, इससे इंकार नहीं किया जा सकता कि इन कार्डों की लोकप्रियता धीरे-धीरे बढ़ रही है तथा ये कार्ड भविष्य की जरूरत है। इन कार्डों के बढ़ते प्रयोग से जहां एक ओर कार्डधारकों को अनेक प्रकार की नई बैंकिंग सुविधाएं प्राप्त हुई हैं वहीं दूसरी ओर कई बार उन्हें नए प्रकार के खतरों का भी सामना करना पड़ता है। हालांकि, हमारे देश में इन खतरों से निपटने हेतु बैंकिंग लोकपाल, उपभोक्ता फोरम, अदालतें एवं साइबर सुरक्षा कानून आदि हैं। भारत में कार्ड धोखाधड़ी की वारदातें अरसे से होती आ रही हैं। लिहाजा, इन फोरमों में ऐसे मसलों पर ही ग्राहकों की शिकायतों की सुनवाई ज्यादा की जाती है। बैंकिंग लोकपाल के आंकड़ों के मुताबिक, बैंकिंग लोकायुक्त के पास सबसे ज्यादा शिकायतें एटीएम-डेबिट कार्ड से संबंधित आती हैं। इसमें शामिल है एटीएम मशीन से पैसे नहीं निकलने, कार्ड की क्लोनिंग, एटीएम-डेबिट कार्ड के पास में रहने के बावजूद पैसे की निकासी हो जाने जैसी शिकायतें सबसे अधिक दर्ज की जाती हैं।

कई बार लोगों के खाते से बिना उनकी जानकारी के पैसे निकल जाते हैं एवं पीड़ित ग्राहकों को इसकी भनक तक नहीं लग पाती हैं जो हमारी वित्तीय साक्षरता के स्तर को दिखाता है। आज भी अधिकांश ग्राहक अपने खातों की विवरणी को नियमित रूप से नहीं देखते है, जबकि लगभग सभी बैंकों ने अनेक तरह के एप्स ग्राहकों को मुहैया करा रखे हैं। गौरतलब है कि बैंकिंग एप्स की मदद से खातों से जुड़ी अनेक तरह की सूचनाएं हासिल की जा सकती हैं। भारतीय स्टेट बैंक ने हाल ही में 'एसबीआई क्विक' के नाम से एक ऐसा एप विकसित किया है जिसकी मदद से एटीएम कार्ड को बिजली की स्वीच की तरह ऑन व ऑफ किया जा सकता है। अर्थात् एटीएम से पैसे निकालने के समय आप एटीएम कार्ड का स्वीच ऑन कर पैसे निकाल सकते हैं और उसके तुरंत बाद उसके स्वीच को ऑफ भी कर सकते हैं, जिससे धोखाधड़ी से बचा जा सकता है।

आज वैश्विक स्तर पर बैंकिंग प्रणाली ऑनलाइन हो चुकी है और ग्राहकों से जुड़ी तमाम वित्तीय

जानकारियां सर्वर में मौजूद हैं, जिसके हैक होने की आशंका हमेशा बनी रहती है, लेकिन आवश्यक सावधानी बरत कर इस तरह की धोखाधड़ी से बचा जा सकता है। देखा जाए तो दिनचर्या के सारे काम करते समय हम सावधानी बरतते हैं। खाना बनाने से लेकर सड़क पार करने तक में सावधानी बरतने की जरूरत होती है, लेकिन वित्तीय मामलों में आज भी अधिकांश भारतीय निरक्षर है। बड़ी-बड़ी डिग्रियां हासिल करने वाले लोग भी एटीएम का इस्तेमाल करना नहीं जानते है, जबकि एटीएम का इस्तेमाल कैसे करें, क्या-क्या सावधानियां बरतें, तमाम जानकारियां एटीएम कार्ड के साथ संलग्न विवरण पुस्तिका में दी हुई रहती हैं। लेकिन कोई भी इसे पढ़ने की जहमत नहीं उठाता। इतना ही नहीं, एटीएम मशीन के केबिन की दीवारों में भी तमाम जानकारियां व एहतियात बरतने के नुस्खे पोस्टरों में लिखे रहते हैं। वर्तमान में लोग अपने एटीएम कार्ड को दोस्त, रिश्तेदार आदि को देने से नहीं हिचकते है। पॉइंट ऑफ सेल में भी इसका बेहिचक इस्तेमाल करते हैं। ई-कॉमर्स में इजाफा होने के बाद से ग्राहक इंटरनेट के जरिए ऑनलाइन खरीदारी कर रहे हैं, परंतु इस क्रम में किस प्रकार की सावधानियां उन्हें बरतनी चाहिए इससे वे अनजान हैं। यथा, मोबाइल नंबर अंजान व्यक्तियों के साथ साझा करते वक्त हम सभी को सावधानी रखनी चाहिए। उदाहरण के लिए आज भारत के बाजारों में चीन के मोबाइलों का कब्जा है, जिनकी सुरक्षा प्रणाली कमजोर होती हैं एवं ऐसे मोबाइलों से डेटा चुराना आसान होता है।

प्लास्टिक मुद्रा से संबंधित धोखाधड़ी की परिभाषा अगर मूल रूप में तय की जाए तो इसमें शामिल है, प्रथम-खो गए अथवा चोरी किए कार्डों के द्वारा; द्वितीय- नकली या क्लोन किए गए कार्डों द्वारा आर्थिक लाभ के लिए किसी व्यक्ति की निजी पहचान सूचना का अधिग्रहण तथा इसका इस्तेमाल करना।

व्यक्ति की पहचान से संबंधित जानकारी की चोरी द्वारा, आर्थिक लाभ के लिए किसी व्यक्ति की निजी पहचान की सूचना के अधिग्रहण द्वारा व्यक्ति के ऐप्लिकेशन की जालसाजी तब की जाती है, जब कोई अपराधी किसी चुराई या नकली दस्तावेजों के जरिए किसी अन्य व्यक्ति के नाम से खाता खुलवाता है। अपराधी यूटीलिटी बिल तथा बैंक विवरणी चुराने की कोशिश कर आपकी जरूरी जानकारी हासिल कर लेते हैं।

खाते के अधिग्रहण में किसी अन्य व्यक्ति के खाते पर अपराधी अधिग्रहणारा अधिकार कर लेता है, जिसके लिए पहले तो वह लक्ष्यित व्यक्ति की जानकारी इका करता है, और कार्ड जारी करने वाले से उसी व्यक्ति के रूप में संपर्क करता है और उससे सभी पत्राचार को नए पते पर भेजने का अनुरोध करता है। तब वह व्यक्ति कार्ड के खो जाने की सूचना देता है और वह उससे नए कार्डों को भेजने की मांग करता है।

कार्ड की धोखाधड़ी में अवैध तरीके से किसी अन्य व्यक्ति के क्रेडिट/डेबिट कार्ड से वस्तु या सेवा प्राप्त करना शामिल है। कार्ड धोखाधडी के अन्य तरीकों में शामिल हैं, जैसे, कार्ड की कॉपी निकाल कर, किसी साधारण नियमित व्यवहार के समय 'स्किमिंग' द्वारा, जिसमें एक अत्यंत छोटे से उपकरण पर असली कार्ड को गुजार कर कार्ड पर लिखी सूचनाओं की चोरी की जाती है, कार्ड चोरी एवं डाक या कूरियर में ही इसके साथ हस्तक्षेप करके तथा अन्य कुटिल माध्यमों द्वारा धोखाधड़ी की जा सकती है।

फिशिंग विशेषत: ई-मेल स्पूफिंग या तत्काल संदेश के साथ की जाती है जिसके द्वारा यूज़रनेम, पासवर्ड एवं क्रेडिट कार्ड की जानकारी जैसा, विवरण इलेक्ट्रॉनिक कम्युनिकेशन की मदद से चुराया जाता है एवं इसमें यूजर को वैध लगनेवाली एक अवैध वेबसाईट की ओर निर्देशित किया जाता है।

स्किमिंग में चोर अपने शिकार के क्रेडिट कार्ड का नंबर रसीदों की नकल कर या और अधिक विकसित तरीकों से जैसे एक छोटा-सा इलेक्ट्रॉनिक उपकरण (स्किमर) के प्रयोग द्वारा सैकड़ों क्रेडिट कार्ड नंबर अपने पास संग्रहित कर सकते हैं। स्किमिंग होटल, शॉपिंग मॉल या ऐसी जगह जहां आपके कार्ड को आपकी नजरों से कुछ समय के लिये दूर किया जाता है, वहां संभव है।

इसके अतिरिक्त, सोशल इंजिनियरिंग में 'विशिंग' जैसे धोखाधड़ी के तरीके अपना कर यथा, वॉयस ओवर आइपी (वीओआईपी) द्वारा समर्थित फीचरों का इस्तेमाल कर निजी तथा वित्तीय जानकारी प्राप्त की जाती है और उसका दुरूपयोग किया जाता है। सोशल इंजीनियरिंग में धोखाधड़ी करनेवाला पहले कर्मचारी होने का नाटक कर ग्राहक का विश्वास जीतता है। सोशल इंजीनियरिंग के माध्यम से ही अपराधी एटीएम पर स्कैनिंग यंत्र यानि स्किमर का उपयोग करके कार्ड की सारी जानकारी चुरा लेते हैं। स्कैंनिग के माध्यम से धोखेबाज सारी जानकारी और पिन नंबर मिल जाने पर डुप्लीकेट कार्ड बनाकर एटीएम से पैसा निकालते हैं या खरीदारी करते हैं। इस प्रकार सोशल इंजीनियरिंग से बचने हेतु सतर्क रहना ही एकमात्र विकल्प है।

प्लास्टिक मुद्रा की धोखाधड़ी से बचाव हेतु सुझाव

अगर प्रयोक्ता सचेत एवं सतर्क रहें एवं बैंकिंग तकनीक में नित नए हो रहे बदलावों से अपने को अतन रखें तो ऑनलाइन या ऑफलाइन दोनों ही प्रकार की ठगी या धोखाधड़ी से काफी हद तक बचा जा सकता है।

- इसकी प्रारंभिक शुरूआत के रूप में प्रयोक्ता को यह सुनिश्चित करना चाहिए कि बैंक से प्राप्त होने वाला किसी भी प्रकार का लिफाफा(कवर) पूरी तरह से सीलबंद हो और उस पर किसी भी प्रकार का फाड़ने या चिपकाने का निशान न हो, विशेष रूप से जब कार्ड संबंधित चीजें प्राप्त होने वाली हों।
- कार्ड प्राप्ति के बाद तुरंत उस पर अपना हस्ताक्षर कर दें। कार्ड के आखिरी तीन नम्बर को सदैव कवर करने की कोशिश करें।
- खाते के लेन-देन विवरण की जानकारी लेने हेतु अपने मोबाइल नम्बर रजिस्टर्ड करा लें तथा मोबाइल नंबर में किसी भी प्रकार का बदलाव होने पर बैंक को तुरंत सूचित करें।
- वेंडर द्वारा कार्ड स्वाइप करते वक्त उस पर पैनी नजर रखें। कभी भी क्रेडिट कार्ड की खाली रसीद पर हस्ताक्षर न करें। खाली स्थान पर एक लाइन खींच लें ताकि वहां किसी प्रकार की अतिरिक्त जानकारी न लिखी जा सके।
- जब लेनदेन के लिए दो बार पिन मांगा जाए तो लेनदेन को तुरंत रद्द कर दें। हमेशा किसी भी कैमरे से बचने हेतु की-पैड को कवर करें और आसपास के लोगों की मदद लेने से परहेज करें।
- निश्चित अंतराल पर अपने एटीएम कार्ड का पासवर्ड बदलते रहना चाहिए। वित्तीय कार्यों

हेतु यथासंभव अपने बैंक की एटीएम मशीन का इस्तेमाल करने की कोशिश करनी चाहिए। विशेष रूप से उस एटीएम का जोकि बैंक शाखा से जुड़ा हो और वहां वैध सुरक्षा गार्ड हो।

- एटीएम का उपयोग करने से पहले मशीन में किसी भी तरह की आशंका, परिवर्तन और क्षति के संकेत की जांच करें। वहां स्कीमिंग डिवाइस लगा हो सकता है।
- किसी भी प्रकार की गड़बड़ी या धोखाधड़ी का पता चलने पर तुरंत अपने एटीएम कार्ड को टोल फ्री नंबर पर फोन करके ब्लॉक कराएं तथा इसकी शिकायत बैंकिंग लोकपाल व पुलिस से भी करें।
- कार्ड के खो जाने या खाते अथवा कार्ड की जानकारी जाहिर हो जाए तो टोल फ्री हेल्पलाइन पर कार्ड को तुरंत ब्लॉक करा दें।
- एकदिवसीय आयोजन/कार्यक्रम जैसे, खेलकूद गतिविधियां, त्योहार, सेमिनार, कार्यशाला, मेला एवं प्रदर्शनी आदि में मुहैया कराई गई अस्थायी वित्तीय सुविधाओं के उपयोग से बचा जाना चाहिए।
- सार्वजनिक वाई–फाई माध्यमों में इंटरनेट बैंकिंग का उपयोग न करें।
- होटल, रेस्तरां, पेट्रोल पंप आदि स्थानों में एटीएम कार्ड का इस्तेमाल करते समय किसी दूसरे से पासवर्ड साझा न करें।
- बैंक विवरणी(स्टेटमेंट) की नियमित रूप से जांच करें तथा किसी भी अनधिकृत लेनदेन का पता लगते ही तुरंत बैंक को खबर करें। दुकानों या पेट्रोल पंप पर अपने सामने ही कार्ड का इस्तेमाल करें।
- रिस्तरां /शॉपिंग मॉल में प्रस्तुत किए गए किसी सर्वे फॉर्म में आप अपनी निजी जानकारी न भरें।
- अपने एटीएम पिन, सीवीवी या पासवर्ड का खुलासा किसी से न करें। बैंकों द्वारा भी इस प्रकार के विज्ञापन जारी किए जाते हैं कि बैंक या क्रेडिट कार्ड फर्म ग्राहकों से फोन या ई-मेल पर कार्ड का विवरण मांगने के लिए अधिकृत नहीं हैं। बावजूद, कई बार पढ़े-लिखे ग्राहक भी इसके शिकार हो जाते हैं।
- कार्ड की वैधता समाप्त होने, नया जारी होने पर पुराने कार्ड को काट कर इसके टुकड़े कर दें ताकि इसका दुरूपयोग न किया जा सके।

ऑनलाइन सावधानी

ई-शॉपिंग के लिए केवल सुरक्षित, स्थापित और वैध साइट का उपयोग करना ही समझदारी है। जिन साइटों में सिक्योर सॉकेट लेयर (एसएसएल) हो और जो एचटीटीपीएस का प्रयोग करती हैं, उन्हीं साइटों का उपयोग करना चाहिए। सिक्योरिटी क्लूज़ की पहचान, जैसे- आपके ब्राउजर के सबसे नीचे लॉक इमेज, यूआरएल का आरंभ https: से होना चाहिए। ऐसे संकेतों से पता चलता है कि आपकी खरीद को एंक्रिप्शन के साथ सुरक्षित किया गया है और आपके खाते की जानकारी सुरक्षित है। अर्थात् लेन-देन एवं खरीदारी हेतु केवल सुरक्षित वेबसाइट का इस्तेमाल करें। किसी भी साइट पर कार्ड के विवरण को सेव करने के लिए यदि पूछा जाए तो उस पर कदापि

क्लिक न करें। साथ ही, साइट के पेमेंट वेरीफिकेशन टूल्स, जो पेमेंट को सत्यापित करता है, पर भी सतर्कता से नजर रखनी चाहिए। आप उसी मर्चेंट या शॉप में खरीदारी करें जिन्हें आप जानते हैं और जिन पर आपको भरोसा हो। अपने क्रेडिट/डेबिट कार्ड से खरीदारी करने के बाद उस वेबसाइट से लॉग-ऑफ हो जाएं और ब्राउजर कुकीज़ को डिलीट कर दें। ऑनलाइन माध्यमों में निजी जानकारी प्रदान करते समय सावधान रहें।

कम्प्यूटर और स्मार्टफोन से बैंकिंग करते वक्त सावधानी

कम्प्यूटर और स्मार्टफोन में सदैव एंटी वायरस सॉफ्टवेयर डालकर रखें, ताकि किसी भी प्रकार के मालवेयर से बचा जा सके। आज कई ऐसे ऐप हैं जो मोबाइल चोरी हो जाने के बाद भी दूर से ही डेटा खत्म कर देते हैं। ऐसा कोई ऐप स्मार्टफोन में इंस्टॉल करना अच्छा होता है ताकि संभावित खतरों से बचा जा सके। बैंक में मोबाइल और ई-मेल अलर्ट अपडेट करके रखें ताकि कोई ट्रांजेक्शन हो तो तुरंत पता चल सके। सोशल मीडिया और अन्य ऑनलाइन खातों में लॉग-आउट करना भी खाते की सुरक्षा के लिए अत्यंत जरूरी है। मोबाइल फोन पर गोपनीय पासवर्ड रखने से परहेज करना चाहिए। कार्ड धोखाधड़ी से बचने के लिए नियमित रूप से पासवर्ड बदलते रहना भी फायदेमंद रहता है।

सभी ई-मेल संदेशों को ध्यान से देखें ताकि आपको फिशिंग स्कैम का पता लग जाए। ऐसे किसी मेल का जबाव न दें जिसमें आपसे आर्थिक जानकारी समेत आपकी निजी जानकारी मांगी गई हो। क्योंकि बैंक कभी ऐसी जानकारी आपसे नहीं मांगता। भुगतान जानकारी कभी-भी ई-मेल के जरिए न भेजें। इंटरनेट (जैसे कि ई-मेल) से भेजी जाने वाली सूचना हमेशा पूरी तरह से सुरक्षित नहीं होती; कोई भी तीसरा पक्ष इन्हें पढ़ सकता है। प्रमोशनल स्कैम से सावधान रहें। पहचान की चोरी के लिए आपसे फोन पर निजी जानकारी मांगी जा सकती है और सबसे ज्यादा जरूरी कि अपने पासवर्ड को सदैव गोपनीय रखें। कुछ ऑनलाइन स्टोर यूज़रनेम तथा पासवर्ड के साथ रजिस्टर करने की मांग करते हैं। ऑनलाइन पासवर्ड को दूसरों से छुपा कर दें, उसी प्रकार आप एटीएम पासवर्ड को भी दूसरों से सुरक्षित रखें। नेटबैंकिंग के लिए सदैव वर्चुअल की-बोर्ड का इस्तेमाल करें।

इसके अलावा, यदि अपने प्लास्टिक मुद्रा कार्ड को धोखाधड़ी से बचाने हेतु हम निम्न रेडी रेकनर का इस्तेमाल करें, तो बहुत हद तक अपने कार्ड को सुरक्षित बना सकते हैं।

ऐसा करें

- एटीएम का इस्तेमाल करने से पहले आप यह देख लें कि इंसर्शन पैनेल पर किसी प्रकार की दूसरी वस्तु न रखी हो (स्किमिंग से बचने हेतु)।
- ट्रांजैक्शन के समय एटीएम पिन नम्बर को हथेली से छुपा दें। ट्रांजैक्शन रसीद न छोड़ें।
- अपने एटीएम पिन को हर तीन महीने पर बदल दें।
- केवल ऐसे ही क्रेडिट कार्ड को साथ में रखें जिनकी आपको ज्यादा आवश्यकता हो।
- अपने घर को बदलने से पहले ही अपने कार्ड निर्गतकर्ता (जारीकर्ता) को पता बदलने की सूचना दे दें।

ऐसा न करें

- अपना कार्ड नंबर एवं पिन किसी को न दें, भले ही वह अपनी पहचान बैंक के कर्मचारी के रूप में बताए।
- किसी अजनबी व्यक्ति द्वारा एटीएम मशीन में आपको मदद करने की पेशकश के बहकावे में आने से बचें। किसी अज्ञात/अवैध स्रोत के साथ आप अपने खाते के विवरण को साझा न करें।
- किसी सार्वजनिक स्थान में स्थित किसी शेयर्ड या असुरक्षित कम्प्यूटर से आप नेट-बैंकिंग एक्सेस न करें अथवा वहां अपने क्रेडिट/डेबिट कार्ड से भुगतान न करें।
- किसी अनपेक्षित स्रोत से आए अजनबी ई-मेल अटैचमेंट को न खोलें या इन्स्टेंट मैसेज डाउनलोड लिंक पर क्लिक न करें। किसी भी संदेहास्पद ई-मेल को तुरंत डिलीट कर दें।
- अपनी खाता संख्या की जानकारी किसी को फोन पर तब तक न दें, जब तक कि आप कॉल करके सुनिश्चित न कर लें कि अमुक कंपनी प्रतिष्ठित है और उसे यह जानकारी देनी चाहिए। जब आपको कोई फोन कॉल आए और क्रेडिट कार्ड का विवरण मांगा जाए तो आप उसे कोई जानकारी न दें (इसे विशिंग कहते हैं।)।
- किसी भी ई-मेल में अपने खाते से संबंधित मांगी गई कोई भी गोपनीय सूचना जैसे कि- पासवर्ड, कस्टमर आइडी, डेबिट कार्ड नम्बर, पिन, CVV2, DOB की जानकारी कभी न दें, भले ही वह ई-मेल किसी भी सरकारी प्राधिकारों जैसे कि आयकर विभाग, भारतीय रिज़र्व बैंक या वीजा या मास्टर कार्ड से जुड़ी किसी कंपनी का ही क्यों न हो।
- अपने बैंक खाते से जुड़ी किसी समस्या या खाते के विवरण तथा पासवर्ड आदि किसी सोशल नेटवर्किंग साइट या ब्लॉग पर नहीं दें।

कुछ सुझाव

कार्ड की धोखाधड़ी से बचाव हेतु कार्ड जारीकर्ताओं, सरकार एवं नियामक संस्थाओं तथा कार्ड धारकों द्वारा किए जाने वाले उपाय :-

कार्ड जारीकर्ताओं द्वारा किए जाने वाले उपाय -

- धोखाधड़ी की छानबीन एवं रोकथाम हेतु सॉफ्टवेयर लगाना जो ग्राहक के सामान्य एवं असामान्य व्यवहार का विश्लेषण करें एवं संभावित धोखाधड़ी से बचने हेतु लेन-देन पर नजर रखें।
- कार्डधारक द्वारा सत्यापन न किए जाने तक कार्ड को ब्लॉक रखना ।
- कार्ड लेनदेन के सुदृढ अधिप्रमाणन (Authentication) संबंधी सख्त उपाय, जैसे कि कार्डधारक से खाता नंबर, पिन, जिप नंबर, व्यक्तिगत प्रश्न आदि पूछना तथा इस तथ्य का सत्यापन करना कि लेनदेन कार्डधारक द्वारा ही किया गया है तथा इसकी पुष्टि टेक्स्ट संदेश, फोन कॉल या सुरक्षा टोकन डिवाइस जैसे परिचित या विश्वस्त माध्यमों से ही हुई है।
- सभी ज्ञात एवं संभावित धोखेबाजों की सूचनाओं का आदान-प्रदान संपूर्ण उद्योग स्तर पर हो।

सरकार एवं नियामक संस्थाओं तथा व्यापारियों द्वारा किए जानेवाले उपाय-

- कार्ड धोखाधड़ी से ग्राहक को बचाने हेतु सशक्त कानून व्यवस्था।
- डेबिट कार्ड/क्रेडिट कार्ड/गिफ्ट कार्ड कंपनियों की कार्य-प्रणाली एवं जोखिम क्षमताओं का नियमित निरीक्षण।
- कार्ड धारकों के हितों की रक्षा हेतु आवश्यक दिशानिर्देशों का प्रकाशन एवं धोखाधड़ी की गतिविधियों की निगरानी।

कार्डधारकों द्वारा किए जानेवाले उपाय

- गुम हुए या चोरी हुए कार्ड की तत्काल सूचना देना ।
- अनधिकृत लेनदेनों की त्वरित रिपोर्टिंग।
- अपना खाता नंबर, कार्ड समाप्त होने की तारीख तथा संबंधित कंपनी का फोन नंबर और पता सुरक्षित स्थान पर दर्ज करके रखना।

उपसंहार

इस प्रकार हम देखते हैं कि तकनीकी रूप से कार्ड धोखाधड़ी रोकने हेतु कई सारे उपाय सृजित किए गए हैं। बावजूद इसके धोखाधड़ी की संख्या दिन-प्रतिदिन बढ़ती ही जा रही है। ऐसे समय में, इन उपायों के साथ ही देश में एक कठोर कानून बनाने की भी आवश्यकता है। ध्यान से अगर देखें तो यह कड़वा सच सामने आता है कि इस अपराध से भारतीय कानून अंजान है। इसे सूचना प्रौगिकी अधिनियम के दायरे तक सीमित कर दिया गया है। जिसका नतीजा है कार्ड धोखाधड़ी की बढ़ती घटनाएं।

हालांकि, कार्ड धोखाधड़ी से बचाव एवं नकदी रहित अर्थव्यवस्था में इस विकल्प की बेहतर भूमिका हेतु समय-समय पर सरकार बैंकों को त्वरित कार्रवाई करने का निर्देश देती रहती है। इसी दिशा में सरकार द्वारा ओटीपी के माध्यम से एटीएम में जालसाजी रोकने हेतु निवारक उपाय अपनाने पर विचार किया जा रहा है। साथ ही केंद्र सरकार डेबिट कार्ड के जरिये बैंक ग्राहक के खाते में सेंध लगाने की कोशिशों को वन टाइम पासवर्ड (ओटीपी) द्‌वारा सुलझाने पर भी विचार कर रही है। इस व्यवस्था में एटीएम के जरिये कोई भी लेन-देन एक ही बार होगा और अगली बार पासवर्ड बदल जाएगा। इस व्यवस्था में पासवर्ड मोबाइल के जरिये ग्राहक को प्राप्त होगा। अगर यह व्यवस्था लागू हो गई तो यह अत्यंत क्रांतिकारी साबित होगा।

इसके अतिरिक्त केंद्र सरकार द्वारा देश में बैंकिंग सेवाओं को बढ़ाने और ग्राहक सुविधा सुधारने की कवायद में भौगोलिक सूचना प्रणाली मानचित्रण (जी.आई.एस. मैपिंग) की भी तैयारी की जा रही है। इसके माध्यम से विभिन्न पहलुओं पर बैंकों से रोजाना की जानकारी मिलेगी। साथ ही शहरी और ग्रामीण क्षेत्रों में बैंकिंग सेवाओं की पहुंच के बारे में भी जानकारी मिलेगी।

अंत में धोखाधड़ी से बचाव हेतु एकमात्र सूत्र वाक्य है - बैंक सुरक्षा व तकनीक पर बढ़ाएं निवेश, ग्राहक सावधानी बरतें। उदाहरण के लिए, डेटा हैकिंग को लिया जा सकता है। डेटा हैकिंग के लिए एक प्रवेश बिंदु की जरूरत होती है, जो कई बार ग्राहक लापरवाही बरतते हुए उपलब्ध करा देता है। इससे बचने के लिए उपभोक्ताओं को एटीएम, क्रेडिट कार्ड व नेटबैंकिंग पासवर्ड किसी को नहीं देना चाहिए और समय-समय पर इसे बदलते भी रहना चाहिए और

ये ऐसा नहीं होना चाहिए कि कोई भी इसका अंदाजा लगा सके। कार्ड के पीछे मैग्नेट चिप होती है, जिस पर खाता संबंधी सारी जानकारी होती है। इसलिए इस पर डबल आइडेंटिफिकेशन होनी चाहिए। नेट बैंकिंग उपभोक्ताओं को डेटा चोरी रोकने लिए सबसे ज्यादा कदम बैंक स्तर पर उठाए जाने चाहिए। ग्राहकों को ऑनलाइन लेनदेन सुरक्षित वेबसाइट के जरिये करना चाहिए। बैंकिंग में इलेक्ट्रॉनिक लेनदेन सिस्टम एक स्विच के माध्यम से होता है। हैकर इसी स्वीच को हैक कर बैंक ग्राहकों की जानकारी प्राप्त कर लेते हैं। इसलिए बैंकों को प्रत्येक लेनदेन का एसएमएस अलर्ट ग्राहकों को भेजना चाहिए। स्विच प्रबंधनकर्ता या स्विच सुरक्षा प्रबंधक को किसी खाते में सामान्य के मुकाबले अचानक अधिक लेनदेन होने पर सतर्क रहना होगा। उसे इसकी जांच कर यह सुनिश्चित करना चाहिए कि कहीं हैकिंग तो नहीं हुई है?

बैंकों में इस समय 30 फीसदी से ज्यादा लेन-देन ऑनलाइन हो रहे हैं। भविष्य में ऑनलाइन लेनदेन में और इजाफा होने वाला है। ऐसे में बैंकों को तकनीक और सुरक्षा पर निवेश बढ़ाना होगा। बैंकों ने इस पर काफी कम निवेश किया हुआ है। जबकि यह भविष्य की बैंकिंग है। ऐसे में, इस प्रकार के नियम बनने चाहिए जिसमें बैंकों को उनके कारोबार का निश्चित हिस्सा सुरक्षा एवं तकनीक पर निवेश करने का प्रावधान हो।

फिर भी इस तथ्य को नजरअंदाज नहीं किया जा सकता कि कार्ड संबंधित धोखाधड़ी एवं गड़बड़ी पूरी दुनिया की समस्या बन चुकी है। ऐसे में इस समस्या से निपटने की तुरंत जरूरत है और इसके लिए सबसे बड़ी जरूरत है कि डाटा के रूप में मौजूद सूचना के संरक्षण पर पूरा ध्यान दिया जाए। एटीएम-डेबिट कार्ड की डेटा चोरी बैंकों की तकनीकी सुरक्षा प्रणाली की कमी को जरूर दर्शाती है, लेकिन इससे ग्राहकों को घबराने की जरूरत नहीं है, क्योंकि भारतीय बैंकों की सुरक्षा प्रणाली अत्यंत मजबूत है। ग्राहकों का भी दायित्व है कि धोखाधड़ी के प्रति ज्यादा जागरूक व सतर्क रहें तथा बैंकिंग क्षेत्र में आए दिन हो रहे तकनीकी बदलावों से अपने को अतन रखें तथा बैंक द्वारा बताई जा रही सावधानियों का भी अनुपालन करें। निष्कर्षतः ''यह हमारा कर्तव्य है कि इसे धोखाधड़ी करने वालों के लिए अतिसंवेदनशील स्थिति में न छोड़ दें।'' सावधान एवं जागरूक रहना ही एकमात्र उपाय है।

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Indian Institute of Banking & Finance,

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31.03.2017

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Signature of Publisher

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