Savings and capital formation in India

No. 271
10-June-2019

Ila Patnaik and Radhika Pandey

National Institute of Public Finance and Policy
New Delhi

Savings and capital formation in India

Ila Patnaik Radhika Pandey

10th June 2019

Abstract

High levels of savings and investments are key to India's sustained and robust long-term growth. While India's saving rate has declined in recent years, a bigger challenge facing the economy is the intermediation of savings to finance the growing requirements of industry and infrastructure. This paper describes the trajectory of savings and investments in India. The major source of investment in the coming decades is expected to be investment in infrastructure and in micro, small and medium enterprises. The paper highlights the issues in infrastructure and MSME financing and proposes an agenda for reforms. Reduced financial repression, deep and liquid bond markets, improvement in banking regulation, improved access to bank credit to MSMEs should be the agenda for financial sector reforms. A framework for failure resolution of financial firms and a conducive environment for competition in the financial sector should be part of the strategy to promote the rate of savings and capital formation.

1 Introduction

A large share of Indian household income goes into savings. While more than half of it goes into physical assets like gold and housing, the rest goes into financial assets, which are then available for investments by companies and government. Household financial savings are the most important source of funds for investment in the economy. A recent push to give access to bank accounts to all households has created the infrastructure through which financial savings could be further increased. Beyond households, savings for capital formation is also done by both public sector and private sector.

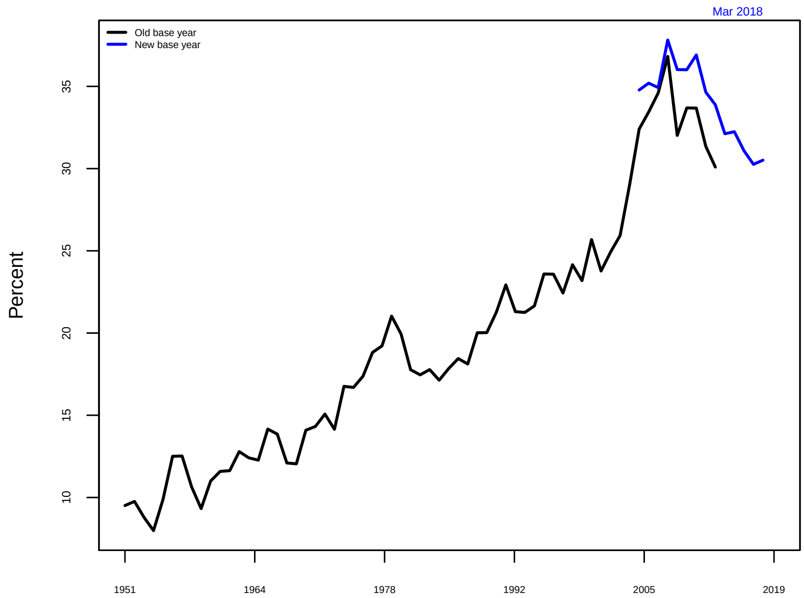
Efficient intermediation by financial sector leads to higher economic growth by increasing savings and their optimal allocation for productive uses. Currently, a big challenge towards raising the rate of savings and investments is the intermediation by the financial sector.[1] Finance is the brain of the economy. It allocates resources to sectors which are the most productive. To meet the growing financial requirements of industry and infrastructure, a second wave of financial sector reforms is needed. Deep and liquid bond markets, reduced state-ownership of banks, improved access to bank credit to small firms and infrastructure should be on top of the agenda for financial sector reforms. India needs sound banking regulation to prevent misallocation of capital. A framework for failure resolution in the form of the Insolvency and Bankruptcy Code (IBC) and the resolution corporation is critical to prevent the growth of zombie firms so that labor and capital can move to healthy firms. A sound Goods and Services Tax (GST) with improved compliance will ensure greater formalization of the economy and is a positive for improving the investment climate.

The paper is organized as follows: the first section describes the present Indian savings landscape. It presents an overview of the components of savings with particular focus on household savings and its components. The second section discusses the state of investment through various indicators. It then delves deeper into the challenges of infrastructure financing and financing for small and medium enterprises. The final section highlights the reforms required to raise the level of savings and investment in the economy.

2 Indian savings landscape

Savings are a critical determinant of economic growth. India's aggregate savings rate is comparable to that of emerging economies like Indonesia, Thailand and significantly higher than those of advanced economies such as the U.S and U.K.[1] Over the past few decades (till 2012), there has been a sharp increase in Indian savings rate (See Figure 1).

Figure 1 Aggregate savings rate



Source: National Accounts Statistics, various years

A high domestic savings rate has been an important part of India's growth story. High investment and an economic boom during the 2003-2008 period was supported by a strong savings rate. The savings rate surged from 25.9 percent in 2003 to 36.8 percent in 2008.

[1]Ministry of Statistics and Programme Implementation. *Report of the High Level Committee on Estimation of Saving and Investment.* Tech. rep. Ministry of Statistics and Programme Implementation, 2008.

Table 1 Savings and its components (Percent to GDP)

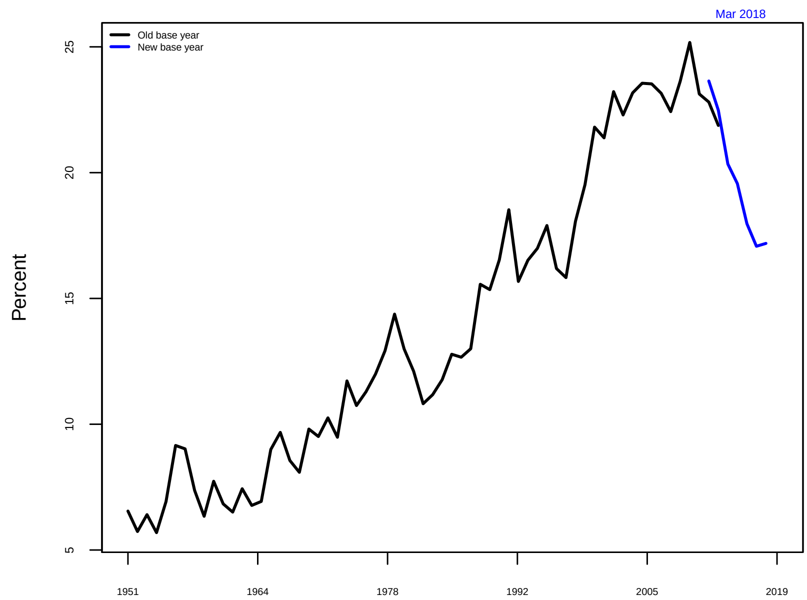
Year	Total	Household sector	Private corporate sector	Public sector
2001	23.8	21.4	3.7	-1.35
2002	24.9	23.2	3.27	-1.57
2003	25.93	22.29	3.92	-0.28
2004	29.03	23.17	4.57	1.28
2005	32.41	23.55	6.55	2.30
2006	33.44	23.53	7.51	2.41
2007	34.60	23.15	7.88	3.56
2008	36.82	22.42	9.40	4.99
2009	32.02	23.64	7.41	0.96
2010	33.69	25.18	8.35	0.16
2011	33.68	23.13	7.97	2.59
2012	31.35	22.81	7.31	1.24
2013	30.09	21.88	7.05	1.17
2014*	32.2	19.6	11.7	2.4
2015	31.1	17.9	11.9	2.4
2016	30.2	17.1	11.5	2.4
2017	30.5	17.2	11.6	2.6

*From 2014 the data corresponds to the new base year 2011-12
Source: National Accounts Statistics, various years

Gross savings constitute savings of households, private corporate sector and public sector[2] (See Table 1). At a disaggregated level, savings by the household sectors is the most prominent component. The buoyant trend in the aggregate savings rate during the high growth phase from 2003-2008 was driven by savings in the household sector. The rate of savings in private corporate sector improved from 4.57 percent in 2004 to 9.4 percent in 2008.[2] Since 2012, however we have seen a decline in the aggregate savings rate as well as in household savings rate. The aggregate savings rate declined from 34 percent in 2012 to 30.5 percent in 2017-18. The household savings rate declined from 22.4 percent in 2012 to 17.2 percent in 2017. Figure 2 shows the trajectory of household savings as a percent to GDP (both old and new base year series). It shows a steep decline in recent years. What could be the possible explanation for the decline in household savings? The term 'households' includes not only individual households but also non-corporate businesses. The unregistered micro, small and medium enterprises are thus covered under the definition of household sector. It is this sector that suffered the most due to the twin shocks of demonetisation and GST.

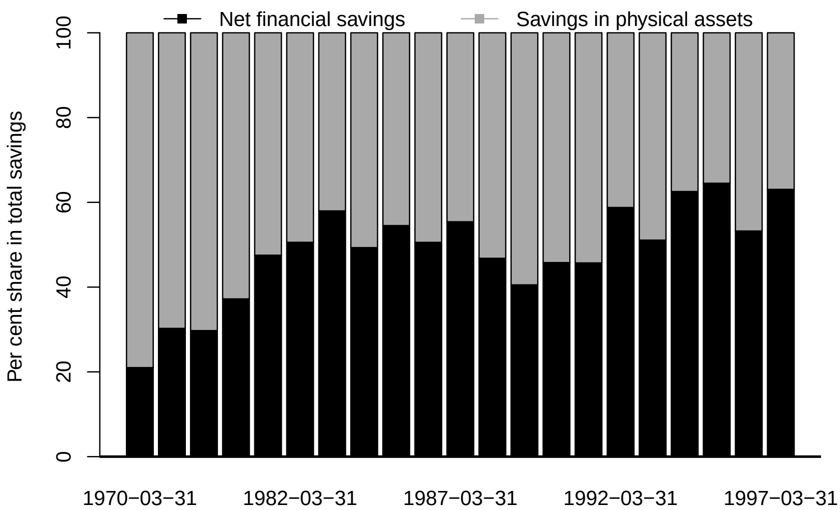
[2]Ministry of Statistics and Programme Implementation, *Report of the High Level Committee on Estimation of Saving and Investment*.

Figure 2 Household savings rate



Source: National Accounts Statistics, various years

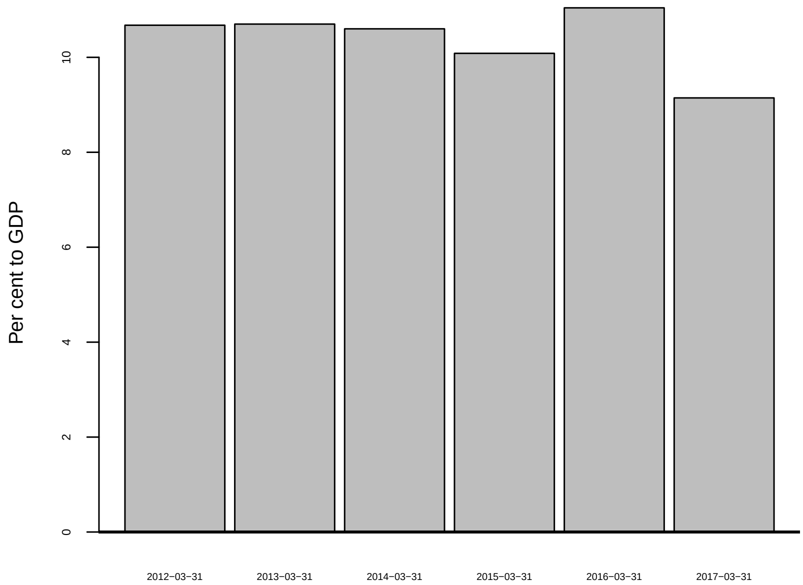
Figure 3 Share of physical and financial assets in household savings



Source: National Accounts Statistics, various years

Household savings comprise financial and physical savings. The share of physical assets in the flow of savings has been increasing over time (See Figure 3). In 2013-2014, physical assets were about 68 percent of household savings. The National Accounts Statistics with the new base year of 2011-2012 suggest that the share of physical assets in household savings though declining is still high at around 60 percent. As percent to GDP, household

Figure 4 Household financial savings



Source: National Accounts Statistics, various years

financial savings have remained stable at roughly 10 percent of GDP over the last five years (See Figure 4).

Since household sector savings is the most prominent component of the aggregate savings, we attempt to project household sector savings. Drawing on the methodology of Planning Commission,[3] we use the elasticity of household savings for obtaining projections. After exploring a number of options, the Planning Commission decided to use the latest three-year moving average of the elasticity of household savings for projecting household savings over the Twelfth Plan. We take the average of the elasticity series from 1981-2013. We use the GDP of 2004-2005 base year for this exercise. This is available till 2013-14. The new GDP series has a few data points which makes it ill-suited for any projection exercise. The average elasticity during the 1981-2013 period is found to be 1.19. We assume a nominal GDP growth of 12 percent. Using these numbers, we project the household sector savings using the equation:

$$(S_t - S_{t-1})/(S_{t-1}) = elasticity * ((Y_t - Y_{t-1})/(Y_{t-1}))$$

There are gaps and limitations in analysing aggregate savings using macroeconomic data available through the National Account Statistics.[4] An alternative approach to analyze

[3] Planning Commission. *Report of the Working Group on Savings during the Twelfth Five-Year Plan (2012-13 to 2016-17)*. Tech. rep. Planning Commission, 2012.

[4] Cristian Badarinza, Vimal Balasubramaniam and Tarun Ramadorai. "The Indian Household Finance Landscape". In: *India Policy Forum* (2017); K G K Subba Rao. "Critique of 2009 Committee on Savings and Investment". In: *Economic and Political Weekly* Vol. 44.Issue No. 39 (26 2009); Ministry

Table 2 Projected household savings rate

Year	Household savings (Per cent to GDP)
2014	22
2015	23
2016	23
2017	24
2018	24
2019	25
2020	25
2021	26
2022	26
2023	27
2024	27
2025	28
2026	28
2027	29
2028	29
2029	30
2030	31

Source: Authors' calculations

the Indian household savings landscape is to look at the aggregated *stock* of savings (wealth). This captures decades of savings decisions and highlights households' social and cultural preferences. The Household Finance Committee[5] made some observations on the Indian household savings landscape:

1. The reports find that a large fraction of the wealth of Indian households is in the form of physical assets. In India, the average household holds 77% of its total assets in real estate, 7% in other durable goods (such as transportation vehicles, livestock and poultry, agricultural machinery and non-farm business equipment), 11% in gold and the residual 5% in financial assets (such as deposits and savings accounts, publicly traded shares, mutual funds, life insurance and retirement accounts). This is in contrast to developed economies where households hold substantial portion of their wealth in financial assets.

2. The objective to support consumption smoothing across the life cycle is served through old-age pension programs. However retirement assets play a very limited role, even for households at the top of the wealth distribution. This feature is not unique to India. Emerging economy households store a large proportion of their assets in physical assets. Financial assets account for a negligible proportion of total household assets. Within the class of financial assets, retirement accounts

of Statistics and Programme Implementation, *Report of the High Level Committee on Estimation of Saving and Investment*.

[5]Household Finance Committee. *Indian Household Finance*. Committee Report. RBI, 2017.

are virtually absent. While on the one hand, the design of financial supply of such services has not kept pace with the demand for customisation arising from households' unique needs, large rural/agricultural populations, large informal-sector workforces additionally explain the low coverage of defined pension programs in emerging economies.[6]

3. For households in the top quintile of wealth holdings, financial assets only play a relatively modest role, even for the wealthiest Indians. A large fraction of the wealth of young households is in the form of durable goods and gold, and as they approach retirement, most of their wealth is in the form of land and housing. There is a substitution effect between durable goods, gold and real estate such that the total share of physical assets remain relatively fixed.

These observations highlight concerns about the state of financial resources available for investment in the economy. Recognizing the low participation of households in financial assets, policy measures have been initiated towards improving access to banking for the unbanked. The last five years have seen some progress in improving access to bank accounts. The Household Finance Committee[7] reports that on an average 66 percent of randomly selected adult household members have a bank account. A report by Demirguc-Kunt et al.[8] notes that the government's policy towards financial inclusion through biometric identification boosted the share of adult bank account holders to 80 percent in 2017 from a low of 35 percent in 2011. Benefits accrued from actively using the accounts for saving money, managing risks, and making or receiving payments. The report by Demirguc-Kunt et al.[9] notes that in India 38 percent of the accounts remained inactive in the past year. This includes no deposit or withdrawal in the past year.

The above discussion shows that while access to bank accounts has improved, its active usage still remains a challenge suggesting that a significant part of the population is still not integrated with the formal banking system. Despite a parallel policy push towards internet connectivity, digital literacy, the proportion of the Indian population accessing bank accounts through their phones or internet is significantly lower than in other developing economies. For example, while people in African countries are moving towards financial inclusion, capitalising on the growth of digital finance, the same cannot be said for India. People in rural areas are not comfortable using phones for banking. Poor access

[6] Cristian Badarinza, Vimal Balasubramaniam and Tarun Ramadorai. "The household finance landscape in emerging economies". In: *VOX: CEPR Policy Portal* (2019).

[7] Household Finance Committee, *Indian Household Finance*.

[8] Asli Demirguc-Kunt et al. *The Global Findex Database. Measuring Financial Inclusion and the Fintech Revolution.* Tech. rep. 2018.

[9] Demirguc-Kunt et al., *The Global Findex Database*.

to electricity and internet penetration is also a contributory factor towards slow adoption of digital banking.[10]

2.1 Composition of household financial savings

Table 3 Composition of household financial savings (Percent) in the long run

Decade	Currency	Deposits	Shares and debentures	Claims on Government	Life insurance funds	Provident and pension funds
1960-1970	25.98	20.59	12.78	-3.17	13.35	30.47
1970-1980	18.96	35.42	3.54	1.44	11.37	29.27
1980-1990	16.05	28.40	8.20	13.89	9.69	23.77
1990-2000	11.92	31.54	12.88	10.47	11.31	21.88
2000-2010	12.33	29.84	5.02	14.08	22.33	16.39

Source: National Accounts Statistics various years

Table 3 shows the composition of financial savings over the last five decades. The table highlights that while deposits constitute the bulk of household financial savings, there is considerable variation in the relative shares of various instruments over the last five decades. The share of currency has declined, reflective of the spread of banking facilities. The share of provident and pension funds has also consistently dropped till 2010 (Planning Commission. *Report of the Working Group on Savings during the Twelfth Five-Year Plan (2012-13 to 2016-17).* Tech. rep. Planning Commission, 2012).

Table 4 Composition of household financial savings (Per cent)

	2011-12	2012-13	2013-14	2014-15	2015-16
Currency	11.39	10.48	8.36	10.61	13.19
Deposits	57.95	56.97	56.01	48.71	42.46
Shares and Debentures	1.77	1.60	1.59	1.62	2.95
Claims on Government	-2.35	-0.67	1.94	0.08	4.47
Insurance Fund	20.98	16.91	18.18	23.62	17.48
Provident and Pension Fund	10.26	14.71	14.93	15.18	19.18

Source: National Accounts Statistics, various years

Table 4 shows the profile of financial savings over a shorter-term horizon. Bank deposits constitute the bulk of household financial savings, though its share in the overall household financial savings has seen a dip from 2011-2012 onwards. Still 57 percent of the financial savings are in cash and deposits leave a very small portion of savings in long-term savings. Shares and debentures constitute a small part of the overall financial savings of households. Investments in provident and pension funds have seen a gradual rise, though they still constitute a small proportion of the overall saving.[3]

[10] Tish Sanghera. "80% of Indians now have a bank account. So why is financial inclusion low?" In: *Business Standard* (May 2018).

Insurance and pension penetration are low by international standards. Table 6 illustrates the pension funds' assets as a percent to GDP. Pension funds' assets are defined as assets bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The pension fund is a pool of assets forming an independent legal entity. India lags behind not only advanced economies but is also placed after emerging economies in pension funds penetration. Table 7 provides a comparison of insurance penetration (measured as ratio of insurance premium to GDP) in India with advanced and emerging economies. India significantly trails other countries in insurance penetration. The life and non-life insurance premium income formed 2.72 percent and 0.77 percent of GDP respectively in 2016. This is low compared to the global average of 3.47 percent and 2.81 percent of life and non-life insurance premium respectively. We attempt to estimate the time it would take for India to reach the current level of global average insurance penetration. Assuming the present average growth of insurance penetration in India, it would take us approximately 21 years to catch up with the global average.

The above discussion shows that the main challenge is not the unavailability of savings but the composition of savings and the intermediation to channel savings into investment. Table 5 shows that India's saving rate exceeds that of advanced economies such as – UK, USA and similarly placed economies like Brazil and South Africa.

Table 5 Annual saving as a percent to GDP

Year	India	UK	USA	Brazil	S.Africa
2010	33.7	12.4	15.4	18.4	18.0
2011	35.4	13.7	16.4	18.9	17.5
2012	33.5	12.1	18.7	18.4	14.8
2013	32.3	11.1	19.1	18.7	15.3
2014	32.9	12.3	20.3	16.3	15.4
2015	30.7	12.3	20.1	14.1	16.3
2016	29.7	12.0	18.6	14.1	16.5

Source: IMF World Economic Outlook, October 2018

Table 6 Pension funds' assets as a percent to GDP

Year	India	UK	USA	Brazil	S.Africa
2010	0.19	82	73.9	13.8	47.7
2011	0.174	88.6	71.3	13.1	45.7
2012	0.3	95.7	75.09	13.4	48.6
2013	0.37	98.1	81.92	12.1	51.2
2014	0.584	97.8	82.11	11.5	54.6
2015	0.78	98.8	77.97	11.4	56.6
2016	1.05	95.2	79.87	12.04	

Source: OECD, available at `https://data.oecd.org/pension/pension-funds-assets.htm`

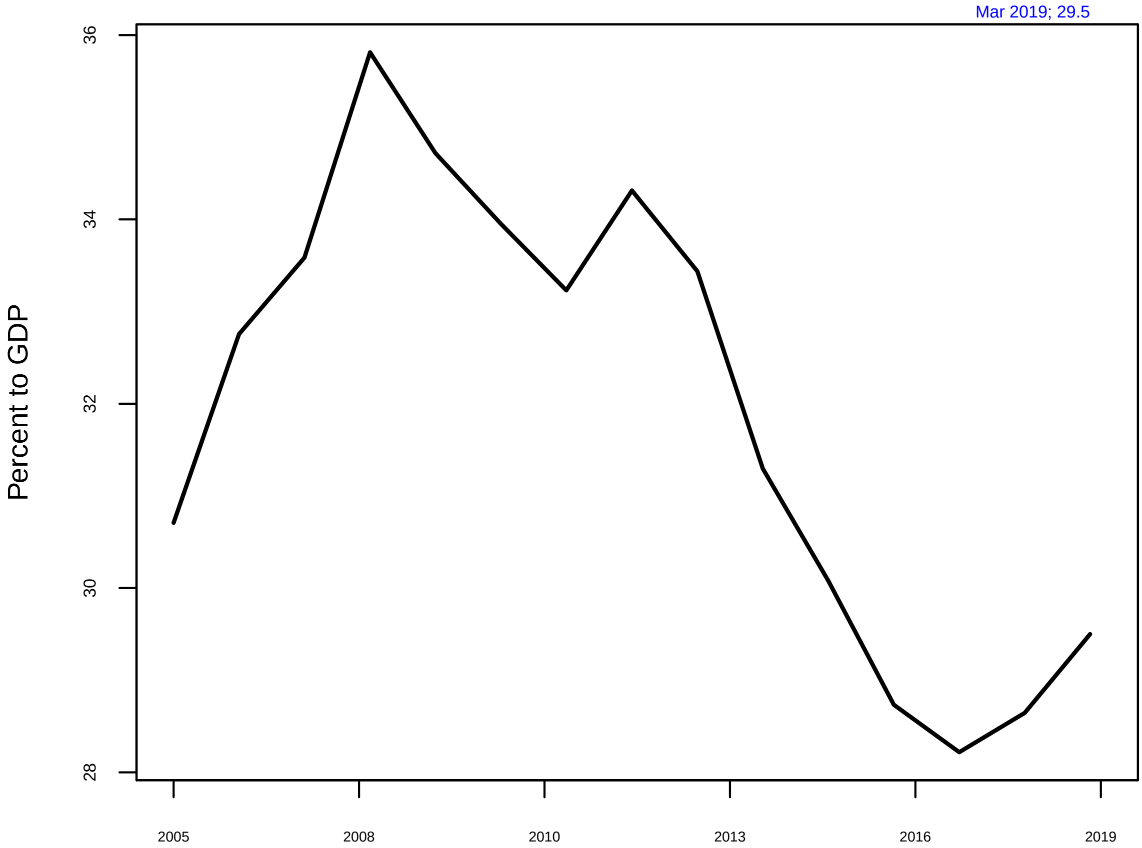
Table 7 International Comparison of Insurance Penetration (Measured as ratio of premium to GDP)

	2013			2014			2015			2016		
Countries	**Total**	**Life**	**Non Life**	**Total**	**Life**	**Non Life**	**Total**	**Life**	**Non Life**	**Total**	**Life**	**Non Life**
Brazil	4.00	2.20	1.80	3.90	2.10	1.90	3.90	2.10	1.80	4.04	2.28	1.76
South Africa	15.40	12.70	2.70	14.0	11.40	2.70	14.70	12.00	2.70	14.27	11.52	2.74
United Kingdom	11.50	8.80	2.80	10.60	8.00	2.60	10.00	7.50	2.40	10.16	7.58	2.58
United States	7.50	3.20	4.30	7.30	3.00	4.30	7.30	3.10	4.20	7.31	3.02	4.29
India#	**3.90**	**3.10**	**0.80**	**3.30**	**2.60**	**0.70**	**3.40**	**2.70**	**0.70**	**3.49**	**2.72**	**0.77**
World	**6.30**	**3.50**	**2.80**	**6.20**	**3.40**	**2.70**	**6.20**	**3.50**	**2.80**	**6.28**	**3.47**	**2.81**

Source: Handbook on Indian Insurance Statistics 2016-17, Insurance Regulatory and Development Authority of India (IRDAI)

3 Transformation of savings into investment

Figure 5 Gross fixed capital formation (Percent to GDP)



Source: National Accounts Statistics, various years

Capital is the key driver of growth in the economy. Investment or Gross Capital Formation (GCF) includes three elements, Gross Fixed Capital Formation (GFCF), change in stocks and valuables (gold). The most important component is GFCF which means capital expenditure on machinery, equipment and dwellings. Figure 5 shows the trajectory of GFCF since early 2000s. The figure shows that the period 2004-2008 witnessed an investment boom with the GFCF to GDP increasing from 30.7 percent to 34.7 percent in 2008. Post the global financial crisis, this ratio moderated to 31 percent in 2013. The moderation in the GFCF to GDP ratio has continued in the recent years. The ratio declined from 30.1 percent in 2014 to 28.6 percent in 2017. The ratio picked up to 29.4 percent in 2018. Moderation in GFCF, a measure of fixed asset creation raises concerns about growth of output in the economy.

Table 8 shows the components of GFCF specifically a deceleration in investment by the

Table 8 Components of gross fixed capital formation (Per cent to GDP)

	Government	Household sector	Private sector	Public sector
2012-03-31	3.48	15.75	11.23	3.86
2013-03-31	3.41	14.63	11.79	3.61
2014-03-31	3.53	12.52	11.68	3.56
2015-03-31	3.55	12.06	11.02	3.45
2016-03-31	3.57	9.13	12.01	3.76
2017-03-31	3.76	9.09	12.29	3.40

Source: National Accounts Statistics, various years

household sector. Household sector investment declined from 15.75 percent of GDP in 2011-2012 to around 9.09 percent of GDP in 2016-2017. A major part of the household investment is in the form of property and the remaining is in equipment. Table 9 shows that the decline in household sector investment is driven by a decline in investment in dwellings and buildings.

Table 9 Components of household sector investment (Percent to GDP)

	Dwellings and buildings	Equipment
2012-03-31	12.85	2.82
2013-03-31	11.61	2.96
2014-03-31	11.11	1.34
2015-03-31	10.24	1.75
2016-03-31	7.27	1.79
2017-03-31	6.77	2.24

Source: National Accounts Statistics, various years

A sharp downturn in investments in dwellings and structures leads to slowdown in construction sector activities, which then feeds into slowdown in various allied sectors, such as steel and cement.

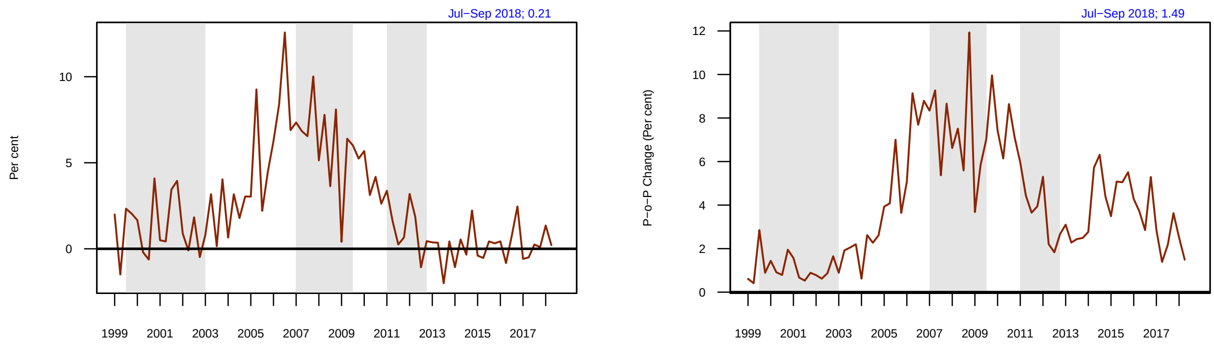
Another approach to assess the state of investment in the economy is to look at project level data.[4] Figure 6 shows the quarter-on-quarter growth in projects under implementation and new projects. In the years 2005 to the beginning of 2009, we saw a sharp increase in the value of projects under implementation. But over the last six years, from 2012 the pipeline of projects under implementation has stagnated. The growth of new projects is also seen to be muted as compared to the strong growth seen till 2011. A number of negative shocks arising from the policy side affected the investment climate adversely.[11] The challenge of reforms is to revive the state of investments in the economy.

The biggest component of investment in India in the coming two decades is expected to be investment in infrastructure. While the bulk of household financial savings are directed

[11] Ila Patnaik and Madhavi Pundit. *Where is India's Growth Headed?* Working Papers 159. National Institute of Public Finance and Policy, 2016.

Figure 6 Quarter-on-quarter growth in projects under implementation and new projects

Under-implementation projects New projects



Source: CMIE Capex

towards bank deposits, banks have limited capacity to finance private investments in infrastructure. Investment in the remaining sectors such as manufacturing and services can be easily financed by retained earnings, promoter savings, bank finance and equity finance including the stock market. Large companies, both in manufacturing and services, are currently able to raise capital and may expect to do so to some degree. The two big challenges today are investments in micro, small and medium enterprises (MSMEs) and in large and long term projects like infrastructure.

3.1 Issues in infrastructure financing

Infrastructure projects are complex, capital intensive and have long gestation periods that often involve unique risks to project financiers. *Economic Survey 2017-18* suggests that India needs USD 4.5 trillion for investment in infrastructure over the next two decades.[12] The scale and complexity of infrastructure projects make financing a challenge and may create a gap between investment demand and supply of finance. Funds for financing infrastructure can flow from banks, bond markets and external funding. Underdeveloped bond markets and a host of regulatory restrictions on financial institution such as insurance and pension funds constrain their ability to participate in infrastructure financing. This section highlights the challenges in infrastructure financing:

Difficulties in bank-led financing : Banks in India typically face an asset-liability mismatch. Currently their liability profile is not suited for financing long-term, high risk infrastructure financing. Banks also face constraints on portfolio management. Banks have to channel 40 percent of their net bank credit to priority sector.[5] They

[12] http://mofapp.nic.in:8080/economicsurvey/pdf/120-150_Chapter_08_Economic_Survey_2017-18.pdf

Table 10 Flow of bank credit

	2004 (Billion rupees)	2008 (Billion Rupees)
Infrastructure+ Construction	573	2333
Other Areas	2717	6250
Total Industrial Credit	3290	8583

Source: Handbook of Statistics on Indian Economy, RBI

have to invest an additional 19.5 percent of their deposits in Government securities (Statutory Liquidity Ratio)[6] and 4 percent of their deposits have to be maintained with the RBI as Cash Reserve Ratio.[13]

The strategy of bank-led financing for infrastructure was tried in the early 2000s. During 2003-2008, the growth in bank credit saw a phenomenal growth of 40 percent (See Figure 7). The bulk of the bank credit went to infrastructure and construction (See Table 10).

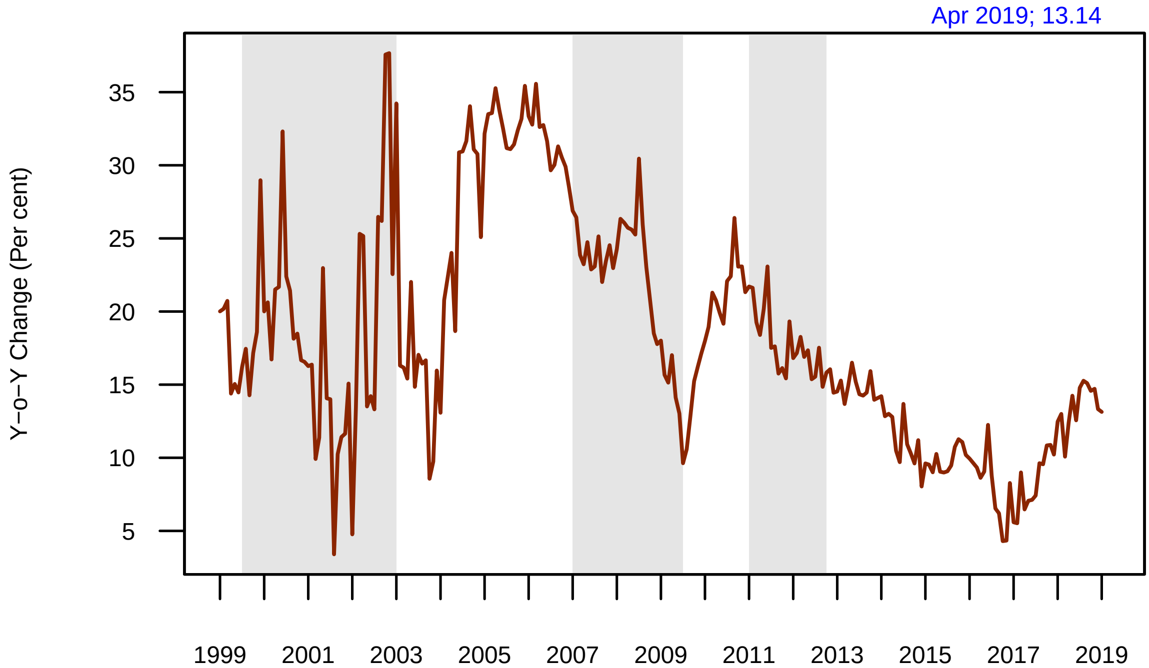
The global financial crisis, and the recession in the economy since 2012, made repayments of loans difficult. The period following this saw a spurt in Non Performing Assets (NPA). Schemes such as Corporate Debt Restructuring (CDR), Sustainable Structuring of Stressed Assets or S4A, Strategic Debt Restructuring (SDR) and Joint Lenders' Forum (JLF) led to evergreening of loans.[7] Bank loans were stuck resulting in a decline in growth of bank credit.

Bank financing is likely to be constrained going forward due to the growing trend of stressed assets in the infrastructure sector in their balance sheets. As of March 2018, while the stressed advances of scheduled commercial banks were 12.2 percent of the total advances, the Reserve Bank of India's Financial Stability Report[14] noted that 22.6 percent of the bank advances to infrastructure sector were stressed. 70 percent of the banking sector is dominated by public sector banks. As of December 2018, 11 of the 21 public sector banks were under Prompt Corrective Action, owing to their weak balance-sheets. These banks were constrained to lend. The Reserve Bank of India's Financial Stability Report noted that by March 2019, there could be further deterioration in the asset quality of banks.[15]

The stressed balance-sheets will constrain the role of the banking sector to be the major source of financing even as the financing needs for infrastructure increase

[13]Richard Herd et al. "Financial Sector Reform in India". In: *OECD Working Paper* 879 (2011).
[14]Reserve Bank of India. *Financial Stability Report, Issue No. 17.* Tech. rep. Reserve Bank of India, June 2018.
[15]Reserve Bank of India, *Financial Stability Report, Issue No. 17*.

Figure 7 Weak bank credit growth since 2012



Source: Handbook of Statistics on Indian Economy, RBI

Table 11 Estimated infrastructure investment and gaps for India

	USD Billion
Estimated current investment (2015)	118
Annual needs	230
Gap	112
Gap as a per cent to GDP	4.1

Source: Meeting Asia's infrastructure needs 2017, ADB

manifold. Asian Development Bank[16] reports that for India, the annual estimated gap in infrastructure financing is to the tune of USD 112 billion. This amounts to 4.1% of GDP (See Table 11). This points to the need for alternative sources of infrastructure financing.

External funding : External sources of funding could bridge some of the funding gap. India's current account deficit widened from 0.6 percent of GDP in 2016-2017 to 1.9 percent of GDP in 2017-2018. Assuming a sustainable level of current account deficit at 3 percent of GDP, an additional 1 percent of capital inflow can flow into infrastructure investment through a mix of FDI, portfolio investments and debt capital (both local-currency and foreign currency denominated). However this constitutes a very small proportion of the total infrastructure financing requirement

[16] Asian Development Bank. *Meeting Asia's Infrastructure Needs.* Report. Asian Development Bank, 2017.

for India.

Insurance and pension funds' participation in infrastructure projects : From the point of view of asset-liability mismatches, insurance and pension funds are best suited to invest in long-term infrastructure projects as these institutions have long-term liability profile. However, they are constrained by the restrictive regulatory framework (Insurance Regulatory and Development Authority. *Insurance Regulatory and Development Authority (Investment) Regulations.* 2000):

- Insurance companies are under obligation to invest 50 percent of their investible resources in government bonds.
- Bulk of the investment has to be in AAA rated bonds. Only 15 percent can be invested in bonds lower than AA.
- Existing regulations allow exposure upto 25 percent of the networth of companies. Since infrastructure companies are highly leveraged, their net worth is low, which prevents insurance companies from investing large sums to infrastructure companies.

These restrictions need to be eased if India needs to develop a bond market. However merely enacting these changes may not be enough.

Limited liquidity in bond market : A critical requirement for capital formation is the availability of non-bank finance. A deep and liquid bond market can potentially serve as an efficient channel to intermediate savings into investments. However the bond market in India is nascent. The bond market in India is characterized by the absence of a well developed and liquid government bond market. Corporate bonds need a liquid government bond market to be able to price risk in a rational manner. The government bond market is dominated by constrained institutional investors who generally do not trade in government securities resulting in low turnover.

The corporate bond market in turn is characterized by a limited liquidity in lower rated bonds.[17] More than half of the bonds issued in 2016-2017 were "'AAA" rated and "AA" rated.[8] The corporate bond issuance is dominated by private placements as these account for more than 95% of the total issuance of corporate debt (Shromona Ganguly. *India's corporate bond market: Issues in market microstructure.* RBI Bulletin. Reserve Bank of India, 2019). Bulk of the issuance have a

[17] *Report of the Working Group on Development of Corporate Bond Market in India.* Tech. rep. Reserve Bank of India, 12th Aug. 2016.

short-tenor of about 2-5 years. Institutional investors such as insurance and pension funds are constrained by their investment mandates.

How can the bond market be deepened? Investment regulations in various sectors can permit investments in below AAA and AA rated category prescribing a minimum percentage in such investments which can be small to start with and increased gradually, based on the experience. To increase the investor base, foreign investors should be allowed greater and frictionless participation in the corporate bond market. Repos in corporate bonds can reduce costs and improve liquidity. Further, the enactment of the Insolvency and Bankruptcy Code (IBC) arms bondholders to safeguard their interests against defaulting issuers. This should potentially incentivise investors to invest in low-rated bonds.

Merely incentivising investments in low rated bonds may not be enough to improve liquidity in the bond market. These may end being another set of enabling legislative changes unless accompanied by fundamental principles of good financial sector regulation on transparency and accountability. A case in point is the investment pattern followed by the Employees' Provident Fund Organisation (EPFO).[9] The Central Government notifies the investment pattern of EPFO. The actual investment is decided by the Central Board of Trustees (CBT). The Government allowed the EPFO to invest in AA-rated bonds but the CBT decided to permit investments in instruments graded a notch higher. Not a significant proportion of funds have flown into them since then.[18] These bonds are rated by Credit Rating Agencies (CRAs). CRAs are registered with and regulated by the Securities and Exchange Board of India (SEBI).

The EPFO is the custodian of the savings of employees. It should seek to ensure that the provident fund of the employee is secure while ensuring a decent return on investment. An expert committee set up by the Government on investments by EPFO in bonds and other instruments noted that the CRAs are not discharging their functions adequately and in a transparent manner.[19] The Committee emphasised the need for a healthy monitoring mechanism, rating mechanism and a forewarning system in case of falling credit rating. It recommended a stringent

[18]Saikat Das Joel Rebello. *Here is what Modi govt should do to lift-off Indian bond market.* Feb. 2018. URL: `https://economictimes.indiatimes.com/markets/bonds/here-is-what-govt-needs-to-do-to-lift-off-indian-bond-markets/articleshow/62810999.cms`.

[19]The Standing Committee on Labour. *The Fifty-Seventh of the Standing Committee on 'Guidelines, Monitoring, Rating, and Regulatory System', Status of Investment in Bonds and such Instruments-[Example of Infrastructure Leasing and Financial Services (IL&FS)] by PF Funds, Pension Funds.* Tech. rep. Feb. 2019.

monitoring of CRAs to ensure that their ratings are transparent. Unless such reforms are initiated, the incentive to invest in low rated bonds will remain a pipe dream.

From a strategic policy perspective, a natural course is to develop the bond market that improves access to credit to firms when banks are stressed.

3.1.1 Private participation in infrastructure

The scale of investment required in infrastructure is more than what can be done through government expenditure. Involving private sector has the potential to induce higher efficiency gains as they enable on-budget and timely delivery, cost savings, and stronger orientation towards customer service. Public Private Partnership (PPP) enables shifting the maintenance and construction risks toward the private sector while enabling the public sector to focus on core businesses and outcomes.

However, the implementation of PPP was mired in a number of challenges. PPPs suffered long delays in environmental and other clearances, land acquisitions and in getting coal linkages or rail connections. Sectors with multiple regulators like roads, ports and airports hinder the decision making process due to an overlap in the functions of regulatory agencies. Contractual framework also needs improvement. Inadequate provision of redressal framework in contracts, lack of clarity on provision for an exit strategy clause caused delays and failures. Many PPPs had a Build-Operate-Transfer (BOT) framework. In this model, the private sector would build the project, operate it for a fixed number of years and then transfer it to the Government. This was a flawed framework as the risk of delays and clearances were borne by the private sector which had the least ability to manage such risks. The model needed a rethink. The risks of delays and clearances needed to be taken up by the Government-most of these risks were government made.

An expert committee on revitalizing the PPP model of infrastructure recommended changes in contracts based on evolving risk profile, market conditions and technology impacts.[20] The Committee also proposed optimal risk allocation and management across all stakeholders and strengthening institutional capacity.

A recent mode of private sector participation is the Toll-Operate-Transfer (TOT) model. In this model, the government builds the project, operates it for some years and then leases the project to the private sector for the low risk task of operating and maintaining.

[20] Department of Economic Affairs. *Report of the Committee on Revisiting and Revitalising Public Private Partnership model of infrastructure*. Tech. rep. Department of Economic Affairs, 2015.

TOT addresses the risk sharing weaknesses of the BOT model. As an example, in the road sector, thirty-year leases of existing toll roads are auctioned to private operators. The winner of the auction wins the right to collect tolls, maintains the roads and transfers them back to the Government after 30 years. The funds from auctions can be used to build fresh infrastructure while improving efficiency in existing infrastructure.

The first TOT auction fetched the Government INR 96.8 billion.[21] The second batch of auction has, however elicited lukewarm response.[22] The lukewarm response could be a reflection of the uncertainty about the profitability of the auctioned road stretches. The funding sources for concessionaires are adversely impacted due to the stressed asset problems of banks and credit crunch being faced by NBFCs. This has also affected the appetite of developers participating in the TOT bidding.

Other sectors such as airports, power transmission, oil and natural gas could potentially explore this model to garner funds for fresh investment.

3.2 Financing for Micro, Small and Medium Enterprises (MSMEs)

The other sector that is under-funded is the micro, small and medium enterprises. MSMEs play a key role in economic growth, job creation and local development. According to the NSS 73rd Round conducted during the period 2015-2016, there were 63.38 million MSMEs in the country. The micro sector with 63.05 million enterprises accounts for more than 99 percent of total estimated number of MSMEs.[23]

According to the Annual Report 2017-2018, Ministry of Micro, Small and Medium Enterprises, the share of MSMEs in GDP was 29 percent in 2015-16. Contribution of manufacturing MSMEs to manufacturing GVA is about 33 percent. Table 12 shows the share of MSMEs in Gross Value Added (GVA) and GDP in the last five years.

MSMEs also play a significant role in employment generation. Estimates by the National

[21] Shailaja Sharma. *India's first big-ticket TOT auction shows PE investors' appetite for roads.* Mar. 2018. URL: `https://www.vccircle.com/indias-first-big-ticket-tot-auction-shows-pe-investors-appetite-for-roads/`.

[22] Tanya Thomas. *NHAI may not get many bids for toll roads.* Dec. 2018. URL: `https://www.livemint.com/Politics/eXTqtv08lj0jF4iN0U65EP/NHAI-may-not-get-many-bids-for-toll-roads.html`.

[23] National Sample Survey Office. *Key Indicators of Unincorporated Non-Agricultural Enterprises (Excluding Construction in India: NSS 73rd Round).* Report. Ministry of Statistics and Programme Implementation, June 2017. URL: `http://www.mospi.gov.in/sites/default/files/publication_reports/NSS_KI_73_2.34.pdf`.

Table 12 Share of MSMEs in Gross Value Added (GVA) and Gross Domestic Product (GDP)

Year	Share in GVA (%)	Share in GDP (%)
2011-12	31.86	29.57
2012-13	32.36	29.94
2013-14	32.26	29.76
2014-15	31.86	29.39
2015-16	31.60	28.77

Source: Ministry of Micro, Small and Medium Enterprises (MSME), Various Annual Reports

Sample Survey Office[24] and CIBIL[25] suggest that MSME sector employs around 117 million people, constituting 40 percent of the workforce. 32 percent of the total jobs are created in the manufacturing sector, 35 percent in trade and 33 percent in other services. While MSMEs play an important role in the real economy, their growth is constrained by the limited availability of bank credit.

Banks can play a crucial role in MSMEs external financing.[26] MSMEs face considerable credit constraints. Their limited size and lower credit worthiness undermine their ability to borrow in the "impersonal" and "arms-length" environment of bond market that requires hard and objective information about the ability to repay.[27] As a consequence, SMEs need bank financing. However in India, SME credit constitutes a small proportion of the outstanding bank credit. As per the MSME Pulse Report published by TransUnion CIBIL and SIDBI, there are close to 51 million MSME units in the country, out of which only 5 million units have access to formal credit.[28]

Table 13 Composition of outstanding bank credit (In per cent)

Variable	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Agriculture and allied activities	12.74	12.11	12.04	12.76	13.49	13.99	13.40
Industry	45.16	45.80	45.51	44.27	41.71	37.77	35.11
Micro and small	5.52	5.84	6.30	6.33	5.67	5.21	4.85
Medium	2.91	2.56	2.24	2.07	1.75	1.48	1.35
Large	36.74	37.40	36.97	35.87	34.28	31.08	28.91
Services	23.85	23.65	24.19	23.54	23.54	25.40	26.67
Personal Loans	18.25	18.43	18.26	19.43	21.27	22.84	24.82

Source: Handbook of Statistics on Indian Economy, RBI

[24] National Sample Survey Office, *Key Indicators of Unincorporated Non-Agricultural Enterprises (Excluding Construction in India: NSS 73rd Round)*.

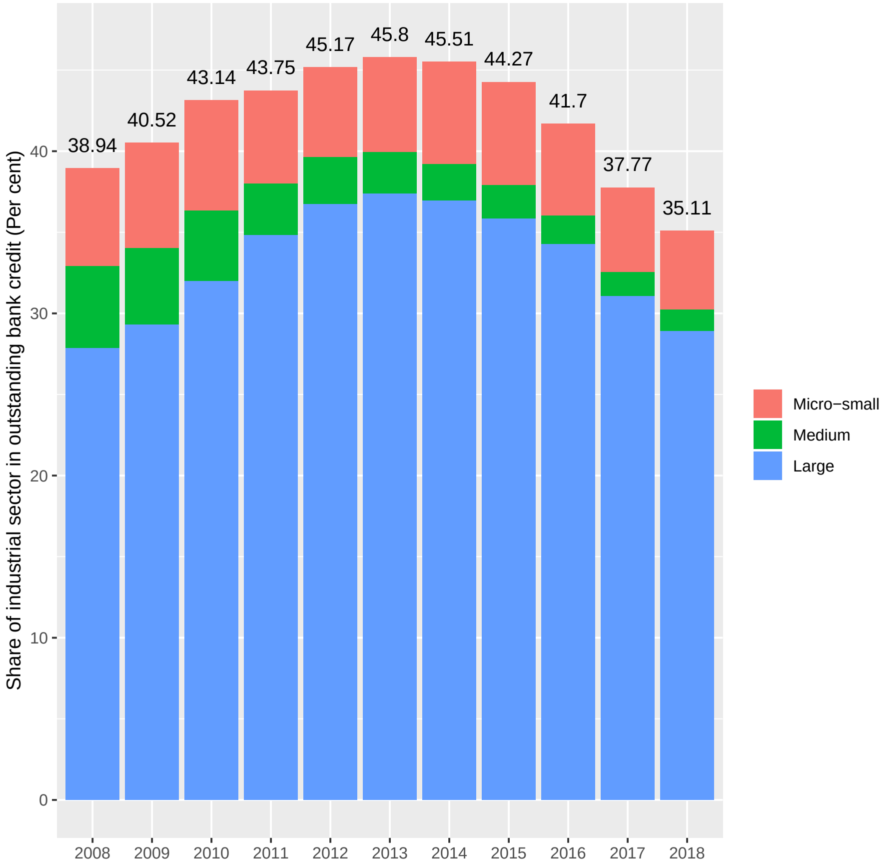
[25] SIDBI-TransUnion CIBIL. *MSME Pulse Report*. Report. MSME, 2018.

[26] Santiago Carbo Valverde, Francisco Rodriguez-Fernandez and Gregory Udell. *Bank lending, financing constraints and SME investment*. Working Paper Series WP-08-04. Federal Reserve Bank of Chicago, 2008.

[27] Augusto de la Torre, Maria Soledad Martinez Peria and Sergio L. Schmukler. *Bank involvement with SMEs: Beyond relationship lending*. Policy Research Working Paper 4649. World Bank Development Economics Research Group & Latin America and the Caribbean Region, 2008.

[28] CIBIL, *MSME Pulse Report*.

Figure 8 Large industries capture the bulk of outstanding bank credit to industries.



Source: Handbook of Statistics on Indian Economy, RBI

Table 13 shows the composition of outstanding non-food credit by banks. The table shows that around 5 percent of the outstanding non-food credit of scheduled commercial banks goes to micro, small and medium enterprises. The micro and small loan portfolio of banks has been declining from 6 percent in 2008 to less than 5 percent in 2017-2018. The share of medium enterprises has declined to 1.35 percent in 2017-2018. The share of MSMEs in bank credit is abysmally low compared to international standards. A study by OECD on financing SMEs suggests that the median share of SME loans as a percentage of all outstanding business loans stood at 42.2 percent in 2016.[29] However in India, the bulk of the outstanding bank credit to industries goes to large industries (See Figure 8). Within the class of MSMEs, the share of medium industries has been consistently declining.

MSMEs remain financially constrained, even though bank credit to MSMEs have been part of the directed credit program in the form of the Priority Sector Lending (PSL).[30]

[29]OECD. *Financing SMEs and Entrepreneurs 2018: AN OECD Scorecard*. Report. OECD, 2018.
[30]Reserve Bank of India. *Master Direction-Priority Sector Lending: Targets and Classification*. 1st Aug.

Table 14 Definition of micro, small and medium enterprises under the PSL guidelines

Manufacturing sector	
Enterprises	Investment in plant and machinery
Micro Enterprises	Does not exceed Rs 2.5 million
Small Enterprises	More than Rs 2.5 million but does not exceed Rs 50 million
Medium Enterprises	More than Rs 50 million but does not exceed Rs 100 million
Services sector	
Enterprises	Investment in equipment
Micro Enterprises	Does not exceed Rs 1 million
Small Enterprises	More than Rs 1 million but does not exceed Rs 20 million
Medium Enterprises	More than Rs 20 million but does not exceed Rs 50 million

Source: (Reserve Bank of India. *Master Direction-Priority Sector Lending: Targets and Classification.* 1st Aug. 2018)

Under the PSL guidelines, banks must allocate 40 percent of their credit to priority sectors. The share of micro-enterprises is 7.5 percent within the 40 percent target. Table 14 shows the definitions of micro, small and medium enterprises for the purposes of PSL:

Credit advanced to MSMEs engaged in services sector also classifies as PSL. The evidence on the effectiveness of these directed lending programs has been far from satisfactory. Experiences of countries like Japan, Korea, China, Brazil and Thailand suggest that directed credit lending programs might not always be efficient in making financing available to certain sectors because of the high costs of implementing such programs.[31] With regards to the design of PSL in India, the study makes the following observations:

- The PSL targets are fixed in terms of previous year's adjusted net bank credit. This creates perverse incentives as banks do not scale up overall lending as it increases bank's overall PSL target for them.
- PSL is very costly for banks relative to the returns that it generates for them. Returns are low on account of interest rate ceilings imposed on these loans. Table 15 shows bank-wise costs and returns of PSL.[32]

In a recent report, the IMF noted that PSL can impose significant limitations on the banks' own credit risk appraisal strategies and policies, and may lead to risk accumulation.

2018.

[31] Nathan Associates Inc. *Reprioritising Priority Sector Lending in India: Impact of Priority Sector Lending on India's Commercial Banks.* Economic Impact Analysis. Nathan Associates Inc, Dec. 2013. URL: https://www.nathaninc.com/insight/priority-sector-lending-in-india/.

[32] Costs of PSL include indirect costs such as non-performing assets and opportunity costs of PSL, and direct costs such as funding cost, transaction cost and credit cost.

Table 15 Costs and returns of PSL

Bank type	Total cost of credit	Total return
Public sector banks	39.1%	11.5%
Private sector banks	26.7%	14%
Foreign banks	25.7%	14%

Source: Nathan Associates Inc, Reprioritising Priority Sector Lending in India: Impact of Priority Sector Lending on India's Commercial Banks

The RBI should consider reviewing PSL policy, including targets and scope of application to allow banks flexibility in meeting PSL targets.[33] A number of suggestions have been made in the policy discourse to improve the efficiency of such schemes while minimising the associated costs.[34] As an example, the Rajan[35] report acknowledges that while priority sector lending has a role in promoting financial inclusion, it should be streamlined to focus solely on the sectors that need access. The *process* by which the mandates are implemented should be reformed to promote efficiency and ease of compliance. The focus should be on promoting access regardless of the institution that implements this. In this backdrop, the Committee recommended that a market for priority sector lending should be developed. The key instrument is the "Priority Sector Lending Certificate (PSLC)".[10] Any bank who has made loans under the PSL would get PSLC. Banks who are not able to meet their targets would be able to buy PSLCs from surplus banks. The merit of this scheme is that it would allow the most efficient lender to provide access to the poor, while finding a way for other banks to fulfil their norms at lower cost. RBI in 2016, released norms on trading in PSLCs.[36]

On the institutional framework, the *Report of the Financial Sector Legislative Reforms Commission, March, 2013* proposes a design for the administration of financial inclusion initiatives like the PSL. The *Report of the Financial Sector Legislative Reforms Commission, March, 2013* opines that when a financial regulator is tasked with formulating regulations on priority sector lending, three problems are encountered:

1. *Costs*: When a regulation forces banks to give more loans to a certain target group, this imposes a cost:a tax upon other customers of loans, and also depositors and shareholders. A fundamental principle of democracy is that authorization for all

[33] International Monetary Fund. *Financial System Stability Assessment*. IMF Country Report No. 17/390. International Monetary Fund, Dec. 2017. URL: https://www.imf.org/en/Publications/CR/Issues/2017/12/21/India-Financial-System-Stability-Assessment-Press-Release-and-Statement-by-the-Executive-45497.

[34] K M Shajahan. "Priority Sector Bank Lending-Some Important Issues". In: *Economic and Political Weekly* Vol. 33.Issue No. 42-43 (17 1998).

[35] Raghuram Rajan. *Report of the Committee on Financial Sector Reforms*. A Hundred Small Steps. Tech. rep. Planning Commission of India, 12th Sept. 2008. URL: http://planningcommission.nic.in/reports/genrep/rep_fr/cfsr_all.pdf.

[36] Reserve Bank of India. *Priority Sector Lending Certificates*. 7th Apr. 2016.

taxation should come from Parliament. When the power to impose such costs are given to unelected officials i.e. the financial regulators; it generates sub-optimal outcomes. Therefore, the Commission recommends that where there is a cost incurred by financial service providers in granting effective and affordable access to financial services, such financial service providers should be reimbursed in some form (for example, cash, cash equivalents or tax benefits).

2. *Dilution of accountability of regulators*: When redistributive objectives are vested with financial regulators, it may take them away from their core functions of consumer protection and micro-prudential regulation.

3. *Inefficient outcomes*: When a transfer is achieved by taxing some consumers in order to deliver gains to others, this is a form of taxation. The Commission believes such implicit and selective taxation of different categories of consumers is inefficient.

The Commission recommends measures to improve the efficacy of developmental and redistributive measures. It believes that redistribution and development are legitimate political goals. However, the right place where these goals should be pursued is Government and not regulators. This calls for making regulation-making functions related to development and redistribution (e.g. regulations for priority sector lending) at the Government (the fiscal authority) while asking financial regulators to verify compliance i.e. to supervise the regulations enacted by the fiscal authority.

To enhance the flow of credit to MSMEs, the Government launched a scheme called the Pradhan Mantri Mudra Yojana (PMMY) in April 2015 for providing loans upto INR 10 lakh to small and micro-enterprises. Under the scheme, an agency was set up to refinance and provide credit support to financial institutions lending to small and micro enterprises. The objective of the scheme was to facilitate the formalization of small and medium enterprises by providing them access to formal credit. However, the success of the scheme in addressing the investment needs of the sector has been limited.

Credit disbursal under the scheme is skewed. Data on credit disbursal shows that 47 percent of Mudra loans sanctioned and disbursed in 2016-2017 were extremely small loans (i.e. loans of up to INR 50,000) under the Shishu category, while 30 percent were between INR 50,001 and INR 5 lakh. The remaining 23 percent of the overall loans disbursed and sanctioned were between INR 5 lakh and INR 10 lakh.

Credit to small businesses needs to become a core activity of banks, rather than a target to be met. Between financial repression, priority sector allocation and highly creditworthy large corporations turning to banks rather than to the bond market, this activity is a very small part of the current Indian banking sector.

4 Reforms

Raising the level of savings and investments require comprehensive policy reforms. The approach towards financialization of savings should not be limited to giving instructions to public sector banks to meet targets. It requires fundamental reforms encompassing greater market orientation and competition in the financial sector and a reform of the regulatory capability.

4.1 Promoting digital access

The RBI[37] in its report on *Trend and Progress of Banking in India* shows that around 32 percent and 19 percent of the branches of public sector banks and private sector banks respectively are working in rural areas. Raising the level of household savings requires solving the problems of outreach, high transactions costs for low value transactions, and business model innovation. An innovative approach is required to bridge the gap between access and usage of bank accounts.

The role of technology in the financial sector could foster financial inclusion and improve the outreach of economic benefits to the financially excluded, unserved and underserved sections of the society. Globally, there is a growing realisation that while considerable progress has been made in the field of financial inclusion, digital technology can play an effective role in plugging the remaining gaps. GPFI[38] focuses on promoting digital approach to financial inclusion. It notes that policy makers should encourage innovation in the digital financial ecosystem to harness its benefits for those that are financially excluded.

[37] Reserve Bank of India. *Report on Trend and Progress of Banking in India*. Tech. rep. 2017. URL: `https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Trend%20and%20Progress%20of%20Banking%20in%20India`.

[38] The Global Partnership for Financial Inclusion (GPFI), G20. *G20 High Level Principles for Digital Financial Inclusion*. Tech. rep. 2016. URL: `https://www.gpfi.org/publications/g20-high-level-principles-digital-financial-inclusion`.

4.2 Privatization of Public Sector Banks (PSBs)

Most arguments for nationalizing banks are based on the premise that profit-maximizing lenders do not necessarily deliver credit where the social returns are highest. Bank nationalisation in India in the late 1960s was also motivated by the desire to serve national priorities like agriculture and small industry. However, cross-country evidence on the impact of state-owned banks is not encouraging. Evidence suggests that government ownership is negatively correlated with financial development and economic growth.[39] After almost four decades since the last wave of nationalization, it is pertinent to ask what is the objective function of public sector banks in India and did they serve their objectives well?

PSBs bear the cost of government's social sector programs. A national mission towards financial inclusion was initiated through the Pradhan Mantri Jan Dhan Yojana. The objective of the scheme is to provide universal access to banking facilities with at least one basic banking account for every household, financial literacy, access to credit, insurance and pension facility. A look at the details of the scheme shows that out of the 336 million bank accounts opened under the scheme as of December 19, 2018, public-sector banks account for more than 80 percent of all accounts opened with dismal participation by private sector banks.[40] There are costs involved in opening and maintaining accounts. There is no business incentive for a bank to cater to account holders maintaining nil or low balances. The PSBs are given aggressive targets with requirement of daily compliance.

Similarly, the management of demonetization and its aftershocks was primarily left to PSBs. It is pertinent to ask if the burden of achieving the government's economic, social and political goals should be left to the public sector banks - as this burden ends up eroding these institutions. Such obligations on PSBs diverts them from their core task of financing credit for genuine investment needs. As of December, 2018, 11 out of 21 listed government owned banks were under Prompt Corrective Action framework due to large bad loans and weak capital levels. These banks may face further erosion in their capital levels. Eight of the PSBs under PCA may have capital below the minimum regulatory level of 9 per cent by March 2019.[41]

The policy response to the growing problems of public sector banks has been to recapit-

[39] Rafael La Porta, Florencio Lopez-De-Silanes and Andrei Shleifer. "Government Ownership of Banks". In: *The Journal of Finance* 57.1 (2002), pp. 265–301. ISSN: 1540-6261. DOI: 10.1111/1540-6261.00422. URL: http://dx.doi.org/10.1111/1540-6261.00422.

[40] See https://www.pmjdy.gov.in/account

[41] Reserve Bank of India. *Financial Stability Report, Issue No. 18.* Tech. rep. Reserve Bank of India, Dec. 2018.

alize banks. Recapitalization puts enormous stress on government finances and distorts the behavior of banks. When private sector banks raise capital-they face a market test, they have to convince investors of their investments, profitability. Public sector banks do not need to answer these questions on profitability and performance. The CAG Report, Union Government, Ministry of Finance[42] points out that during 2008-2009 to 2016-2017, INR 1,187.24 billion was infused into the banking system. The report noted that while the desired objective of recapitalization has been to improve the level of capital in banks in line with the regulatory requirements, in many instances the objective has not been fulfilled. In October 2017, the Government announced a mega recapitalization plan of INR 2.11 trillion over the next two years through budgetary provisions of INR 181.39 billion and the sale of recapitalization bonds worth INR 1.35 trillion. It was expected that this infusion of capital will support the growth in credit. As a first tranche of this amount- INR 880 billion as recapitalization bonds was infused in 2017-2018 in PSBs. This amount was merely sufficient to tide over the losses of banks, and did not result in improvement in capital adequacy levels.[11] Recapitalization is not an optimal policy response, it uses tax-payer money to cover up the failure of the institution. The stress tests by the RBI shows that the bad loans of the banks that received recapitalization support from the government, will rise further and their capital levels will deteriorate.[43]

Numerous expert committees in the past recommended reducing government stake and privatization of public sector banks in a phased manner.[44] While public sector bank privatization can minimize the recurrent need for recapitalization, some degree of conditional recapitalization may be necessary to support privatization. Recapitalization initiatives should focus on enhancing banks' ability to attract fresh private capital. Infusion of tax-payer funded money should be contingent upon meaningful restructuring of public sector banks, and exit of weak banks through sale of viable assets to private banks and strong public sector banks. The strategy of merging weak public sector banks with strong public sector banks should be reconsidered as it risks undermining the viability of the acquirer.[45] One approach could be to recapitalize relatively better performing public sector banks such that they can be picked up by private sector players. This would ease the burden on tax-payers and address the moral hazard problem associated with sustained infusion of capital in distressed public sector banks.

[42]CAG Report, Union Government, Ministry of Finance. *Report of the Comptroller and Auditor General of India on Recapitalisation of Public Sector Banks, Report No. 28 opf 2017 (Performance Audit)*. Tech. rep. Ministry of Finance, 2017.

[43]Reserve Bank of India, *Financial Stability Report, Issue No. 17*.

[44]M. Narasimham. *Report of the Committee on Banking Sector Reforms*. Tech. rep. Ministry of Finance, 1998; Rajan, *Planning Commission, Report of the Committee on Financial Sector Reforms, September, 2008*.

[45]International Monetary Fund. *Financial System Stability Assessment of India*. Tech. rep. Dec. 2017.

4.3 Competition

India should promote a competitive banking system that checks inefficiencies stemming from entry barriers. Banks can play a more effective role in allocating capital to its most productive uses and thus promoting savings and investment as new banks enter into the system and inefficient banks are driven out. The Indian banking sector has long been dominated by public sector banks. The entry of banks has been constrained by the then restrictive framework. Since 1991, the window to allow a private entity to start a bank was opened only three times.

In a Discussion Paper released in 2013, RBI proposed to review the then policy of 'stop and go' or block bank licensing policy and made a case for continuous authorization of new banks.[46] Consequently guidelines for on-tap licensing of universal banks was issued in August 2016.[47] The policy of 'on-tap' licensing of banks is a promising step in the direction of increasing competition in the banking sector. However the response to the guidelines has been lukewarm as some of the elements of the policy seem stringent. Only one application for on-tap licensing has been received. The regulator should consider revising some of the criteria to signal its intent to promote entry of new players in the banking sector.

4.4 Increase the share of MSMEs in bank credit

Literature on MSME financing suggests that MSMEs are informationally opaque and risky. They cannot access capital markets or issue bonds. Relationship lending[12] is thus seen as a valuable tool to alleviate credit constraints faced by MSMEs. Hence policies should be oriented to induce more MSMEs to seek a more long-term banking relationship with financial institutions.[48] This would enable MSMEs to access more credit at lower rates of interest. While banks are best placed to lend to MSMEs, in India, it is the large firms that capture the bulk of outstanding bank credit.

Enhancing the flow of bank credit to MSMEs requires a two-pronged approach: First, a reduction of financial repression: Banks have to channel 40 percent of their net bank credit to priority sector. They have to invest a further 19.5 percent of their deposits in

[46] Reserve Bank of India. *Banking Structure in India- The Way Forward.* Discussion Paper. Reserve Bank of India, 2013.

[47] Reserve Bank of India. *Guidelines for 'on tap' Licensing of Universal Banks in the Private Sector.* 2016.

[48] Thorsten Beck et al. "When arm's length is too far: Relationship banking over the credit cycle". In: *Journal of Financial Economics* 127 (Nov. 2017).

Government securities (Statutory Liquidity Ratio) and 4 percent of their deposits have to be maintained with the RBI. With a mandatory Liquidity Coverage Ratio (LCR) of 100 percent to be achieved by March, 2019, investment in Government securities will increase further. These prescriptions constrain the ability of banks to lend to MSMEs. Gradually reducing priority sector lending and SLR would help a more productive intermediation of funds.[49] Second, while banks are best placed to lend to MSMEs, it is the large firms that capture the bulk of outstanding bank credit. This reflects the inefficiency of the bond market and underscores the need for reforming the bond market.

4.5 Bond market reforms

India's financial markets are relatively under-developed. While substantial progress was made in the field of equity markets, commensurate changes are needed to address the problem of missing markets such as the bond market and the currency market. Several committees notably the Rajan[50] and the *Report of the Working Group on Development of Corporate Bond Market in India*[51] have proposed reforms to develop the bond market. Given India's infrastructure financing needs, the universe of domestic institutional investors are limited. Further, they are constrained to finance long-term infrastructure because of mandatory requirements to finance Government borrowing. The scale of financial repression needs a rethink. Another problem is that of limited foreign participation. Foreign participation in the bond market is restricted due to complex system of capital controls. By easing controls on foreign participation in corporate bonds, liquidity can be built in the market.[13]

The development of a corporate bond market is conditional upon a well developed and liquid government bond market since a market-determined yield curve is needed to serve as a benchmark for pricing corporate bonds. The government would also need a vibrant bond market as it relies less on forcing banks to hold substantial part of its debt. The Statutory Liquidity Ratio (SLR) currently at 19.5 percent of net demand and time liabilities of banks has been progressively reduced in the last three years. With volatility in the bond market, the appetite of banks to hold government securities goes down. In this backdrop the management of government liabilities entailing greater diversification of the investor base, will assume significant challenges. Substantial enhancement of institutional capacity will be required to deal with financial portfolio management. This requires creation of a specialized and independent public debt management agency to

[49] International Monetary Fund, *Financial System Stability Assessment*.
[50] Rajan, *Planning Commission, Report of the Committee on Financial Sector Reforms, September, 2008*.
[51] *Report of the Working Group on Development of Corporate Bond Market in India*.

manage government debt. Creation of an independent debt management agency is also central to addressing the present conflict of interest between the role of RBI as an inflation targeting central bank and as a debt manager to the Central Government. When RBI is given the objective of obtaining low cost financing for the government, this may give RBI a bias in favor of low interest rates, which could interfere with the goal of inflation targeting.

4.6 Improvements in banking regulation

The June 2018 issue of the Financial Stability Report by the RBI showed that the gross non-performing asset ratio (GNPA) of Scheduled Commercial Banks (SCBs) had risen to 11.6 per cent in March 2018.[52] The ratio marginally declined to 10.8 per cent in September 2018.[53] The PSBs GNPA ratio was 15.6 per-cent in March 2018. It declined to 14.8 per-cent in September 2018. A rise in banks' NPAs dents banks profitability and constrains their lending capacity.

The weakness in banks balance-sheets and phenomenal rise in bad loans raise concerns on the state of banking regulation in India. The job of the regulator is to timely detect the loans getting stressed and non-performing and to hold the boards of banks responsible. However evidence seems to suggest otherwise. The erstwhile schemes like the Strategic Debt Restructuring (SDR), Corporate Debt Restructuring (CDR), and Scheme for Sustainable Structuring of Stressed Assets (S4A) did not help much in arresting the rising NPAs. It is only recently that the regulator has responded through regulatory actions. In early 2018, RBI dismantled the erstwhile schemes and introduced a framework for early identification and reporting of stress.[54] Provisioning requirements kick in as soon as the loan is defaulted. Lenders are required to prepare resolution plans. If resolution plans are not implemented, lenders shall file an insolvency application, singly or jointly, under the Insolvency and Bankruptcy Code 2016 (IBC).

The latest episodes of scams in the banking sector again raise concerns on the regulation and supervision of banks in India. The Punjab National Bank (PNB) scam[14] was carried out because the trail of transactions through Society for Worldwide Interbank Financial Telecommunications code (SWIFT) were not integrated with the Core Banking Solution (CBS) of bank. As an outcome, the fraudulent activities went undetected. The scam led to enormous losses and rise in the NPAs for PNB adversely impacting the banks capacity

[52]Reserve Bank of India, *Financial Stability Report, Issue No. 17*.
[53]Reserve Bank of India, *Financial Stability Report, Issue No. 18*.
[54]Reserve Bank of India. *Resolution of Stressed Assets: Revised Framework*. 12th Feb. 2018.

to lend. The regulator issued warnings to the regulated entities to link SWIFT with CBS. But these warnings did not translate into supervisory action. While the laws empower RBI to adopt formal, legal means to establish rules and enforce compliance, the RBI often uses informal means. This approach comes in the way of effective enforcement of banking regulation. Had there been effective and timely intervention by the regulator, the enormous losses suffered by PNB could have been avoided.

There have been other instances where the regulator has adopted a reactive approach. For many years, despite its unquestioned powers to regulate, supervise and inspect banks, the regulator did not take action against banks that were hiding their bad assets. The requirement regarding *disclosure* of divergence in asset classification, income recognition and provisioning came into being only in April 2017.[55]

Privatization of public sector banks is one element of the reform agenda. India first needs to develop a regulatory and supervisory capability before privatizing public sector banks. This requires a sound regulation process. A blueprint for improved regulation-making was provided by *Handbook on adoption of governance enhancing and non-legislative elements of the draft Indian Financial Code.* In 2014, all the financial sector regulators had agreed to implement these recommendations. The key principles underpinning sound regulation making process are:

- No subordinate legislation may be published without a Board resolution determining the need for such subordinate legislation.
- All draft subordinate legislation should be published with statement of objectives, the problem it seeks to solve, and a cost-benefit analysis (using best practices).
- Comments should be invited from the public and all comments should be published on the website of the regulator.
- Regulations should become effective after the Board approves them.
- Board approval should take into account all comments received.

4.7 Resolution of weak firms

Failure of inefficient firms is important for 'creative destruction'. The failure of inefficient firms is essential for the shift of labor and capital to more efficient firms. A critical

[55]Reserve Bank of India. *Disclosure in the "Notes to Accounts" to the Financial Statements- Divergence in the asset classification and provisioning.* 18th Apr. 2017.

milestone in the failure resolution of non-financial firms came about with the enactment of the Insolvency and Bankruptcy Code (IBC). However financial firms cannot be resolved under the IBC, as bank creditors are the depositors. The IBC envisaged process of negotiations by creditors does not work in the case of financial firms.

The present system of resolution of financial firms in India is inadequate in many respects. First, it equips the respective microprudential (e.g. RBI for banks) regulators with resolution powers. Since regulators are supposed to minimize the probability of failure, they are slow in acknowledging failures of financial firms. This breeds regulatory forbearance induced inefficiency and locks up labor and capital in inefficient firms. Second, the present legislative framework gives very limited powers of resolution such as forced mergers and winding up. In many cases, RBI nudges a large bank to take over a failing bank as it did, for example, in case of the Global Trust Bank (GTB) amalgamation with Oriental Bank of Commerce (OBC).[15] Third, even these limited powers are not enjoyed over many financial firms such as the state-owned public sector banks.

A resolution framework and a Resolution Corporation was proposed by the Financial Resolution and Deposit Insurance (FRDI) Bill. This was withdrawn due to political opposition to some clauses in the bill. A key area of concern was the 'bail-in' clause that empowered financial institutions that are in a state of difficulty to use depositors' money to bail them out of a troubled situation. The ambiguity over protecting existing levels of deposit insurance for smaller deposits also led to criticism. There were demands to substantially revise the deposit insurance cover.

Concerns need to be addressed and the bill brought back soon. Having a resolution framework in place will be critical in case there is a bank failure, especially of a large private sector bank that no one may have the ability to buy up, or the government have the resources to bail out. A framework for failure resolution would also promote entry of banks leading to greater competition in the banking sector. This would promote effective allocation of savings into productive investments.

4.8 Unified financial market regulation

Various segments of financial markets are deeply inter-connected. The corporate bond market is deeply linked to the equity market as bad news about a company causes both the bond price and the equity price to sink. The corporate bond market is deeply inter-linked to government bond market as rise in interest rates causes both prices of government and corporate bonds to fall. Finally the domestic bond markets are linked to the global markets through currency spot and derivatives market. When a foreign investor buys a rupee-denominated bond, they would need a currency derivatives market to hedge the foreign currency exposure. There may be an interest rate derivative also at play, as the foreign investor may not like to take the risk that interest rates will go up.

In India, from a regulatory standpoint, each of these markets are treated separately. At present RBI has a key role in Government securities market as the regulator and as the investment banker to the government as it manages the government debt. It provides platform for auction of government securities in the primary market and also regulates clearing and settlement of trades in government securities.[16]

The corporate bond market differs in regulatory architecture. SEBI regulates the primary and secondary market in corporate bonds while RBI regulates repos and reverse repos in corporate bonds. The derivatives on interest rates and currency are subject to the regulatory jurisdiction of RBI.

Not only is the regulatory framework fragmented, the infrastructure of bond market is also carved out from the mainstream financial market infrastructure.[56]

Internationally, government bond issuance and trading is part of the unified framework of securities trading. The depository infrastructure for Government bonds is part of the depository infrastructure for the financial market with a few exceptions. The settlement of government securities is overseen by the securities market regulator.

There is a strong case to change the regulations that have prevented the emergence of the Bond-Currency-Derivatives Nexus.[57] This is an important deficiency that India must overcome in developing its domestic financial market. The creation of a well-functioning government bond market with a public debt management agency and integration with equity markets was proposed in the March 2015 Budget. This proposal was rolled back to give the RBI time to work with the Ministry of Finance on a transition plan. As a critical element of facilitating finance for investment, this work needs to be prioritized.

[56] Radhika Pandey and Ila Patnaik. "Legislative strategy for setting up an independent debt management agency". In: *NUJS Law Review* 10.3 (2017).

[57] Rajan, *Planning Commission, Report of the Committee on Financial Sector Reforms, September, 2008*; Ministry of Finance, Government of India. *Report of the High Powered Expert Committee on Making Mumbai an International Financial Centre*. 2007. URL: http://finmin.nic.in/mifc/mifcreport.pdf.

5 Conclusion

Finance holds the key to India's long-term sustainable growth. As the economy becomes larger and market-oriented, the financial sector needs to play a critical role in channelling savings into productive investments.

Raising the level of savings and capital formation is critical for financing the growing requirement of infrastructure and industry. The two biggest challenges of investment in India are investment in infrastructure and in micro, small and medium enterprises. Savings need to be intermediated to provide finance for infrastructure and MSMEs. While most of the household savings are channelled into bank deposits, banks are ill-suited to finance the growing infrastructure requirements. Reforms must focus on promoting the availability of non-bank finance. Any agenda to develop a deep and liquid corporate bond market must focus on developing the government bond market in India.

Nascent and illiquid bond markets result in banks advancing more loans to infrastructure and industry at the cost of micro, small and medium enterprises. To address their financial constraints, a reform strategy must focus on increasing the share of MSMEs in bank credit.

Promoting digitisation in the financial sector, developing the Bond-currency-derivatives nexus, privatising public sector banks, fostering competition in the banking sector, improved regulation of the banking sector and a unified financial sector regulation should be the key components of any strategy to develop the financial sector to be able to support intermediation of savings into investment in the economy.

References

Asian Development Bank. *Meeting Asia's Infrastructure Needs*. Report. Asian Development Bank, 2017.

Badarinza, Cristian, Vimal Balasubramaniam and Tarun Ramadorai. "The household finance landscape in emerging economies". In: *VOX: CEPR Policy Portal* (2019).

– "The Indian Household Finance Landscape". In: *India Policy Forum* (2017).

Beck, Thorsten et al. "When arm's length is too far: Relationship banking over the credit cycle". In: *Journal of Financial Economics* 127 (Nov. 2017).

CAG Report, Union Government, Ministry of Finance. *Report of the Comptroller and Auditor General of India on Recapitalisation of Public Sector Banks, Report No. 28 opf 2017 (Performance Audit)*. Tech. rep. Ministry of Finance, 2017.

Carbo Valverde, Santiago, Francisco Rodriguez-Fernandez and Gregory Udell. *Bank lending, financing constraints and SME investment*. Working Paper Series WP-08-04. Federal Reserve Bank of Chicago, 2008.

CIBIL, SIDBI-TransUnion. *MSME Pulse Report*. Report. MSME, 2018.

Demirguc-Kunt, Asli et al. *The Global Findex Database. Measuring Financial Inclusion and the Fintech Revolution*. Tech. rep. 2018.

Department of Economic Affairs. *Report of the Committee on Revisiting and Revitalising Public Private Partnership model of infrastructure*. Tech. rep. Department of Economic Affairs, 2015.

Department of Economic Affairs, Ministry of Finance. *Handbook on adoption of governance enhancing and non-legislative elements of the draft Indian Financial Code*. Tech. rep. Ministry of Finance, 2013.

Finance, Ministry of. *Report of the Financial Sector Legislative Reforms Commission: Volume I: Analysis and Recommendations, 2013*. Tech. rep. 2013.

Fund, International Monetary. *Financial System Stability Assessment of India*. Tech. rep. Dec. 2017.

Ganguly, Shromona. *India's corporate bond market: Issues in market microstructure*. RBI Bulletin. Reserve Bank of India, 2019.

Herd, Richard et al. "Financial Sector Reform in India". In: *OECD Working Paper* 879 (2011).

Household Finance Committee. *Indian Household Finance*. Committee Report. RBI, 2017.

India, Reserve Bank of. *Guidelines for 'on tap' Licensing of Universal Banks in the Private Sector*. 2016.

Insurance Regulatory and Development Authority. *Insurance Regulatory and Development Authority (Investment) Regulations*. 2000.

International Monetary Fund. *Financial System Stability Assessment*. IMF Country Report No. 17/390. International Monetary Fund, Dec. 2017. URL: https://www.imf.org/en/Publications/CR/Issues/2017/12/21/India-Financial-System-Stability-Assessment-Press-Release-and-Statement-by-the-Executive-45497.

Joel Rebello, Saikat Das. *Here is what Modi govt should do to lift-off Indian bond market*. Feb. 2018. URL: https://economictimes.indiatimes.com/markets/bonds/here-is-what-govt-needs-to-do-to-lift-off-indian-bond-markets/articleshow/62810999.cms.

La Porta, Rafael, Florencio Lopez-De-Silanes and Andrei Shleifer. "Government Ownership of Banks". In: *The Journal of Finance* 57.1 (2002), pp. 265–301. ISSN: 1540-6261. DOI: 10.1111/1540-6261.00422. URL: http://dx.doi.org/10.1111/1540-6261.00422.

Labour, The Standing Committee on. *The Fifty-Seventh of the Standing Committee on 'Guidelines, Monitoring, Rating, and Regulatory System', Status of Investment in Bonds and such Instruments- [Example of Infrastructure Leasing and Financial Services (IL&FS)] by PF Funds, Pension Funds*. Tech. rep. Feb. 2019.

Ministry of Finance, Government of India. *Report of the High Powered Expert Committee on Making Mumbai an International Financial Centre*. 2007. URL: http://finmin.nic.in/mifc/mifcreport.pdf.

Ministry of Finance, Government of India. *Economic Survey 2017-18*. 2018.

Ministry of Statistics and Programme Implementation. *Report of the High Level Committee on Estimation of Saving and Investment*. Tech. rep. Ministry of Statistics and Programme Implementation, 2008.

Narasimham, M. *Report of the Committee on Banking Sector Reforms*. Tech. rep. Ministry of Finance, 1998.

Nathan Associates Inc. *Reprioritising Priority Sector Lending in India: Impact of Priority Sector Lending on India's Commercial Banks*. Economic Impact Analysis. Nathan Associates Inc, Dec. 2013. URL: https://www.nathaninc.com/insight/priority-sector-lending-in-india/.

National Sample Survey Office. *Key Indicators of Unincorporated Non-Agricultural Enterprises (Excluding Construction in India: NSS 73rd Round)*. Report. Ministry of Statistics and Programme Implementation, June 2017. URL: http://www.mospi.gov.in/sites/default/files/publication_reports/NSS_KI_73_2.34.pdf.

OECD. *Financing SMEs and Entrepreneurs 2018: AN OECD Scorecard*. Report. OECD, 2018.

Pandey, Radhika and Ila Patnaik. "Legislative strategy for setting up an independent debt management agency". In: *NUJS Law Review* 10.3 (2017).

Patnaik, Ila and Madhavi Pundit. *Where is India's Growth Headed?* Working Papers 159. National Institute of Public Finance and Policy, 2016.

Planning Commission. *Report of the Working Group on Savings during the Twelfth Five-Year Plan (2012-13 to 2016-17)*. Tech. rep. Planning Commission, 2012.

Rajan, Raghuram. *Report of the Committee on Financial Sector Reforms*. A Hundred Small Steps. Tech. rep. Planning Commission of India, 12th Sept. 2008. URL: `http://planningcommission.nic.in/reports/genrep/rep_fr/cfsr_all.pdf`.

Rao, K G K Subba. "Critique of 2009 Committee on Savings and Investment". In: *Economic and Political Weekly* Vol. 44.Issue No. 39 (26 2009).

Report of the Working Group on Development of Corporate Bond Market in India. Tech. rep. Reserve Bank of India, 12th Aug. 2016.

Reserve Bank of India. *Banking Structure in India- The Way Forward*. Discussion Paper. Reserve Bank of India, 2013.

– *Disclosure in the "Notes to Accounts" to the Financial Statements- Divergence in the asset classification and provisioning*. 18th Apr. 2017.

– *Financial Stability Report, Issue No. 17*. Tech. rep. Reserve Bank of India, June 2018.

– *Financial Stability Report, Issue No. 18*. Tech. rep. Reserve Bank of India, Dec. 2018.

– *Master Direction-Priority Sector Lending: Targets and Classification*. 1st Aug. 2018.

– *Priority Sector Lending Certificates*. 7th Apr. 2016.

– *Report on Trend and Progress of Banking in India*. Tech. rep. 2017. URL: `https://www.rbi.org.in/scripts/AnnualPublications.aspx?head=Trend%20and%20Progress%20of%20Banking%20in%20India`.

– *Resolution of Stressed Assets: Revised Framework*. 12th Feb. 2018.

Sanghera, Tish. "80% of Indians now have a bank account. So why is financial inclusion low?" In: *Business Standard* (May 2018).

Shajahan, K M. "Priority Sector Bank Lending-Some Important Issues". In: *Economic and Political Weekly* Vol. 33.Issue No. 42-43 (17 1998).

Sharma, Shailaja. *India's first big-ticket TOT auction shows PE investors' appetite for roads*. Mar. 2018. URL: `https://www.vccircle.com/indias-first-big-ticket-tot-auction-shows-pe-investors-appetite-for-roads/`.

The Global Partnership for Financial Inclusion (GPFI), G20. *G20 High Level Principles for Digital Financial Inclusion*. Tech. rep. 2016. URL: `https://www.gpfi.org/publications/g20-high-level-principles-digital-financial-inclusion`.

Thomas, Tanya. *NHAI may not get many bids for toll roads*. Dec. 2018. URL: https://www.livemint.com/Politics/eXTqtv08lj0jF4iN0U65EP/NHAI-may-not-get-many-bids-for-toll-roads.html.

Torre, Augusto de la, Maria Soledad Martinez Peria and Sergio L. Schmukler. *Bank involvement with SMEs: Beyond relationship lending*. Policy Research Working Paper 4649. World Bank Development Economics Research Group & Latin America and the Caribbean Region, 2008.

Notes

1. Financial system provides avenues for transforming savings into investments.

2. Estimates of savings and capital formation in the 2004-05 GDP and the 2011-12 GDP series are not strictly comparable. With change in the base year, there have been changes in the categorization of sectors. In the 2004-05 series, public sector consisted of departmental and non-departmental enterprises, but in the 2011-2012 series, they have been classified into public financial corporations, public non-financial corporations, and general government. Private corporate sector has been split into private financial corporations and private non-financial corporations. For the household sector, the firms registered under Limited Liability Partnership (LLP) Act and quasi-corporations (QCs, firms with published accounts), which were hitherto part of households, are now included under private corporate sector.

3. We do not include 2016-17 in our analysis. In 2016-17, savings in currency were negative as demonetisation forced households to park their cash holdings with banks.

4. A project in CMIE CapEx is an intention to set up an additional productive capacity in India. A project is identified when there is reasonable clarity on the capacity being created. Such projects are then periodically monitored through the announcement till completion.

5. Priority sector includes the following categories: Agriculture, Micro, small and medium enterprises, export credit, education, housing, social infrastructure, renewable energy and Others.

6. The RBI has decided to reduce the SLR by 0.25% every quarter till it reaches 18 percent.

7. The schemes were: Corporate Debt Restructuring, Sustainable Structuring of Stressed Assets or S4A, Strategic Debt Restructuring (SDR) and Joint Lenders' Forum (JLF). These schemes were scrapped in March 2018. SDR allows creditors to convert part of the stressed debt into equity and sell to a new promoter. S4A allows banks to bifurcate the stressed debt from large borrowers (more than Rs 500 crore) into a sustainable part that would be treated like a standard asset and an unsustainable part that can be converted into equity. There were inherent problems with these schemes. Under SDR, bankers had to find a buyer within a short period for the part of debt converted to equity. If that did not happen, the asset would again be classified as NPA. The effectiveness of the S4A scheme could be limited because, to be eligible for this scheme, more than half of the loan amount had to be sustainable, which may not be the case for a majority of the projects. Under JLF, differences among the creditors led to delayed resolution of stressed assets. Within 45 days of its formation, the JLF had to come up with a corrective action plan (CAP) and 75% of the creditors had to agree to the plan.

8. SEBI, Handbook of Statistics, 2016-17

9. Under EPF scheme, an employee has to pay a certain contribution towards the scheme and an equal contribution is paid by the employer. The employee gets a lump sum amount including self and employer's contribution with interest on both, on retirement.

10. Priority Sector Lending Certificates (PSLCs) are a mechanism to enable banks to achieve the priority sector lending target and sub-targets by purchase of these instruments in the event of shortfall. This also incentivizes surplus banks as it allows them to sell their excess achievement over targets thereby enhancing lending to the categories under priority sector. Under the PSLC mechanism, the seller sells fulfilment of priority sector obligation and the buyer buys the obligation with no transfer of risk or loan assets.

11. India's public sector banks posted a combined loss of Rs 853.7 billion in the fiscal year ending March 2018.

12. Banks repeatedly interacting with clients to obtain and exploit proprietary borrower information

13. Very recently, RBI has announced easing of restrictions on government and corporate bond market including easing of restrictions on foreign participation in short-term bonds.

14. Two employees of the PNB issued fraudulent Letters of Undertaking or LoUs, without asking for any margin money as security, even though the firms did not have any pre-approved credit limit. The companies raised short-term credit based from overseas branches of Indian banks based on these LOUs. These LOUs were issued over the SWIFT inter-bank messaging system without entering these transactions on the bank's own system.

15. On July 26, 2004, RBI announced that GTB would be merged with the OBC. For the scheme of amalgamation of Global Trust bank with Oriental Bank of Commerce, see `https://www.rbi.org.in/scripts/BS_CircularIndexDisplay.aspx?Id=1800`

16. The Reserve Bank regulates the Clearing Corporation of India Limited (CCIL). CCIL is the clearing and settlement agency exclusively for the government securities.

MORE IN THE SERIES

- Sikdar, S. (2019). Rate of Return to Education in India: Some Insights, WP No. 270 (June).

- Pandey, R., and Patnaik, Ila, and Shah, A. (2019). Measuring business cycle conditions in India, WP No. 269 (May).

- Pandey, R., and Patnaik, Ila. (2019). Fiscal policy cyclicality in South Asian economies, WP No. 268 (May).

Ila Patnaik, is Professor, NIPFP
Email: ila.patnaik@nipfp.org.in

Radhika Pandey, is Fellow, NIPFP
Email: radhika.pandey@nipfp.org.in

National Institute of Public Finance and Policy,
18/2, Satsang Vihar Marg,
Special Institutional Area (Near JNU),
New Delhi 110067
Tel. No. 26569303, 26569780, 26569784
Fax: 91-11-26852548
www.nipfp.org.in