# 'Riskless Capitalism' in India
## Bank Credit and Economic Activity

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A study of the financial processes underlying India's high-growth trajectory of the 2000s and its relationship with "riskless capitalism," a term first used by Raghuram Rajan in November 2014, finds that the Indian growth story cannot be over-simplistically explained as a result of "market-oriented" reforms. Public sector bank credit-financed investments, particularly in the infrastructure sector, played a significant role in sustaining growth, most crucially after the global economic crisis. Such a growth trajectory, however, proved to be unsustainable with the expansionary phase coming to an end in 2011–12 and bad loans piling up in the banking system.

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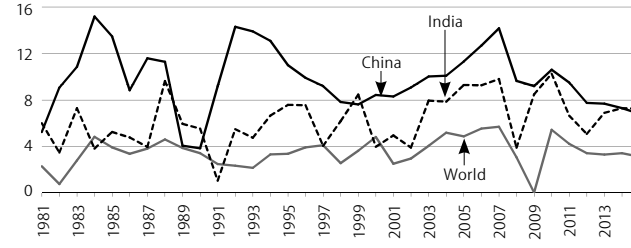
The post-reform growth process in India, which occurred alongside an increasing integration with the global economy, can be seen in terms of three episodes.

The first episode roughly coincides with the first decade after the reforms were initiated in 1991, in which the growth rate remained almost similar to the 1980s. The second episode started from 2003 and continued till 2008 (we call it the first boom), when a visible acceleration of the real gross domestic product (GDP) growth rate was witnessed (Figure 1). With a brief interlude of a slowdown in 2008 following the global financial crisis, the economy returned to a high-growth path in 2009, the third episode, for two years till 2011 (the second boom), after which it started slowing down considerably.

Official estimates claim that the Indian economy has already recovered from the slowdown and has emerged as the fastest-growing major economy in the world in 2015, overtaking China (Figure 1). Whether such a turnaround has been achieved since 2013 as suggested by the new GDP series, however, remains questionable.[1] Our analysis does not cover the period after 2013–14.

**Figure 1: Annual Growth Rates of Real GDP** (%)




Source: IMF, World Economic Outlook Database, October 2015.

The fact that the growth performance of the Indian economy in the 1990s—the first post-reform decade (1991–2000)—was by and large similar to the 1980s, has been widely noted and commented upon. De Long (2003) suggested that the "structural break" in India's growth had occurred in the mid-1980s and the rather limited measures of trade liberalisation of the 1980s had a stronger growth impact compared to the more sweeping policy changes brought about in 1991. Chandrasekhar and Ghosh (2002) emphasised the role played by a widening fiscal deficit (centre and states combined) in providing stimulus to growth in the 1980s and highlighted the absence of any significant increase in the average rate of economic growth, investment and savings in the 1990s, compared to the earlier decade. Ahluwalia (2002), while admitting the absence of any acceleration in the growth rate, pointed to the "remarkable external

stability" of growth in the 1990s in contrast to the unsustainable external debt build-up of the 1980s, and argued that gradualist reforms of the 1990s had laid the basis for a higher growth trajectory in the future.

High growth experienced in the last decade (the first and the second boom) has renewed the debate on the impact of reforms on economic growth, with some proponents of reforms arguing that liberalisation of external trade and investment has resulted in economic growth taking off "dramatically," which in turn has led to significant declines in poverty (Bhagwati and Panagariya 2013). Others, while lauding the impact of reforms on economic growth as a "significant achievement," have pointed out the lopsided nature of the growth process, which has led to widely different speeds at which living standards have improved for the upper-income groups and the rest of the population, as well as the continuing lag in India's human development indicators, even in comparison to poorer developing countries (Drèze and Sen 2013). These appraisals, while contending with each other on the socio-economic impact of growth, however, converge on attributing faster economic growth to market-oriented reforms.

This paper takes a different view regarding India's integration with the global economy by focusing on the financial aspects of the growth process. Our findings suggest that while trade and financial opening up may have triggered faster growth almost a decade after the initiation of reforms, a crucial role was played by the state in sustaining the first boom of the 2000s and prolonging the boom beyond the 2007–08 global economic crisis. A credit bubble was generated through the public sector banks (PSBs), complemented by external debt finance, particularly in the infrastructure sector. The bubble eventually burst in 2011–12, resulting in a bad loans crisis engulfing the banking system.

In a speech made in November 2014, the then Reserve Bank of India (RBI) Governor Raghuram Rajan rang the alarm bells on the growing corporate debt defaults afflicting the banking system and resources being frittered away through debt write-offs. The governor identified the problem in what he characterised as "riskless capitalism" enjoyed by large promoters of businesses in India.

> Risk taking inevitably means the possibility of default. An economy where there is no default is an economy where promoters and banks are taking too little risk. What I am warning against is the uneven sharing of risk and returns in enterprise, against all contractual norms established the world over—where promoters have a class of "super" equity which retains all the upside in good times and very little of the downside in bad times, while creditors, typically public sector banks, hold "junior" debt and get none of the fat returns in good times while absorbing much of the losses in bad times. (Rajan 2014)

We contend that the "riskless capitalism" characterised by Rajan is actually a process through which private corporate investment and economic activity have been stimulated in India during the high growth phase, that is, the two booms witnessed since 2003. In order to take a closer look at the domestic factors contributing to the two booms, we look at the trajectory of private corporate investment and its financing through bank credit.

**Figure 2: Share in World Merchandise and Commercial Services Exports**


Source: WTO, *International Trade Statistics*, various issues.

## Exports as Trigger for the First Boom

The acceleration of India's economic growth since 2003 coincided with a global economic boom, with India's share in world merchandise and services exports growing from 0.6% and 1%, respectively, in 1999 to 0.8% and 1.4% in 2003, the take-off year of the first boom (Figure 2).

India's merchandise exports–GDP ratio, which had risen from the 1980s' average of 4.4% to 7.6% in the 1990s, witnessed a sharp rise to 9.3% in 2000–01 and continued to rise to almost 15% in 2008–09 (Table 1). While this points towards an important role played by export markets in stimulating the economic boom in the 2000s, it is noteworthy that imports have also grown much faster than exports in the 2000s unlike in the 1990s, which reflects a net dampening effect of trade openness on aggregate demand.[2] The import–GDP ratio had risen sharply from an average of 9% in the 1990s to 10.6% in 2000–01, further to 24.4% in 2008–09. The merchandise trade deficit, which had remained consistently positive for India through the 1980s and 1990s, rose to historically high levels in the 2000s, reaching 9.5% of GDP in 2008–09.

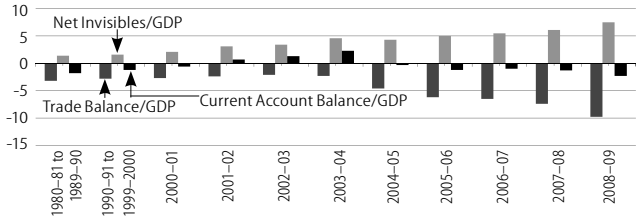
**Table 1: Merchandise Exports, Imports and Trade Balance** (% of GDP)

| | Exports/ GDP | Imports/ GDP | Oil Trade Balance/GDP | Non-oil Trade Balance/GDP | Trade Balance/GDP |
|---|---|---|---|---|---|
| 1980–81 to 1989–90 | 4.4 | 7.0 | -1.7 | -0.9 | -2.5 |
| 1990–91 to 1999–2000 | 7.6 | 9.0 | -1.9 | 0.6 | -1.4 |
| 2000–01 | 9.3 | 10.6 | -2.9 | 1.6 | -1.3 |
| 2001–02 | 8.9 | 10.4 | -2.4 | 0.9 | -1.5 |
| 2002–03 | 10.1 | 11.7 | -2.9 | 1.2 | -1.7 |
| 2003–04 | 10.3 | 12.6 | -2.7 | 0.4 | -2.3 |
| 2004–05 | 11.6 | 15.5 | -3.2 | -0.7 | -3.9 |
| 2005–06 | 12.4 | 17.9 | -3.9 | -1.6 | -5.5 |
| 2006–07 | 13.3 | 19.6 | -4.1 | -2.2 | -6.3 |
| 2007–08 | 13.2 | 20.3 | -4.1 | -3.0 | -7.1 |
| 2008–09 | 14.9 | 24.4 | -5.3 | -4.2 | -9.5 |
| 2009–10 | 13.1 | 21.1 | -4.3 | -3.7 | -8.0 |
| 2010–11 | 14.7 | 21.6 | -3.8 | -3.2 | -6.9 |
| 2011–12 | 16.3 | 26.0 | -5.3 | -4.5 | -9.8 |
| 2012–13 | 16.2 | 26.4 | -5.5 | -4.7 | -10.2 |
| 2013–14 | 16.8 | 23.9 | -5.4 | -1.7 | -7.1 |
| 2014–15 | 15.1 | 21.8 | -4.0 | -2.7 | -6.7 |

Source: Calculated from RBI's Database on Indian Economy (DGCIS data).

India's oil trade has been in deficit since the 1970s. The non-oil trade balance, however, turned positive on average in the 1990s and improved further in the first four years of the 2000s despite the oil trade balance deteriorating during this period. Additionally, the net invisibles to GDP ratio increased significantly from 2000–01, reflecting the rise in India's services exports during this period driven by software services, coupled with substantial net private transfers in the form of remittances. The overall result was reflected in a positive

**Figure 3: Current Account Balance** (% of GDP)




Source: Calculated from RBI's Database on Indian Economy (BoP data).

current account balance for the Indian economy for three consecutive years starting from 2001–02, with the current account surplus reaching 2.3% of GDP in 2003–04 (Figure 3). This indicates the stimulus from external markets that contributed to growth acceleration, with the GDP growth rate rising from around 4% in 2002–03 to 8% in 2003–04.

By 2004–05, however, the current account balance had once again turned negative (Figure 3). It is important to note that throughout the boom period, from 2003–04 to 2007–08, when the Indian economy experienced an average annual GDP growth rate of around 8.7%, the merchandise trade and current account deficit continued to rise. The non-oil trade balance also turned negative from 2004–05 and worsened in tandem with the oil trade deficit (Table 1). Thus, while the stimulus from external markets could have played a role in setting off the growth acceleration, the sustenance of the boom cannot be attributed to export surpluses.[3]

Unlike China, India's growth in the 2000s was accompanied by a marked deterioration of its trade and current account balance as a share of the GDP. The rising external deficit was not only on account of increasing international prices and volumes of oil imports, but for rising imports of a range of non-oil commodities, including capital goods, coal and gold, signifying an increase in the import intensity of the economy.[4]

## Investment and Credit during the First Boom

**Private corporate investment:** The economic boom since 2003–04 saw a significant rise in the investment and savings rates of the economy. While gross domestic capital formation and gross domestic savings as a share of the GDP had seen minor increases from 20.4% and 18.6% on average in the 1980s to 24.3% and 23% in the 1990s, respectively, the investment and savings rates climbed from 2003–04 to peak at 38.1% and 36.8% in 2007–08 (Table 2). A notable aspect here was the sharp rise in private corporate investment. The private corporate sector's gross capital formation as a share of the GDP remained well below that of the public sector in the 1980s and 1990s. This reversed in the 2000s with the private corporate sector's investment rate surpassing that of the public sector by 2004–05 and peaking at 17.3% in 2007–08. The public sector's investment rate fell considerably till 2002–03, but rose consistently thereafter.

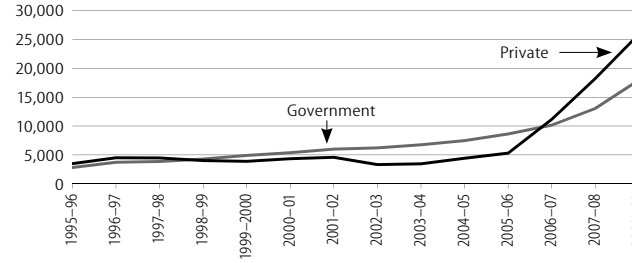
**Table 2: Rates of Savings and Investment** (% of GDP)
(Base Year: 2004–05)

| | Gross Domestic Savings/GDP | Gross Domestic Capital Formation/GDP | Gross Capital Formation/GDP | | |
|---|---|---|---|---|---|
| | | | Public Sector | Private Corporate Sector | Household Sector |
| 1980–81 to 1989–90 | 18.6 | 20.4 | 11.1 | 4.3 | 6.7 |
| 1990–91 to 1999–2000 | 23 | 24.3 | 8.8 | 7 | 8 |
| 2000–01 | 23.7 | 24.3 | 7.1 | 4.9 | 11.4 |
| 2001–02 | 24.8 | 24.2 | 7.2 | 5.1 | 12.6 |
| 2002–03 | 25.9 | 24.8 | 6.4 | 5.7 | 12.3 |
| 2003–04 | 29.0 | 26.8 | 6.6 | 6.5 | 12.1 |
| 2004–05 | 32.4 | 32.8 | 7.4 | 10.3 | 13.4 |
| 2005–06 | 33.4 | 34.7 | 7.9 | 13.6 | 11.7 |
| 2006–07 | 34.6 | 35.7 | 8.3 | 14.5 | 11.9 |
| 2007–08 | 36.8 | 38.1 | 8.9 | 17.3 | 10.8 |
| 2008–09 | 32.0 | 34.3 | 9.4 | 11.3 | 13.5 |
| 2009–10 | 33.7 | 36.5 | 9.2 | 12.1 | 13.2 |
| 2010–11 | 33.7 | 36.5 | 8.4 | 12.8 | 13.2 |
| 2011–12 | 31.3 | 35.5 | 7.7 | 10.1 | 15.8 |
| 2012–13 | 30.1 | 34.8 | 8.1 | 9.2 | 14.8 |

Source: Calculated from RBI's Database on Indian Economy (CSO data).

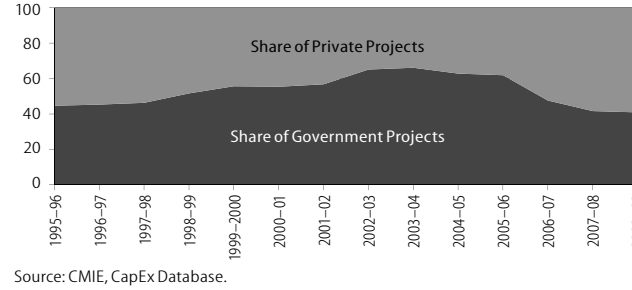
The estimation of private corporate investment, which showed up in the sharp rise in the investment rate since 2003–04, has been questioned on methodological grounds.[5] While it is quite likely that the Central Statistics Office (CSO) estimates have exaggerated the gross capital formation in the private corporate sector in the 2000s, other evidence does point towards a faster expansion of private investment compared to public investment during this period. The Centre for Monitoring Indian Economy's (CMIE) Capex database captures investment projects involving capital expenditure over ₹1 crore since 1995–96. The data on the stock of investment projects under implementation show a trend similar to the one suggested by the CSO estimates. The nominal value of the stock of investment projects being implemented in the private sector surpassed that of government investment projects by the end of March 2007 (Figure 4a). The share of private investment projects in total investment projects under implementation rose from 38% in 2005–06 to 52% in 2006–07 (Figure 4b).

**Figure 4a: Investment Projects (Under Implementation)** (in ₹ billion)




Source: CMIE, CapEx Database.

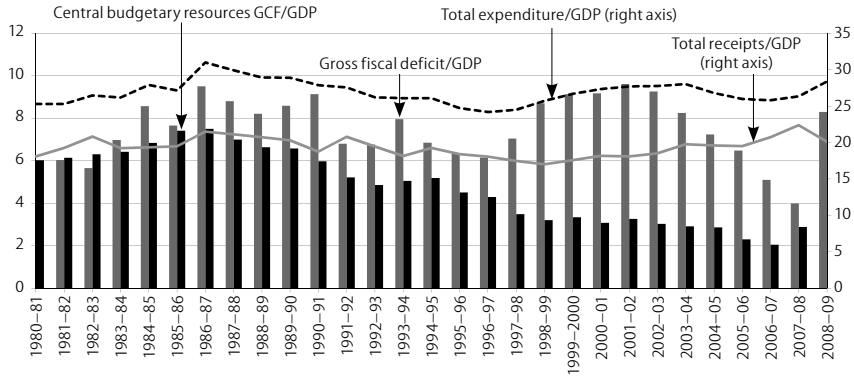
**Figure 4b: Investment Projects (Under Implementation) (% Shares of Government and Private Projects by Nominal Value)**




Source: CMIE, CapEx Database.

The fiscal indicators of the centre and states combined provide further confirmation of the trends. The gross fiscal deficit, which averaged around 7.7% of GDP in the 1980s and 7.5% in

**Figure 5: Government Expenditure, Receipts & Gross Fiscal Deficit of Centre & States Combined** (% of GDP)




Source: Calculated from RBI's Database on Indian Economy (Handbook).

the 1990s, had reached 9.3% of the GDP in 2002–03 (Figure 5). With the inception of the boom phase, the gross fiscal deficit to GDP ratio fell continuously from 2003–04 to reach 4% in 2007–08. The total government expenditure to GDP ratio declined from 28% in 2003–04 to 26.4% in 2007–08 and total receipts rose from 19.8% to 22.4% in the same period. Gross capital formation from the central budgetary resources as a proportion of the GDP, which averaged around 6.7% in the 1980s, fell to 4.5% in the 1980s and further to 2.7% of the GDP in the 2000s.

Thus, the first boom of the 2000s was accompanied by a decline in the public expenditure to GDP ratio and a steeper decline of the gross fiscal deficit to GDP ratio, which confirms the larger role played by private investment in the boom. Moreover, the contribution of budgetary resources of the central government in gross capital formation has also shown a long-term declining trend. The faster expansion of private investment in the 2000s occurred not only in those sectors of manufacturing and services where the private corporate sector had a traditional presence, but also in the infrastructure sector, where private investment was practically absent till the 1990s.

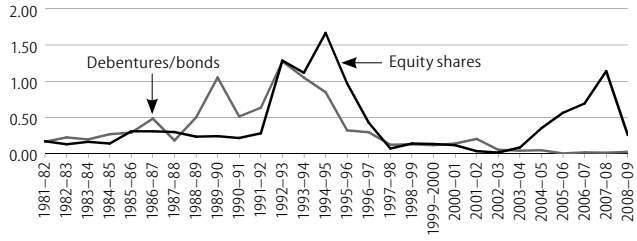
The following points emerge from our discussion on the first boom of the 2000s. First, it started in 2003–04 and paused with the global economic crisis in 2008–09. Second, while export markets played a role in causing the growth acceleration in the early years of the last decade, the rising trade and current account deficits have acted as a dampener on aggregate demand. India's growth story was, therefore, different from the export-led growth stories of China or the ASEAN. Third, private corporate investment expanded more rapidly than public investment during the first boom period, with a contraction in the gross fiscal deficit. We now proceed to study the financial aspects of this growth phase to better understand its relationship with economic reforms.

**Financing the boom:** While the average annual stock market capitalisation in India roughly followed the pattern of growth of the real economy, its role in terms of financing the economic boom, however, has been minuscule. New public issues of equity and debt by private companies taken together reached around 2.5% of the GDP in 1992–93 and have not crossed that level ever since (Figure 6a). It is noteworthy that even though the boom since 2003–04 was led by private corporate investment, the amount of capital mobilised from the primary equity market touched merely 1% of the GDP at its peak in 2007–08. In the debt market, while public issues of bonds fell after 2004–05 and remained muted throughout the boom period, private placement of corporate debt increased since 2005–06 and reached 3% of GDP in 2008–09 (Figure 6b).

Private placement of corporate debt has continued to rise even in the aftermath of the boom period. There has been a policy thrust on deepening the market for corporate bonds and securitised debt since the mid-2000s (GOI 2005).[6] Although, it can be seen that during the boom period, resource mobilisation from the equity and debt markets by the private corporate sector never crossed 4% of the GDP.

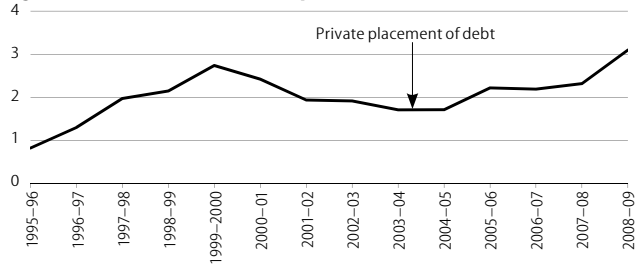
The most crucial role in financing the boom in the real economy was played by the scheduled commercial banks. The banking sector reforms initiated in the early 1990s following the recommendations of the Narasimham Committee-I sought to deregulate interest rates, reduce the statutory liquidity ratio (SLR) and cash reserve ratio (CRR), and also dilute the norms of priority sector lending. All this was meant to reduce the share of the government and sectors like agriculture and small-scale industries in bank credit and enhance the share of the private corporate sector. However, despite the reduction of the SLR from 38.5% in 1992 to 25% in 1997 and the CRR from 15% in 1992 to 4.5% by 2003, the scheduled commercial banks (SCBs) had raised their holding of government securities throughout the late 1990s even with growing deposits, leading to a fall in the credit–deposit ratio from an annual average of 65% in the 1980s to 55% in the 1990s (Figures 7a and 7b, p 89). This was attributed to risk aversion on the part of the banks in lending to the private commercial sector as well as the relative attractiveness

**Figure 6a: New Capital Issues by Non-government Public Limited Companies** (% of GDP)



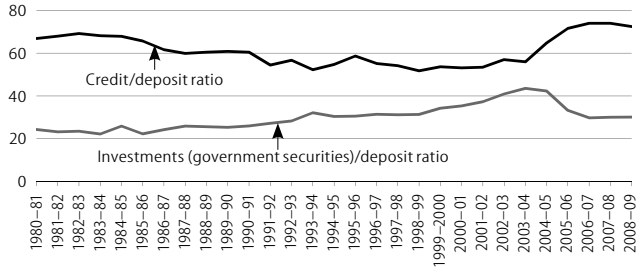

Source: Calculated from RBI's Database on Indian Economy.

**Figure 6b: Private Placement of Corporate Debt** (% of GDP)



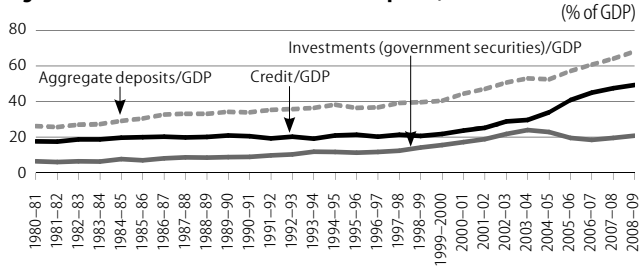

Source: PRIME Database.

**Figure 7a: Scheduled Commercial Banks—Credit–Deposit Ratio**



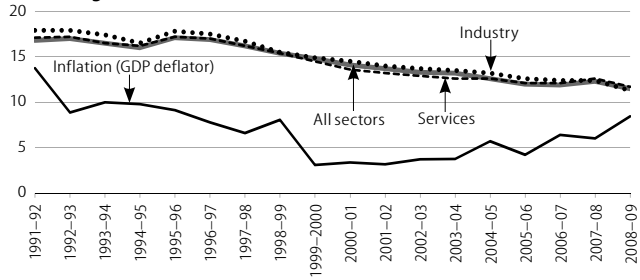

Source: RBI's Database on Indian Economy.

**Figure 7b: Scheduled Commercial Banks—Deposits, Credit and Investment** (% of GDP)




Source: RBI's Database on Indian Economy.

**Figure 8a: Sector-wise Weighted Average Nominal Lending Rates of SCBs and Average Inflation Rate** (%)




Source: RBI's Database on Indian Economy.

**Figure 8b: Weighted Average Real Lending Rates of SCBs** (%)


Source: RBI's Database on Indian Economy.

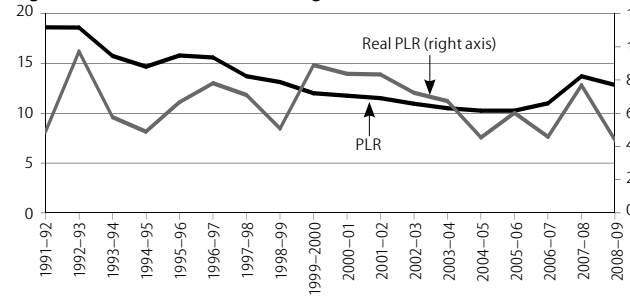
of government securities in terms of returns (Chandrasekhar and Pal 2006).

This trend reversed with the commencement of the economic boom with the credit–deposit ratio rising and investments in government securities falling from 2004–05. The credit–deposit ratio maintained an annual average of around 74% since 2004–05, with the credit–GDP ratio rising from around 30% in 2003–04 to around 50% in 2008–09.

The sharp and unprecedented rise in bank credit in the 2000s occurred alongside a gradual decline in the lending rates of the commercial banks. The weighted average lending rates of all SCBs declined gradually from around 17% in 1995–96 to 13% in 2003–04. Due to a larger fall in the inflation rates in the late 1990s, however, the real interest rates rose during this period and remained over 10% between 1999 and 2002. With inflation rising from 2003–04 and lending rates continuing in a declining trend, real interest rates fell significantly (Figures 8a and 8b).

A broadly similar movement can be seen in the benchmark prime lending rate (PLR) of the State Bank of India (SBI), the largest commercial bank in India. The SBI's nominal PLR had fallen from 15.8% in 1995–96 to 12% in 1999–2000, and further to 10.3% in 2004–05, driving down the real lending rate from around 9% in 1999–2000 to 4.5% in 2004–05 (Figure 8c). This decline in the nominal and real lending rates in the early 2000s resulted from the accommodative policy stance of the monetary authorities during this period, with the policy rate cut from 8% in March 2002 to 6.25% by October 2005.

**Figure 8c: Benchmark Prime Lending Rate of the SBI—Nominal and Real** (%)

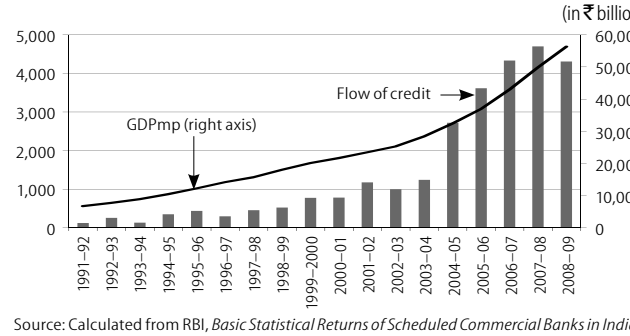



Source: SBI Benchmark Prime Lending Rate (Historical Data), SBI Corporate Website.

## Role of Bank Credit

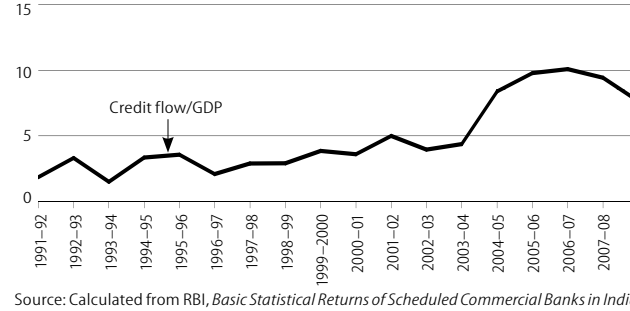
In examining the contribution of bank credit in the economic boom of the 2000s, we have estimated the bank group-wise and sector-wise annual flow of credit in the post-reform period.

**Figure 9a: Annual Credit Flow of Scheduled Commercial Banks & GDPmp** (in ₹ billion)




Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India* and Database on Indian Economy.

**Figure 9b: Annual Credit Flow of Scheduled Commercial Banks** (% of GDP)

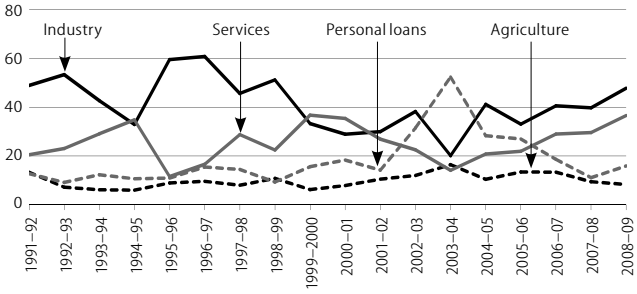



Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India* and Database on Indian Economy.

The annual flow of credit was estimated as the change in annual stocks of outstanding credit from the data on occupation-wise classification of outstanding credit published by the RBI in the *Basic Statistical Returns of Scheduled Commercial Banks in India*. The credit flow data reflects the injection of new credit in the economy.

Annual flow of bank credit jumped from ₹1.2 trillion in 2003–04 to ₹2.7 trillion in 2004–05, that is, from around 4.4% to 8.4% of the nominal GDP (Figures 9a and 9b, p 89). This significant injection of new credit coincided with the growth acceleration witnessed from 2003–04. During the phase of accelerated growth between 2005 and 2008, annual credit flow averaged at over 9.7% of the GDP. The share of industry in new credit had a declining trend in the 1990s, with the services sector enhancing its share significantly in the late 1990s (Figure 10). There was also a spurt in personal loans between 2002 and 2006, with over 50% of new credit in 2003 and 2004 going into personal loans.

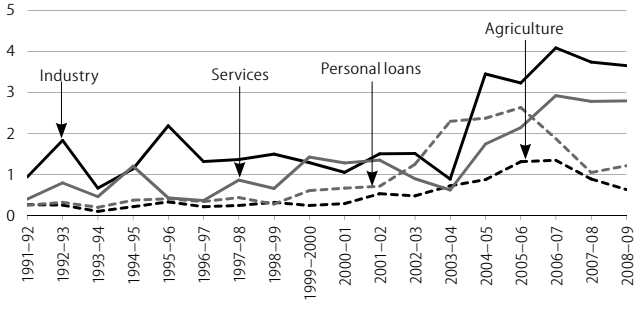
**Figure 10: Sectoral Share in Annual Credit Flow of SCBs** (%)




Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India.*

From 2004–05, however, the share of the industrial sector in new credit has been the highest among all sectors, averaging around 42%, followed by services averaging around 27%. The share of personal loans in new credit has averaged around 13% since 2006–07. The share of agriculture in new credit increased from an average of 8% in the 1990s to 12% in the 2000s.

**Figure 11: Sectoral Share in Annual Credit Flow of SCBs** (% of GDP)

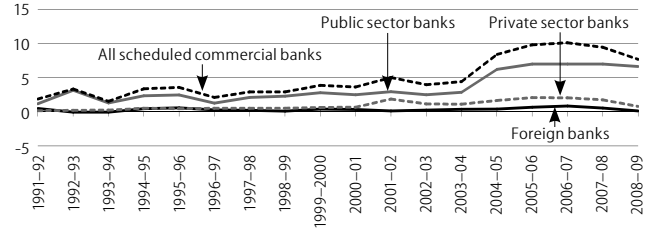



Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India.*

The jump in credit flow witnessed in 2004–05 was led by new credit to industry increasing from less than 1% of the GDP in 2003–04 to almost 3.5% of the GDP in 2004–05 (Figure 11). Since 2004–05, new credit to industry and services have averaged at around 3.5% and 2.4% of the GDP respectively, while personal loans, which rose to above 2% of the GDP between 2002 and 2006, averaged around 1% since 2006–07.

Among bank groups, the PSBs have clearly led the surge in credit since 2004–05, with new credit from PSBs averaging around 6.7% of the GDP between 2004 and 2009 (Figure 12). It is noteworthy that the credit flow from private sector banks did not follow a similar trend.

**Figure 12: Bank Group-wise Annual Credit Flow** (% of GDP)




Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India* & Database on Indian Economy.

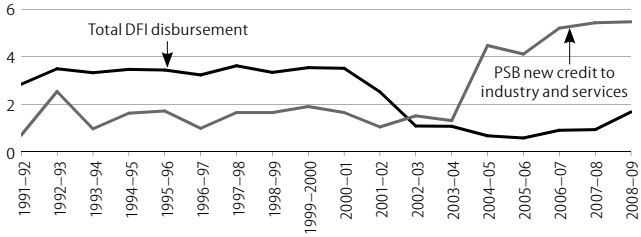
The significant difference in the rates of new credit flow from the PSBs and private sector banks from 2004–05 is quite striking. Industrial financing in India till the 1990s used to be dominated by the development financial institutions (DFIs), which specialised in long-term project financing. The Narasimham Committee-II set up to further the banking sector reforms agenda had called for a phasing out of the DFIs in its report submitted in 1998. The ICICI was the first DFI to convert into a universal bank in 2002. Upholding the "successful" transformation of the ICICI, RBI's Working Group on DFIs set up in 2004 made the following observations:

> In view of the banking system having acquired the skills of managing risks in extending finance to different sectors of the economy including long term finance and the capital market (both equity and debt taken together) providing significantly larger resources to the corporate sector, the need for DFIs as the exclusive providers of development finance has diminished. *The banks may be encouraged to extend high risk project finance with suitable Government support with a view to distributing risks and funding sources as also developing appropriate credit appraisals and monitoring skills across the financial system*. (emphasis added; RBI 2004)

The RBI (2004) further argued that the business model of the DFIs have become unviable in a context where interest rates have been deregulated. The rising cost of funds and the very long-term maturity of their loans were seen to be exposing the DFIs to high credit risks and leading to accumulation of non-performing assets (NPAs), which made them crucially dependent on the government's financial support. Thus, it was prescribed that only a handful of DFIs should be continued with central government support and the rest of the DFIs converted to either banks or non-banking financial companies (NBFCs), as per the recommendations of the Narasimham Committee-II. Subsequently, most DFIs were gradually eliminated and the larger ones like the IDBI and UTI converted into commercial banks, following the ICICI.

The demise of the DFIs since the early 2000s, which resulted from such a policy shift, created a void in financing the private corporate sector, which the PSBs were "encouraged" to fill through syndicated lending. As annual disbursements from DFIs fell from 3.5% of the GDP in 2000–01 to 0.66% of the GDP in 2004–05, new credit from PSBs increased from 1.6% of the GDP to 4.5% during the same period (Figure 13, p 91). The residual DFI disbursements that have continued after 2003–04 are almost entirely accounted for by the Life Insurance Corporation (LIC)

**Figure 13: DFI Annual Disbursements and PSB Annual Credit Flow to Industry and Services** (% of GDP)



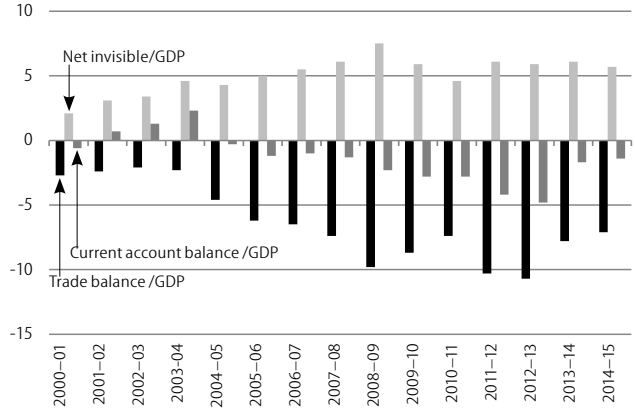

Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India* and *Handbook of Statistics on the Indian Economy.*

of India and Small Industries Development Bank of India (SIDBI).[7] The dismantling of development finance and the reliance on the public sector banking system to fuel credit growth in industry and services during the first boom in the 2000s had perverse implications in the medium term, which became manifest during the second boom and its aftermath.

## Fiscal Stimulus and the Second Boom (2009–11)

The second boom came one year after the Indian economy was hit by the global recession. With falling exports, the external sector ceased to provide any significant stimulus for growth. In fact, the current account deficit started widening during this period and reached a record 4.8% of the GDP in 2012–13 (Figure 14). This led to an episode of capital flight and currency depreciation in the following year.

**Figure 14: Current Account Balance** (% of GDP)




Source: Calculated from RBI's Database on Indian Economy (BoP data).

Following the global recession, the central government intervened to pump prime the Indian economy. During the period of the first boom, the gross fiscal deficit to the GDP had steadily declined to reach 4% in 2007–08. This rose sharply to 8.3% of the GDP in 2008–09, reflecting the fiscal stimulus of the government (Figure 15a). Since then, total expenditures continued to increase while receipts declined, with the fiscal deficit averaging around 7.7% of the GDP till 2013–14.

The revenue deficit, which had declined to almost zero by 2007–08 increased sharply to 5.7% of the GDP by 2009–10 (Figure 15b). This was because of a significant fall in the tax–GDP ratio between 2008 and 2010, because the post-crisis fiscal stimulus had come more in the form of tax breaks (2.4% of GDP) than in terms of rising government expenditures (2.2% of GDP). The direct taxes to GDP ratio, which had peaked at

**Figure 15a: Government Expenditure, Receipts and Gross Fiscal Deficit of Centre and States Combined** (% of GDP)

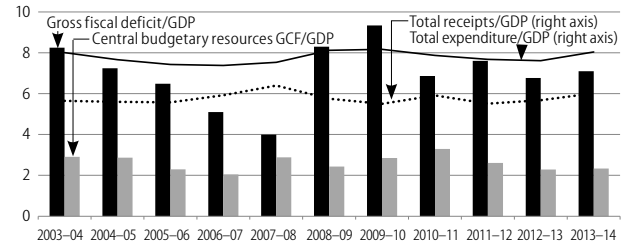
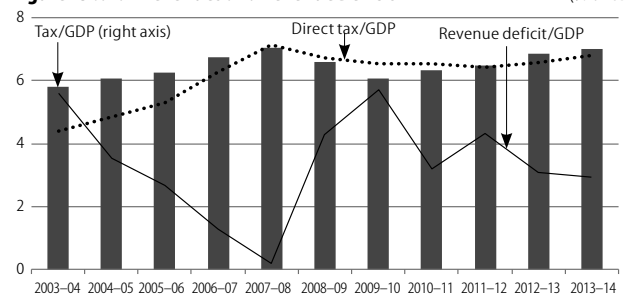



**Figure 15b: Tax Revenues and Revenue Deficit** (% of GDP)




Source: Calculated from RBI's Database on Indian Economy (Handbook).

7% of the GDP in 2007–08 has averaged around 6.5% in the post-crisis period.

## Private Corporate Investment in the Second Boom

As noted earlier, the Indian economy since 2003–04 saw a significant rise in the investment and savings rate of the economy. With a brief fall in 2008–09, investment and savings rose again during the second boom (Table 1). However, during the second boom, private corporate investment did not attain the levels witnessed during the first boom, while the level of public investment was higher than that in the previous phase of expansion.

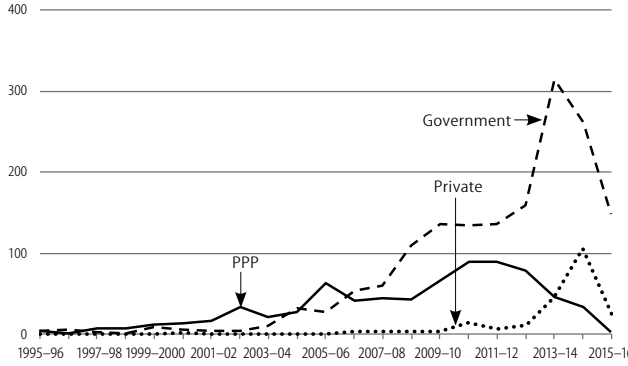
**Investment in infrastructure**: The faster expansion of private investment in the 2000s occurred not only in those sectors of manufacturing and services where the private corporate sector had a traditional presence, but also in the infrastructure sector, where private investment was practically absent till the 1990s. As per Planning Commission estimates, total investment in the infrastructure sector—defined as electricity, roads and bridges, telecommunications, railways, irrigation, water supply and sanitation, ports, airports, storage, and oil and gas pipelines—increased from 5% of the GDP during the Tenth Five Year Plan period (2002–03 to 2005–06) to 7.2% of the GDP during the Eleventh Five Year Plan (2007–08 to 2011–12), with the share of private investment in total infrastructure investment rising from around 22% to 36% (Table 3). It is noteworthy that the share of private investment in infrastructure overshot

**Table 3: Investment in Infrastructure** (% of GDP)

| | Tenth Plan Total (2002–03 to 2006–07) (Actual) | Eleventh Plan (2007–08 to 2011–12) (Actual) | Twelfth Plan (2012–13 to 2016–17) (Initial Projection) | Twelfth Plan (2012–13 to 2016–17) (Revised Projection) |
|---|---|---|---|---|
| Total | 5.04 (100) | 7.21 (100) | 8.18 (100) | 5.71 (100) |
| Public | 3.92 (77) | 4.57 (64) | 4.24 (52) | 3.47 (60) |
| Private | 1.12 (22) | 2.64 (36) | 3.94 (48) | 2.23 (40) |

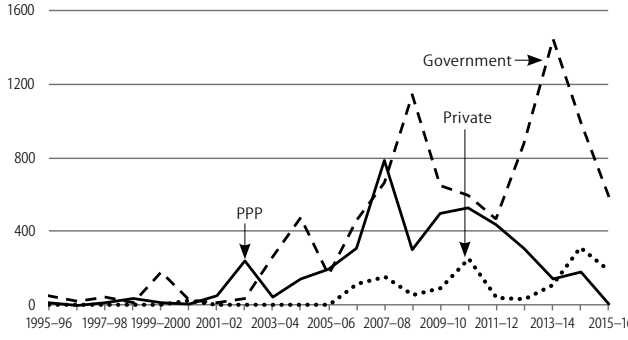
Source: Planning Commission, Twelfth Plan Document and High Level Committee on Financing Infrastructure.

**Figure 16a: Number of Infrastructure Projects Awarded**




Source: Database of Infrastructure Projects in India, Department of Economic Affairs, GoI.

**Figure 16b: Total Project Cost of Infrastructure Projects Awarded** (₹ billion)




Source: Database of Infrastructure Projects in India, Department of Economic Affairs, GoI.

the target of 30% set in the Eleventh Plan, mainly on account of enhanced levels of investment in sectors like power, telecommunications, and gas pipelines.

The emphasis on encouraging private investments in the infrastructure sector in the Eleventh Plan was also reflected in a shift to the public–private partnerships (PPPs) in infrastructure development. Data on infrastructure projects from the Department of Economic Affairs (DEA) database show the rise in the number and value of PPP projects (above ₹5 crore) from 2002–03 (Figures 16a and 16b). The total number of PPP projects peaked at 89 in 2010–11 and 2011–12, while in terms of total project cost it peaked at ₹786 billion in 2007–08. Since 2012–13, there has been a gradual decline in the PPP projects. Private sector projects in infrastructure kick-started in 2006–07 and peaked in 2014–15 at 106 projects with a total project cost of ₹314 billion. Traditional government projects also saw an increase from 11 projects with a total project cost of ₹264 billion in 2003–04 to 110 projects with a total cost of ₹1.1 trillion in 2008–09. Government projects peaked in 2013–14, both in terms of numbers at 315 projects as well as in terms of project cost at ₹1.4 trillion.

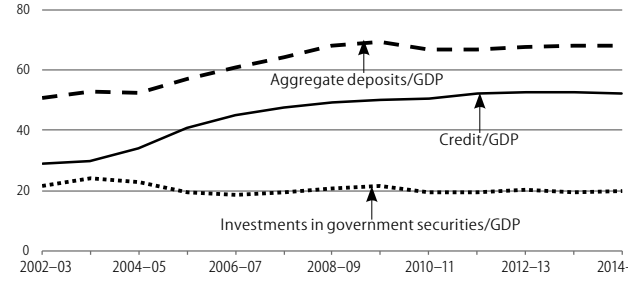
Investment in infrastructure, both public and private, played an important role in prolonging the economic boom of the 2000s, especially during the period of the Eleventh Plan (2006–07 to 2011–12). This role became particularly crucial in sustaining growth in India after the 2007–08 global crisis.

However, this high rate of investment in infrastructure could not be sustained in the Twelfth Five Year Plan (2012–13 to 2016–17). The Planning Commission's (2014) High Level Committee on Financing Infrastructure noted that the anticipated investment in infrastructure in 2012–13, the first year of the Twelfth Plan, was only 66% of what was targeted and had fallen below what was actually realised in 2008–09. The committee revised the projections for infrastructure investment in the Twelfth Plan from 8.2% of the GDP to 5.7% of the GDP, with both public and private investment projected to drop sharply. This clearly signalled the end of the expansionary phase of the economy.

**Financing the second boom:** Like in the first boom, a crucial role in financing the second boom was played by the SCBs. This can be noted in the trend of the credit–GDP ratio, which did not witness any decline even during the crisis year. The credit–GDP ratio continued to rise in the post-crisis phase despite a fall in the deposit–GDP ratio (Figure 17).

**Figure 17: Scheduled Commercial Banks: Deposits, Credit and Investment**

(% of GDP)




Source: RBI, Database on Indian Economy.

In contrast to the first boom, credit growth happened despite a rise in the weighted average lending rates of all SCBs (Figure 18a). After having fallen significantly for almost nine years, the weighted average real lending rate rose at the beginning of the second boom in 2009–10 (Figure 18b).

**Figure 18a: Weighted Average Nominal Lending Rates of SCBs** (%)

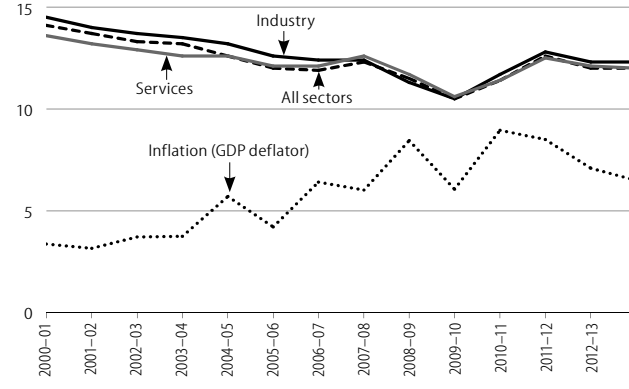



**Figure 18b: Weighted Average Real Lending Rates of SCBs** (%)

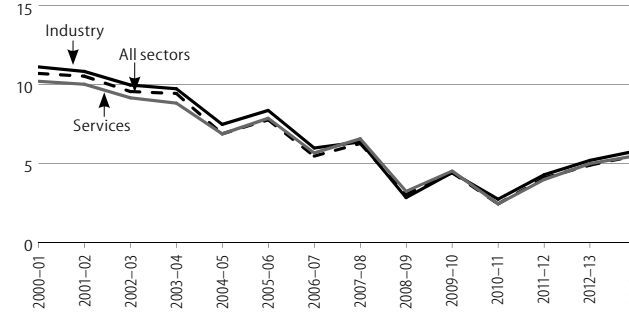


**Figure 19a: Annual Credit Flow of Scheduled Commercial Banks and GDPmp**

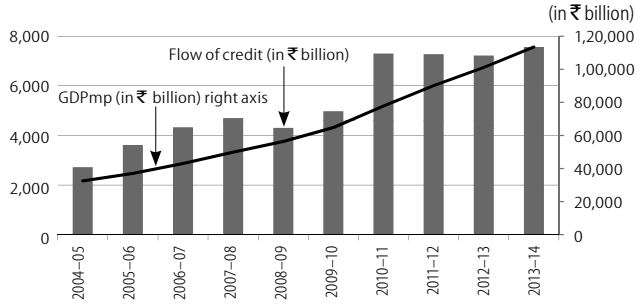
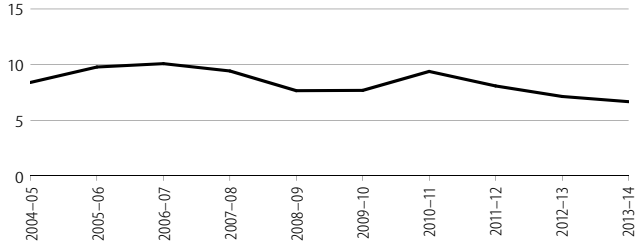



**Figure 19b: Annual Credit Flow of Scheduled Commercial Banks** (% of GDP)

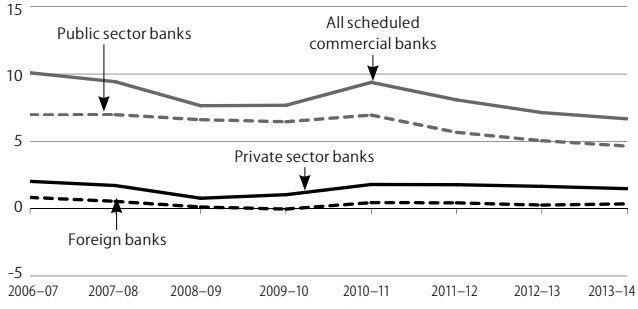



Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India* & Database on Indian Economy.

After a brief fall in 2008–09, the annual flow of credit not only recovered in the following year but it also attained higher levels as compared to the pre-recession period (Figure 19a). Credit flow as a proportion to the GDP also showed an uptick coinciding with the second boom (Figure 19b). This renewed increase of credit flow at a time of rising interest rates was a harbinger of debt distress, which followed soon.

Among bank groups, the PSBs too had led the credit surge during the second boom. The private sector and foreign banks were far more cautious in this regard (Figure 20).

**Figure 20: Bank Group-wise Annual Credit Flow** (% of GDP)



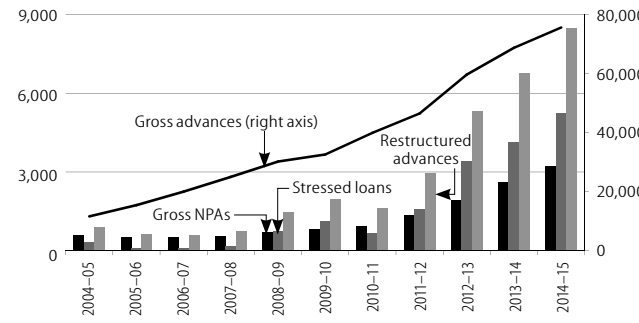

Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India.*

## The Bad Loans Crisis

The speech made by the RBI governor in November 2014 had clearly identified the victims and beneficiaries of "riskless capitalism":

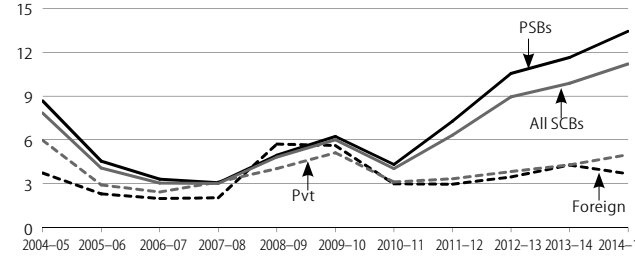
> Faced with this asymmetry of power, banks are tempted to cave in and take the unfair deal the borrower offers. The bank's debt becomes junior debt and the promoter's equity becomes super equity. The promoter enjoys riskless capitalism—even in these times of very slow growth, how many large promoters have lost their homes or have had to curb their lifestyles despite offering personal guarantees to lenders? ... Who pays for this one way bet large promoters enjoy? Clearly, the hard working savers and taxpayers of this country! As just one measure, the total write-offs of loans made by the commercial banks in the last five years is 161018 crore, which is 1.27% of GDP. (Rajan 2014)

**Figure 21: SCBs Gross Advances and Stressed Advances** (in ₹ billion)




Source: RBI, Statistical Tables Relating to Banks in India.

**Figure 22: Bank Group-wise Ratio of Stressed Advances in Gross Advances** (%)




Source: RBI, Statistical Tables Relating to Banks in India.

## Stressed Loans

Such an admission of a systemic malaise came from the higher echelons of the policy establishment amidst a sharp decline in bank profitability in 2013–14, which led to a slowdown in credit growth (Table 4). Annual growth of bank credit, which had risen from an annual average of around 15% in the 1990s to above 22% in the 2000s—crossing 30% between 2004 and 2007—nosedived to around 9.7% in 2014–15 and further down to 8.8% in 2015–16.

**Table 4: Annual Growth in Credit and Profits of SCBs** (%)

| | 2010–11 | 2011–12 | 2012–13 | 2013–14 | 2014–15 | 2015–16 |
|---|---|---|---|---|---|---|
| Credit growth | 22.9 | 18.1 | 15.9 | 14.5 | 9.7 | 8.8 |
| Profit (after tax) growth | 23.6 | 14.6 | 12.9 | -14.1 | 10.1 | -43.0 |

Source: RBI, Statistical Tables Relating to Banks in India and RBI (2015).

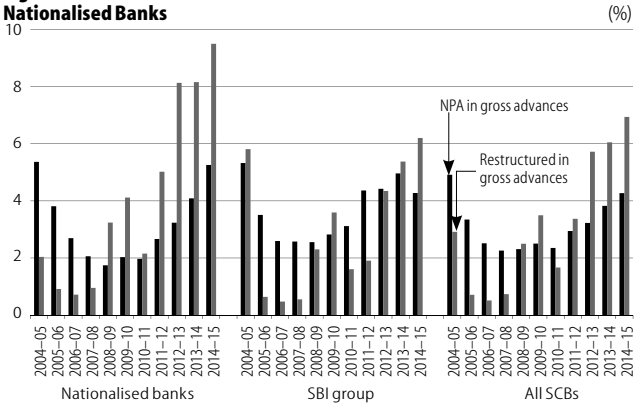
The fall in overall bank credit growth occurred despite private and foreign banks maintaining a much higher credit growth rate, because credit growth for the PSBs fell very sharply to around 7.3% by the end of March 2015 and 4% by the end of March 2016.

Higher provisions for NPAs and write-offs of bad loans have been the main reason behind the falling profitability of PSBs, besides slower earnings growth owing to the economic slowdown. Given the enhanced share of PSBs in credit growth during the boom, they have been saddled with a much higher share of NPAs within the banking system.

The accumulation of bad debts in the banking system accelerated from 2011–12, with the end of the boom period (Figures 21 and 22). In order to keep their NPA ratios down, banks started restructuring massive amounts of corporate debt, with the stock of restructured advances surpassing that of the NPAs.

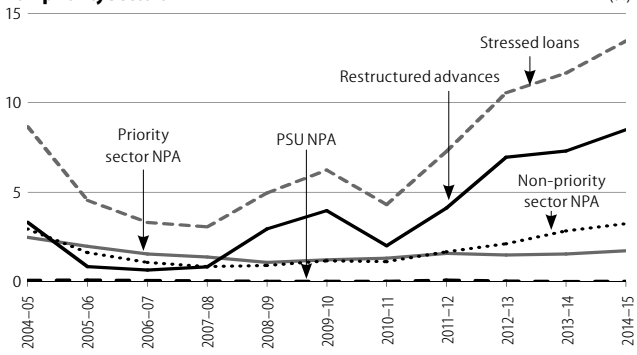
The overall stressed advances to gross advances ratio for all banks, including declared NPAs and restructured advances, rose from around 4% in 2010–11 to above 11% in 2014–15. With the banking system's gross advances amounting to ₹75 trillion in 2014–15, stressed advances stood at ₹8.4 trillion in March 2015,

**Figure 23: PSBs Stressed Advances in Gross Advances—SBI and Nationalised Banks**




Source: RBI, Statistical Tables Relating to Banks in India.

**Figure 24: PSBs Stressed Advances in Gross Advances—Priority and Non-priority Sectors**




Source: RBI, Statistical Tables Relating to Banks in India.

of which ₹7.5 trillion were with PSBs. While PSBs accounted for around 74% of all SCBs' gross advances, they had a share of almost 90% of the total stressed advances of the banking system. Among the PSBs, the SBI group's ratio of stressed advances to gross advances was at 10.5% in 2014–15, while that of other nationalised banks was at a much higher level of 14.8% (Figure 23).

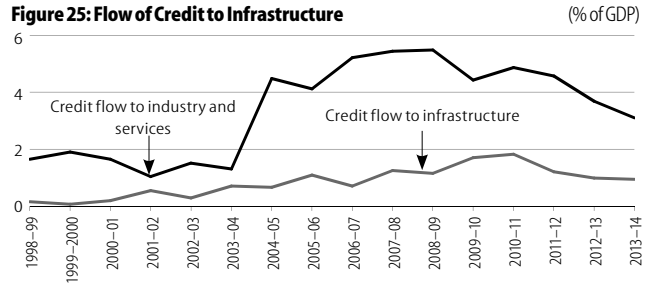
The increase in stressed loans of the PSBs from 2011–12 has been driven by increases in the NPAs from the non-priority sector and the restructured advances (Figure 24).

The priority sector and public sector units (PSUs) have not witnessed any rise in their NPA ratios. Thus, almost the entire bad loans crisis faced by the PSBs can be attributed to credit extended to the private corporate sector. This explains the RBI governor's castigation of "riskless capitalism," whereby the losses made by the private corporate sector after the end of the boom period have been offloaded on to PSBs.

## Debt Stress, a Sectoral Decomposition

The RBI's (2015) *Financial Stability Report* provided information on the sectoral composition of the stressed loans (Table 5). Five sectors, namely, mining, iron and steel, textiles, infrastructure and aviation, which accounted for almost 25% of gross advances of the banking system, contributed over 51% of the stressed advances. Infrastructure with a 15% share in gross advances contributed almost 30% of the stressed advances, while iron and steel with 4.5% share in gross advances contributed 10.2% of stressed advances. Within the infrastructure

**Figure 25: Flow of Credit to Infrastructure**




Source: Calculated from RBI, *Basic Statistical Returns of Scheduled Commercial Banks in India and Handbook of Statistics on the Indian Economy.*

sector, power and telecom were the major absorbers of credit as well as contributors to debt stress.

The high contribution of the infrastructure and iron and steel sectors to the stressed advances of the banking system point towards excessive bank lending to these sectors during the period of the boom. It is also noteworthy that while infrastructure and iron and steel comprised almost 23% of gross advances of the PSBs, their share in gross advances of the private banks and foreign banks were 11% and 9%, respectively.

Annual flow of credit to the infrastructure sector rose from around 0.3% of the GDP in 2002–03 to 1.1% of the GDP in 2005–06, and peaked at 1.8% of the GDP in 2010–11 (Figure 25). Average annual flow of infrastructure credit was 1.4% of the GDP between 2007–08 and 2011–12, that is, the period of the Eleventh Plan. This needs to be seen in the context of the thrust given to investment in infrastructure and PPPs in the Eleventh Plan, which we noted while discussing the enhanced role of private investment in the growth process during the 2000s. It is also noteworthy that credit to infrastructure rose during the second boom, when the overall credit to industry and services were on a decline (Figure 25).

## Credit-driven Investment in Infrastructure

The Eleventh Five Year Plan had projected an increase in infrastructure investment from around 5% of the GDP in the Tenth Plan period to 7.6% of the GDP in the Eleventh Plan period (Table 3), with the share of private investment in total

**Table 5: Sectoral Composition of Stressed Advances (December 2014)** (%)

| Sub-sector | | PSBs | Private Banks | Foreign Banks | All SCBs |
|---|---|---|---|---|---|
| 1 Mining | Share in advances | 1.7 | 0.4 | 0.4 | 1.3 |
| | Share in stressed advances | 1.4 | 1.1 | 0.3 | 1.4 |
| 2 Iron and steel | Share in advances | 5.2 | 2.5 | 2.7 | 4.5 |
| | Share in stressed advances | 10.5 | 7.9 | 3.6 | 10.2 |
| 3 Textiles | Share in advances | 3.9 | 2.4 | 1.2 | 3.4 |
| | Share in stressed advances | 7.5 | 6.4 | 3.4 | 7.3 |
| 4 Infrastructure | Share in advances | 17.6 | 8.4 | 6.4 | 15 |
| (of which) | Share in stressed advances | 30.9 | 18.2 | 32.8 | 29.8 |
| Power generation | Share in advances | 10.1 | 3.8 | 1.1 | 8.3 |
| | Share in stressed advances | 17.3 | 7.3 | 0 | 16.1 |
| Telecom | Share in advances | 1.7 | 0.9 | 3.2 | 1.6 |
| | Share in stressed advances | 1.8 | 3.1 | 19.7 | 2.2 |
| 5 Aviation | Share in advances | 0.6 | 0.1 | 0.6 | 0.5 |
| | Share in stressed advances | 2.7 | 0.4 | 0 | 2.4 |
| Total of these five | Share in advances | 29 | 13.9 | 11.3 | 24.8 |
| sub-sectors (1 to 5) | Share in stressed advances | 53.1 | 34.1 | 40 | 51.1 |

Source: RBI (2015); Scheduled Commercial Banks=SCBs.

infrastructure investment projected to rise from 20% to 30% (Planning Commission 2008). Of the financing for the investment in infrastructure, 48% was expected to flow from debt sources, with the rest being financed from the budgetary resources of the central and state governments, internal and external budgetary resources (IEBRs) of public enterprises and through equity and internal accruals of the private corporate sector. Around 51% of debt was expected to be contributed by the commercial banking sector, with the rest of debt finance coming from NBFCs, insurance companies, pension funds and external commercial borrowings (ECBs), with a likely "funding gap" of ₹16.2 billion (2006–07 prices) for the entire plan period.

A crucial element in the financing plan for infrastructure investments in the Eleventh Plan was that while 40% of public investment was to be financed with debt, for private investment the debt/non-debt finance ratio was almost 7:3. This, in fact, had been the typical gearing ratio for PPP infrastructure projects in India. A study conducted by Pricewaterhouse Coopers for the World Bank (PwC 2007) on PPP infrastructure projects in India, covering the detailed financials of 104 projects worth $11.48 billion, came out with the following findings:

- Of the project cost, 68% is usually financed by debt and 26% by promoter's equity, while only 2% comes from sub-debt and the remaining 4% comes from government grants of different kinds.
- Out of the debt financing of $7.7 billion, 72% can be attributed to term loans from commercial banks. Players like India Infrastructure Finance Company Limited (IIFCL) (34.4%), IDFC (22%) and IDBI (17.3%) dominate in the funding from non-bank sources of debt.[8]
- Within bank lending, PSBs dominate with a share of 82%, while the share of private sector banks and foreign banks are only 13% and 5%, respectively.

Given such a funding pattern for PPP projects, the projection of bank credit requirements made in the Eleventh Plan, amounting to 51% of total debt finance requirements, were underestimates. Restrictions on insurance companies and pension funds like the Employees' Provident Fund Organisation (EPFO) prevented them from lending to infrastructure projects, which did not have high credit ratings. RBI norms set limits on raising ECBs for financing or refinancing infrastructure projects. The IIFCL, an infrastructure finance company set up by the government in 2006 to provide long-term finance to infrastructure projects, had till December 2015 made cumulative disbursements of ₹47,000 crore only, under direct lending, takeout finance and refinance schemes taken together. This was a minuscule fraction of the ₹9.2 trillion outstanding bank credit to the infrastructure sector in March 2015. The bulk of the burden of financing infrastructure investments, especially private investments, therefore had to be borne by the commercial banks, particularly the PSBs.

While preparing the Twelfth Plan, the Planning Commission (2013) had estimated that the share of private investment in total investment turned out to be 36% by the end of the Eleventh Plan period, overshooting the projected share of 30%. With private investment in infrastructure rising from 1.1% of the GDP in the Tenth Plan to 2.6% of the GDP in the Eleventh Plan period, credit flow to infrastructure also rose from 0.7% of the GDP to 1.4% of the GDP (Table 6).[9] Such increases in private investment and credit flow can be seen in subsectors like power, telecom, roads and bridges, and ports. This debt-financed expansion of private investment in infrastructure during the Eleventh Plan period (2007–12) coincided with the global slowdown following the financial crisis, and prolonged the expansionary phase in India till 2011–12.

**Table 6: Infrastructure—Private Investment and Credit Flow in Tenth and Eleventh Plan** (% of GDP)

| (% of GDP) | Tenth Plan (2002–03 to 2006–07) | | | Eleventh Plan (2007–08 to 2011–12) | | |
|---|---|---|---|---|---|---|
| | Total Investment | Private Investment | Credit Flow | Total Investment | Private Investment | Credit Flow |
| Power | 1.51 | 0.38 | 0.34 | 2.40 | 1.13 | 0.74 |
| Telecom | 0.79 | 0.52 | 0.10 | 1.15 | 0.89 | 0.24 |
| Roads, bridges and ports | 0.96 | 0.17 | 0.12 | 1.48 | 0.38 | 0.26 |
| Total infrastructure | 5.02 | 1.11 | 0.68 | 7.18 | 2.61 | 1.42 |
| (%) | | Private Investment/ Total Investment | Credit Flow/ Total Investment | | Private Investment/ Total Investment | Credit Flow/ Total Investment |
| Power | | 25.2 | 22.6 | | 47.0 | 30.9 |
| Telecom | | 65.0 | 12.6 | | 77.8 | 20.9 |
| Roads, bridges and ports | | 18.1 | 12.5 | | 25.5 | 17.6 |
| Total infrastructure | | 22.0 | 13.5 | | 36.3 | 19.8 |

Source: Calculated from Planning Commission, Twelfth Plan Document and *Handbook of Statistics on the Indian Economy*.

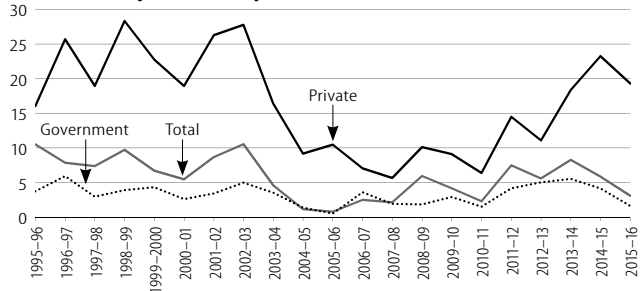
We have already noted that such high levels of private investments could not be sustained in the Twelfth Plan, with actual investment in infrastructure in 2012–13 falling short of projected estimates by 66%. The shortfall in private investment in infrastructure in 2012–13 was by a much higher level of 74%. The fall of total infrastructure investment as a proportion of the GDP, from 7.2% between 2007 and 2012 to 5.1% in 2012–13 and 5.3% in 2013–14 prompted the High Level Committee on Financing Infrastructure to revise the total projection for the infrastructure investment to GDP ratio during the Twelfth Plan period from 8.2% to 5.7%. The following observation was made by the committee:

> the policy environment has become increasingly difficult on account of various factors such as inadequate allocation of fuel to power stations, delays in environment and forest clearances, issues in land acquisition, constraints in bank lending, economic slowdown and delays in decision-making, which are the principal causes of decline in investment in infrastructure, especially during the last two years. The Committee noted that if the above constraints are not addressed urgently, they would lead to a widening of the infrastructure deficit with serious repercussions for the economy in the years to come. (Planning Commission 2014)

Thus, two sets of issues were flagged by the committee in explaining the slowdown in infrastructure investments: (i) delays in policy-level decision-making and regulatory clearances, and (ii) constraints on bank lending and the economic slowdown. Estimates made from the CMIE Capex database, however, show that the "dropping rate" of investment projects in the private sector grew much more sharply than that of projects in the public sector after the end of the second boom (Figure 26, p 96).

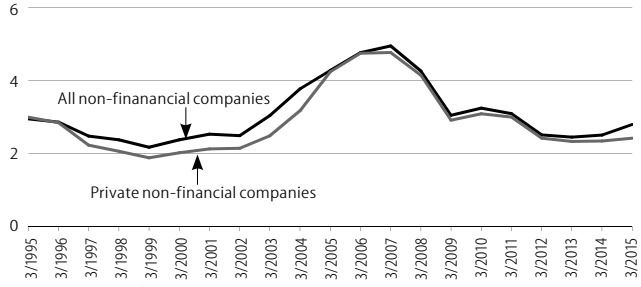
While the private sector always had a much higher rate of dropped projects than the public sector, the difference had narrowed during the boom period, reflecting conducive market and credit conditions. With an overhang of corporate debt and bad loans accumulating in bank balance sheets since 2011–12,

**Figure 26: Dropping Rate of Investment Projects—Dropped Projects as a Share of Projects under Implementation** (%)



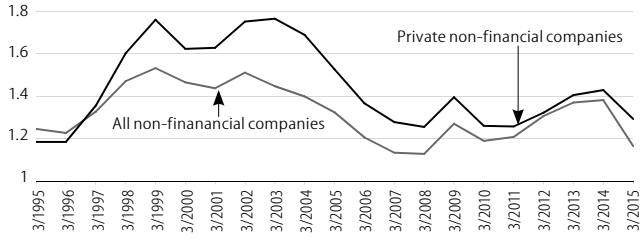

Source: CMIE, CapEx database.

**Figure 27: Average Interest Coverage Ratio of Non-financial Companies** (%)




Source: Calculated from CMIE, Prowess database.

**Figure 28: Average Debt Equity Ratio of Non-financial Companies** (%)




Source: Calculated from CMIE, Prowess database.

the rate of dropped projects increased much more sharply in the private sector.

The *Economic Survey* (GoI 2015a) carried out an elaborate study of stalled projects and noted that most of the stalled private sector projects were in manufacturing and infrastructure, while the stalled government projects were predominantly in infrastructure. It made the following relevant observation:

> Perhaps contrary to popular belief, the evidence points towards over exuberance and a credit bubble as primary reasons (rather than lack of regulatory clearances) for stalled projects in the private sector. On the flipside, government projects were the most severely affected by "policy paralysis" of regulatory clearances. There are of course interdependencies, but a private sector 'project bubble' is not inconsistent with the data. (GoI 2015a)

Noting that the stock market has not been much affected by such stalling of projects, the *Economic Survey* showed through an event study that the stalling of projects did not have any significant impact on firm equity, which may be because "the market is internalising the expectations of bailouts."

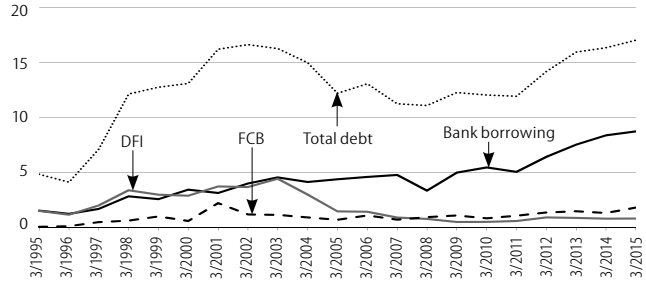
## Credit Bubble

In order to further examine the quality of credit to the non-financial corporate sector during the boom phase of the 2000s, we have conducted an analysis based on non-financial companies' data from the CMIE Prowess database. The debt–equity ratio (DER) and the interest coverage ratio (ICR) are standard indicators of corporate leverage, with the former indicating the proportion of the aggregate debt stock in companies' net worth and the latter indicating solvency status. The time-series of the average interest coverage ratio (EBITDA[10]/interest payments) and the average debt–equity ratio for the entire database of non-financial companies are given below (Figures 27 and 28).

The average ICR of the non-financial sector improved considerably from March 1999 till the end of March 2008 and started declining thereafter, reflecting the worsening financial and economic conditions after the global financial crisis. The average DER rose during the late 1990s, then fell from 2003 to 2008, and showed an upward trend since 2009. The average ICR and DER of the private non-financial companies are higher than that of the public sector and other companies.

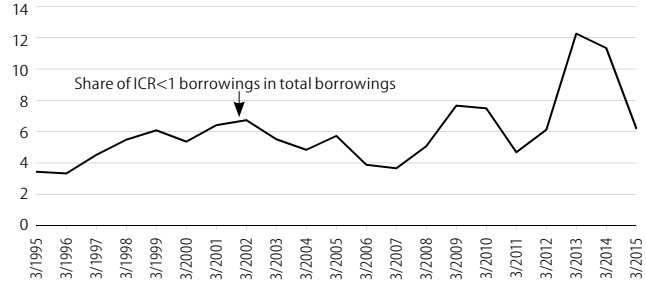
Figure 29 plots over time the annual share of the outstanding debt of private non-financial companies with high DER (>5) in total outstanding debt of all non-financial companies. The share of DER>5 debt rose continuously from the late 1990s till 2001–02. With the boom in the 2000s, the share of high DER companies in total debt had fallen between 2003 and 2008. The share started rising again from 2009 and reached a peak of 17% by the end of March 2015. The gradual replacement of corporate borrowings from the DFIs by those from the banks from 2003–04 can also be seen from the figure.

**Figure 29: Share of DER>5 Company Debt in Total Debt** (%)




Source: Calculated from CMIE, Prowess database.

**Figure 30: Share of ICR<1 Company Borrowings in Total Bank Borrowings** (%)




Source: Calculated from CMIE, Prowess database.

A similar trend can be seen with respect to the share of bank borrowings by private non-financial companies with ICR<1 in total bank borrowings. For a company with ICR<1 in a period implies that its net earnings (EBITDA) are less than interest payments, signifying negative cash flow. The share of bank borrowings by such companies in total bank borrowings fell from 6.7% in 2001–02 to 3.7% in 2006–07, then rose again to 7.7% in 2008–09, fell to 4.7% in 2010–11, and rose again to

peak at 12.2% in 2012–13 (Figure 30, p 96). The stock of bank credit with ICR<1 companies was at the highest level between end of March 2012 and 2014.

The sectoral shares of companies with DER>5 and ICR<1 are provided in Table 7 with a ranking based on their share of total DER>5 and ICR<1 borrowings in the end of March 2015. The iron and steel sector had the highest share of debt among the outstanding bank borrowings of all DER>5 companies, followed by the power and civil engineering sector (which fall under infrastructure) and warehousing. Among ICR<1 companies, the largest share was of the power sector, followed by warehousing, civil engineering and textiles. These broadly follow the pattern of sectors with high NPAs and stressed loans, as reported by the RBI.

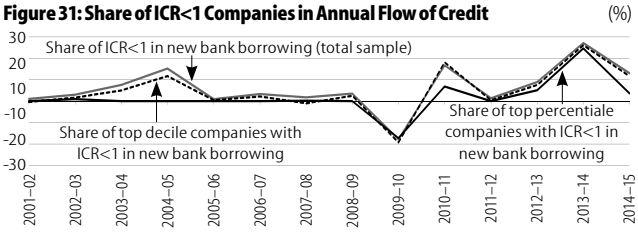
**Table 7: Sectoral Shares of DER> 5 and ICR<1 Companies, End-March 2015**

| Sectors | % Share in DER>5 Bank Borrowing | Sectors | % Share in ICR<1 Bank Borrowing |
|---|---|---|---|
| Iron and steel | 28.7 | Electricity (infrastructure) | 21.6 |
| Electricity (infrastructure) | 21.6 | Warehousing and support activities for transportation | 11.7 |
| Civil engineering (infrastructure) | 12.6 | Civil engineering (infrastructure) | 10.9 |
| Warehousing and support activities for transportation | 5.1 | Textiles | 8.6 |
| Transport equipment | 3.1 | Motor vehicles | 6.7 |
| Machinery and equipment | 3.1 | Iron and steel | 5.0 |
| Electrical equipment | 2.8 | Non-metallic mineral products | 3.8 |
| Non-metallic mineral products | 2.5 | Telecommunications (infrastructure) | 3.3 |
| Telecommunications (infrastructure) | 2.4 | Pharmaceuticals | 3.1 |
| Chemicals and chemical products | 2.1 | Basic metals | 2.7 |
| Total | 83.9 | Total | 77.4 |

Source: Calculated from CMIE, Prowess database.

In order to take a closer look at the deterioration of the quality of credit, we examine the share of companies with ICR<1 at the end of the previous year in the annual flow of bank credit. An increasing share implies a worsening of credit quality. For this, we identified a sample of 1,445 companies from the Prowess database, which has provided complete data on bank borrowings, EBITDA and interest payments for the time-period 2001–02 to 2014–15. Figure 31 shows the share of ICR<1 companies in the sample within the annual flow of credit to all the companies in the sample.

**Figure 31: Share of ICR<1 Companies in Annual Flow of Credit**




Source: Calculated from CMIE, Prowess database.

There were sharp deteriorations in the quality of credit to the non-financial sector in two phases, when the share of ICR<1 companies in total credit flow increased sharply. The first phase was between 2001–02 and 2004–05, when the share rose from 1% to 15.2%. This was when the first boom had commenced. The share came down significantly in 2005–06 and remained below 5% till 2008–09. The share turned negative in 2009–10, signifying deleveraging. There was a reversal in 2010–11, when the share of ICR<1 companies in credit flow jumped to 16% and then, after falling in 2011–12, had once again risen from 2012–13 to peak at 27% in 2013–14. The period between 2011 and 2014 was therefore another phase when credit quality deteriorated significantly, and certainly experienced a credit bubble.

It is noteworthy that while ICR<1 companies in the first decile of our sample explain most of the credit flow till 2008–09, the spikes after 2008–09 are on account of credit flow to ICR<1 companies in the first percentile. This reflects the concentration of credit within the ICR<1 companies. Table 8 provides the list of the first percentile companies in our sample and ranks them in terms of their net bank borrowings in 2013–14, the year with the highest share of net bank borrowings to ICR<1 companies. Out of the 14 companies, numbers 1 and 4 had ICR<1 at the end of 2012–13 and yet they could borrow ₹168.5 billion and ₹49.5 billion, respectively, from banks in 2013–14, accounting for almost 25% of net credit flow to all companies in our sample. Large borrowings by such heavily indebted private companies have aggravated the bad loans crisis.

**Table 8: Net Bank Borrowings of Top Percentile Companies in 2013–14**

(in ₹ million)

| | Company | Net Bank Borrowings in 2013–14 |
|---|---|---|
| 1 | Reliance Industries | 1,68,500.0 |
| 2 | Bhushan Steel | 68,775.7 |
| 3 | Jindal Steel & Power | 49,488.6 |
| 4 | Jaiprakash Associates | 49,488.6 |
| 5 | Essar Steel India | 34,813.6 |
| 6 | Tata Steel | 31,649.3 |
| 7 | Hindalco Industries | 31,050.8 |
| 8 | Larsen & Toubro | 23,288.5 |
| 9 | Reliance Infrastructure | 12,762.3 |
| 10 | Tata Motors | 11,639.2 |
| 11 | JSW Steel | -241.9 |
| 12 | Wipro | -4,828.0 |
| 13 | Essar Oil | -9,000.3 |
| 14 | Bharti Airtel | -12,078.0 |

Source: Calculated from CMIE, Prowess database.

## Conclusions

Our findings suggest that the Indian growth story of the 2000s cannot be simplistically explained as a result of "market-oriented" reforms. While trade opening up and export surpluses seem to have triggered a boom in the early 2000s, the boom was sustained by private investments financed by enhanced flows of credit from PSBs, enabled by a decline in the nominal and real lending rates. Such PSB credit-financed investments, particularly in the infrastructure sector, played a crucial role in generating high levels of economic activity in the aftermath of the global economic crisis in 2008–09, even against the backdrop of rising interest rates. Such a growth trajectory, however, proved to be unsustainable when the expansionary phase came to an end in 2011–12 and bad loans began piling up in the banking system.

Two significant aspects of this growth experience need to be reflected upon, in our view. First, that there was a marked difference in the lending behaviour of the PSBs and the private or foreign banks during the phase of economic expansion, which shows that much more than the invisible hand of the market was at play in determining the flow of credit. Not only have the PSBs replaced the DFIs in providing long-term finance to the corporate sector, but such loans to the infrastructure sector, for instance, were also extended in tandem with the economic strategy of the state, particularly during the Eleventh Five Year Plan.

Since the end result has been an unprecedented accumulation of NPAs in the balance sheets of PSBs, the premature euthanasia of the DFIs in the Indian context requires a fundamental rethink. The model of universal banking seems to have failed in the Indian context, where the public sector commercial banks lack the requisite skills and diligence required for financing long-term projects. Since the bulk of the resources of the commercial banks are raised through short-term deposits, such project financing means unwarranted risks to the commercial banking sector.

Second, the fact that heavily indebted private companies could still manage to contract large volumes of fresh credit from the PSBs points towards a systemic malaise, which former RBI Governor Rajan had characterised as "riskless capitalism." The scale at which this has happened cannot be downplayed as merely comprising aberrations. Rather, it can be argued that the availability of such "riskless" credit from PSBs had itself influenced the risk schedule and, hence, the investment behaviour of the private corporate sector during the high-growth phase. Moreover, if the accumulated NPAs are to be finally written off or made to disappear from the bank balance sheets through a public-funded bailout through a "bad bank"—as has already been proposed in the official circles—it would amount to ex gratia transfers made by the state to the private corporate sector.

The question that needs to be asked then is: why is the state choosing to provide subsidies to private corporates rather than itself undertaking those investments? In other words, the relationship between the state and the private corporate sector in India in the post-reforms period needs to be critically interrogated in the light of this experience.

## NOTES

1 The Central Statistics Office (CSO) released a new series of national accounts in January 2015, revising the base year from 2004–05 to 2011–12. The new series used a different corporate sector database which led to the increase in the size of the private corporate sector in aggregate GDP in 2011–12 from 23.7% in the old series to 34.7%, much of it because of an abnormal 309% increase in the GDP estimates for the private financial corporate sector. Such revisions have showed up in a higher GDP growth rate of 6.6% in 2013–14 as per the new series, compared to 4.7% in the earlier series (Nagaraj 2015a). The new series has also come under criticism for the use of WPI as a deflator for sectors like manufacturing, trade and finance, resulting in overestimations of the GDP growth rate (Sengupta 2016).

2 This will necessarily be so if we leave aside the effect that innovations for exports might independently have on investment demand. The net result of trade deficit on aggregate demand will depend on how much of this investment effect of exports offsets the negative demand effect of the trade deficit.

3 Ghosh Dastidar (2015) argues on the basis of a survey of empirical evidence that India's growth can be better characterised as export "induced," where favourable conditions in the world market have caused an increase in exports, rather than being export "led," as has been experienced by the East Asian economies, which resulted from state-directed export promotion strategies.

4 Chaudhuri (2013) and Nagaraj (2015b) discuss the rising import intensity of India's capital goods and manufacturing sectors in the 2000s.

5 Nagaraj (2008) pointed out that the methodology of "blowing up" up the investment and savings data from RBI's limited sample of around 2,000 companies over the paid-up capital of all companies registered with the Registrar of Companies led to serious overestimations, since a very large proportion of such registered companies are economically inactive, shell companies.

6 A High Level Expert Committee on Corporate Bonds and Securitisation, formed after an announcement in the Budget 2005–06, submitted its report in December 2005, making several recommendations to develop the primary and secondary market for corporate debt (GoI 2005). The government accepted its recommendations and initiated implementation from 2006–07.

7 See Nayyar (2015) for a more detailed analysis of DFI disbursements in India.

8 IDBI was considered as a financial institution in the report and not as a bank.

9 Planning Commission (2013) did not provide data on the financing of realised infrastructure investment during the Eleventh Plan, including bank credit. The data on credit to infrastructure have been obtained from the RBI database. The definitions of the infrastructure sector and its subsectors are different for the RBI and the Planning Commission. We have compared the investment and credit data only where the definitions match closely. Given the scale of private investments made during the Eleventh Plan period, the infrastructure credit data provided by the RBI appear to be underestimates.

10 EBITDA stands for "earnings before interest, tax, depreciation and amortization."

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