Banks play a crucial role in the Indian financial system. More than two-thirds of household savings are channeled through the banking system, which also provides more than 90% of the commercial credit in the country. In a bank-dominated economy, sustained impairment of the banking sector due to balance sheet problems creates a drag on real economic activity and can take the shape of an economic crisis. It is imperative to expeditiously resolve a banking sector crisis so that banks as the primary source of credit can start functioning normally again. In India, banking crisis is a recurrent phenomenon. Since the liberalisation reforms of 1991, there have been two major banking crisis episodes-the first one took place during the 1997-2002 period and the second one started in the aftermath of the 2008 Global Financial Crisis and is yet to be resolved

The Indian economy has changed rapidly and significantly since the implementation of the liberalisation, deregulation and privatisation reforms of the early 1990s. The banking sector has also undergone remarkable changes over the last 25 years. When comparing crises across time, the main antecedents that need to be considered are the changes in the overall economy as well as in the banking sector at the time of the crises. The economic factors that are relevant here include the growth rate of GDP and the evolution over time of the bank credit to GDP ratio. Also important is the structure of banking as captured through factors such as the depth of banking penetration, share of bank credit in the overall capital formation, ownership structure of banks, level of capitalisation, and key aspects of banking regulation. These antecedents help to understand the causes of the crises and also facilitate a comparison of crises occurring at different points in time.
There are several ways to describe a banking crisis. The most common manifestations of stress in the banking sector are in the form of insolvency and illiquidity. In India, crises have mostly manifested in the form of high levels of NPAs and their impact on the capital adequacy levels of banks. Hence, the levels of NPAs, in absolute and in relation to the capital in the banking system, constitute a convenient metric to compare the degree of banking crises.

Banking in India broadly consists of the commercial banks and the co-operative banks. Commercial banks in turn are classified into scheduled and non-scheduled commercial banks. The scheduled commercial banks (SCBs) are those banks that are included in the second schedule of the Reserve Bank of India Act, 1934 and satisfy certain conditions with regard to paid up capital, reserves etc. The SCBs include the public sector banks (nationalised banks, State Bank of India and its subsidiaries), domestic private sector banks (old and new), foreign private sector banks and regional rural banks

Banks in India got nationalised in two phases, in 1969 and 1980 (14 largest private banks in 1969 and 6 more in 1980). After the second round of nationalisation, close to 90% of the sector was composed of government owned banks and the rest of the sector was almost equally divided among a few foreign banks and some very small privately owned banks . Between 1980 and 1992 the PSU banks in India were completely government owned. The first bank to go public was the State Bank of India in 1992-93.

Post liberalisation in 1991, the government appointed various committees to review the functioning of the Indian banking sector and recommend policy changes to make the banks more healthy, competitive and efficient. Two such expert committees were set up under the chairmanship of Mr. M. Narasimham in 1991 and 1998. The recommendations made by these committees (popularly known as Narasimham Committee I and II) laid out the roadmap for banking sector reforms in post-liberalisation India. The committees recommended several micro prudential measures including adoption of risk based capital standards, and uniform accounting practices for income recognition and provisioning against bad and doubtful debts. The objective was to benchmark against international best practices as embodied in the Basle I norms set by the Basle Committee on Banking Supervision (BCBS).

Following the recommendations of the Narasimham committee I, Indian banks were subject to a capital to risk-weighted assets system in which banks had to achieve 8% CRAR or capital to risk-weighted assets ratio by 1996 (Ghosh et al, 2003). The CRAR measures the ratio of a bank's paid-up capital to its advances and other assets. Narasimhan Committee II also made several recommendations about asset classification, increasing banks CRAR to 10% by 2002, and setting up of Asset Reconstruction Companies (ARCs) that would take over the stressed assets from banks. Since then RBI has progressively introduced in a phased manner, prudential norms for income recognition, asset classification, and provisioning for the advances portfolio of banks.

The Narasimham Committee I also recommended issuance of new licenses to private sector entities to set up banks. Consequently RBI issued 11 licenses for setting up new privately owned banks. While most of these new private sector banks started functioning in the mid 1990s, their share of the banking business remained modest until 2000.

Other banking sector reforms based on the committees recommendations included interest rate deregulation, allowing PSU banks to raise up to 49% of their equity in the capital market and gradual reduction of the Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) to improve banks profitability.

The banking sector has grown manifold in size since the time of bank nationalisation. From 1969 to 2015, the number of commercial banks went up from 89 to 152. The dependence on bank finance has also increased over the years.
The share of household savings in bank deposits has gone up from around 30% in 1991 to close to 60% in 2013.Domestic credit extended by banks to the private sector as a share of GDP has gone up from 24% in 1992 to 53% in 2015. The share of banks in corporate borrowing has remained high and as of 2011 was close to 60% as highlighted in the Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework . All these point to the fact that despite the move towards a market-based financial system since the 1990s, banks continue to play a very important role in the Indian economy.

While the share of private sector banks has gone up over time the actual number of private sector banks has decreased since 2000. This reflects the fact that since early 2000s, very few new banking licenses have been given out by the RBI to private sector entities even as the economy has grown in size.The predominant position of government owned or public sector banks is a unique feature of Indian banking. Even today, 25 years post liberalisation the share of the PSU banks is as high as 70% of the entire banking sector. Government ownership in these banks amounts to 51% or higher.
This has two important implications. One is that it puts a constraint on bank recapitalisation. There is always a tendency for a banking crisis in India to degenerate into a public finance or fiscal problem given that the government has to bear a lions share of the burden to recapitalise the PSU banks.
Government ownership also creates a perception of State guarantee among the depositors.In the aftermath of the 2008 Global Financial Crisis, PSU banks in India outperformed their private sector peers despite being systemically more risky in the sense of being vulnerable to the crisis.This apparent stability of the PSU banks is because of their access to explicit and implicit government guarantee.Banking crisis in India needs to be understood in the context of capital adequacy and solvency problems rather than a liquidity shortage. The resolution of such a crisis can be more easily delayed owing to the government ownership of 70% of the banking system.

Since the liberalisation reforms of 1991 ,there have been two major banking crisis episodes-the first one took place during the 1997-2002 period and the second one started in the aftermath of the 2008 Global Financial Crisis and is yet to be resolved.
The banking crisis that started around 1997 was preceded by a series of liberalisation, deregulation, and privatisation reforms initiated in 1991. When

the economy was being opened up, the banking sector that had operated in a protected and regulated environment for decades, also needed to be reformed so that it could measure up to international standards. Banking sector reforms in this era primarily consisted of deregulation of entry, strengthening bank supervision and implementation of prudential norms based on internationally accepted practices.

As a result of these reforms, new private banks started operating roughly from 1995 onward. Between 1990 and 1995, the number of private sector banks in the economy increased from 25 to 32. By 1997 their market share was roughly 6%. During the mid 1990s there was a credit boom in the newly liberalised, privatised and deregulated economy. During 1992-96, bank credit to GDP ratio averaged at 18% and bank credit grew at close to 12% .

The liberalisation, deregulation and privatisation reforms of the early 1990s also triggered a big investment boom in the economy. It also paved the way for foreign firms to enter. This created competition for the existing domestic firms. Also when the licensing restrictions were removed, domestic firms rushed to expand capacity. But several of them were not able to adapt to the changing environment or withstand competition from other domestic firms and foreign entrants and became economically unviable. This resulted in stress in the advances portfolio of the commercial banks.

Apart from private and PSU banks, there also existed financial intermediaries called Development Finance Institutions (DFIs). DFIs such as IDBI, ICICI, and IFCI were critical players in the financial sector in the 1990s. They were term-lending institutions that extended long term finance to the industrial sector. Although the DFIs were not deposit taking entities, they accounted for a substantial share of the overall commercial credit in the economy. Almost all the lending for new industrial projects was done by the DFIs while commercial banks focused mostly on working capital finance.

The DFIs had access to low cost capital from RBI as well as from multilateral agencies. They also borrowed resources from banks through bonds that qualified for the latters statutory liquidity reserved (SLR) requirements. With the initiation of macroeconomic and financial sector reforms in the 1990s, the operating environment for the DFIs underwent a significant change. Their access to low-cost capital was withdrawn which meant that DFIs had to raise capital in the market. They also faced stiff competition from the banks that started doing project financing but at lower rates. This caused severe stress in the financial position of the DFIs and their NPAs accumulated to very high levels. By the late 1990s they were no longer economically viable.In the late 1990s the Indian economy experienced a series of external shocks. The Asian financial crisis happened in 1997. This was followed by India conducting nuclear blasts in 1998. Then there was the collapse of the Internet bubble in the US in 2000-2001. In the immediate aftermath of the nuclear blasts of 1998, international sanctions were imposed on India. These events led to a general slowing down of the economy. The average real GDP growth rate between 1997 and 2002 slowed down to around 5% from an average of 7% during 1994-97.The banking crisis of 1997-2002 was an outcome of post-liberalisation structural changes in the economy and was accentuated by a few events both internal and external which resulted in a cyclical slowdown of the real economy. The macroeconomic and banking sector conditions preceding the ongoing banking crisis were very different from the earlier episode. The period from 2003 to 2008 witnessed unprecedented economic growth, remarkable growth in exports and favourable macroeconomic conditions in the form of low inflation and low interest rates. India became a major beneficiary of benign global conditions over a sustained period of time.

The banking sector also witnessed structural changes in the 2000s. There was a remarkable increase in the volume of bank credit. Bank credit grew at a staggering rate of 25% during 2003-2007.The credit boom in general was larger during the mid 2000s than the one in the 1990s and the absolute magnitude of the subsequent NPA problem was also much bigger.

The composition of bank lending underwent a transformation.This change in the composition of bank lending was problematic for three reasons.

Policy changes led to large-scale private sector participation in infrastructure development. Over the period from 2003 to 2007, there were major private entrants into sectors such as aviation, telecom, mobile telephony etc. that were earlier under complete government ownership. There was a huge demand of credit from these industries but commercial banks had little expertise or experience in assessing these businesses. This resulted in potential mismatch of the skills required to do project lending and the capabilities at the PSU banks.

Secondly, this led to a fundamental asset-liability mismatch problem. Unlike DFIs which were funded by long-term bonds and hence could extend long-term credit to industrial projects, commercial banks main source of funding are deposits which tend to be more short-term in their maturity profile. Hence banks doing long-term project lending on the back of short-term assets is bound to result in maturity mismatches in the balance sheets.

Lending to infrastructure also exposed banks to risks they were not accustomed to. These risks emanated from delays and roadblocks due to policy issues, environmental approvals, and the ability of the promoters to bring in large amount of equity needed to complete the projects. It also complicated the governments role. On one hand the government was the owner and provider of capital to banks, and hence would be concerned about the credit risks that the PSU banks were undertaking. On the other hand as a key participant in the economic infrastructure development, the government bore crucial responsibility for the viability and creditworthiness of such projects.

The roots of the present crisis can be traced to the excessive lending done by the banks during the credit and investment boom of 2003-2008. In 2008, the world witnessed the Global Financial Crisis. In the aftermath of the crisis India experienced a dramatic slowdown in growth, a massive depreciation of the exchange rate, high inflation and a sustained period of monetary contraction during which RBI raised interest rates to deal with rising inflation. All of these events wreaked havoc for the corporate sector and in turn for the banking sector.

In the immediate aftermath of the 2008 crisis, governments across countries undertook measures to support the financial sector and broadly to get out of a severe recession. Concerns about a potential economic slowdown prompted the Indian government to also take stimulus measures to support the economy. One such measure was to encourage banks, especially the PSU banks, to lend even more to the infrastructure sector, which by 2009 had already started showing stress due to a slowing economy, longer than anticipated delays to obtain clearances from the government, escalating costs etc.

RBI as the banking regulator also announced schemes of restructuring which allowed banks to suspend norms of income recognition and restructure loans that could have become non-performing. This made it easier for already over-leveraged companies to borrow more.

By 2011, the Indian economy entered into a business cycle recession and demand started slowing down .The overall slowdown of the global economy and the weakening of external demand for Indian exports contributed to this.

From the high growth years of the 2003-2008 period, real GDP growth rate during the 2011-2013 slowed down to 6%. New projects failed to take off due to the lack of government approvals and projects that had received credit during the credit boom period got stalled owing to the general slowing down of the economy. The problem was especially acute in the infrastructure sector. This led to a fresh wave of NPAs especially in sectors such as infrastructure, steel, metals, textiles etc.

By late 1990s, many of the PSU banks had begun showing signs of weakness. The CRAR of most of these banks was either at or had gone below the safe level of 8%. In other words, many PSU banks were undercapitalised. The growing NPAs of these banks became a major drag on the financial system. By 1997, the ratio of gross NPAs to advances had reached 15%.The loan quality was worse in the term-lending DFIs.While the

NPA share was much larger in the first crisis episode the growth rate of NPAs is significantly higher in the ongoing crisis.
In case of the ongoing crisis, the NPA problem started assuming serious proportions roughly from 2013 onward but the NPAs had been growing from 2010. To some extent the restructuring schemes introduced by the RBI helped the banks to suppress the extent of their balance sheet stress in the aftermath of the 2008 Global Financial Crisis. In April 2015, RBI introduced the Asset Quality Review (AQR), which forced the banks to recognise the stressed assets on their books and provision for them. This was applicable to private and PSU banks alike. The AQR resulted in a sharp decline in the share prices of several banks. By September 2015, 9 out of 10 stressed banks were government owned. Profitability of the banking sector in general has decline since 2012.

The policy responses to both the crisis episodes need to be reviewed in the context of the broader macroeconomic and banking environment. A multiplicity of factors aided the resolution of the banking crisis of the late 1990s.The DFIs were merged with the commercial banks (for example ICICI and IDBI) or were allowed to stagnate and become less relevant (for example IFCI). The extent of the problem was relatively smaller in commercial banks. These were partly rescued through capital injection by the government before being allowed to raise capital in the market. The relatively smaller size of the overall banking sector compared to recent times, as well as the size of the stressed asset problem did not impose a significant fiscal pressure on the government.
the current banking crisis is a much more difficult one to resolve, given the magnitude of the problem as well as the macroeconomic environment in which it originated. The V-shaped growth recovery of the early 2000s including the export and investment boom is unlikely to happen this time around. The economic slowdown that began in 2011 continues to be a cause of concern and the growth momentum is much slower than what it was in early 2000s.
the Indian economy experienced a massive monetary contraction in November 2016 when the legal tender status of high denomination currency notes was canceled by the government and RBI resulting in 86% of the currency in circulation being withdrawn. In 2016-17 this is likely to act as a further drag on the economy and maybe even add to the NPA woes of an already struggling banking sector.Several policy actions have already been implemented. Balance sheet troubles for banks started as early as 2011-12. When the first signs of trouble surfaced, RBI as the banking regulator took recourse to regulatory forbearance. For example RBI initiated several restructuring programs (such as Corporate Debt Restructuring, Strategic Debt

Restructuring, 5/25, Joint Lenders Forum etc.) to enable the banks to resolve the stressed asset problem. However these programs helped the banks to hide the actual extent of the stress on their balance sheets instead of solving the underlying problems.The government initiated the Indradhanush program in August 2015 to revamp the PSU banks, which also includes recapitalisation or infusion of capital into the banks.There has been considerable debate by now in the public policy domain about the pros and cons of using the resources of the government, which is essentially the taxpayers money to recapitalise banks.

The sooner the crisis is resolved and the health of the banks is revived the better it is for the overall economy.The ongoing NPAs problem needs to be resolved using a three-pronged approach which involves recognition, recapitalisation and resolution.The problem is more acute at the PSU banks. because, they cannot raise significant amount of capital in the market without diluting the governments share below 51%.Recapitalisation by the government not only hampers fiscal prudence but also creates a potential moral hazard issue for the banks who have less incentive then to set their own houses in order.

there are specific roles to be played by the regulator, the government and the banks themselves to ensure that the next time banks face NPA problem, it can be contained and the damage to the taxpayer can be minimised.RBI as the banking sector regulator can adopt pre-emptory measures such that if bank credit goes beyond a specific range, counter cyclical steps can be adopted such as imposing capital requirements and sectoral caps if some sectors are overheated. This has the risk of potentially lowering growth but this risk could be worth taking for longer-term benefits.

there need to be comprehensive reforms of banking regulation and supervision. Banking regulation needs to be more proactive and needs to create incentives for the banks to recognise the losses as early as possible so that NPAs do not keep accumulating on the bank balance sheets.

India throws interesting insights into the reasons behind the occurrence of these crises, their implications and approaches to resolve them.

Growing out of the problem appears to be the most efficient and quickest approach to resolve a banking crisis. However, this approach is feasible only under three conditions (i) the crisis is not too deep (2) the source of the impairment is cyclical macroeconomic factors and (3) the macroeconomic recovery in the aftermath of the crisis is a sharp one. The Indian economy witnessed these conditions in the 2003 to 2008 period that helped resolve the banking crisis of the late 1990s. It is important to note that the extraordinarily sharp economic recovery is an exception rather than a rule, especially after a banking crisis. Indeed, in a bank centric economy like India, it is more reasonable to expect slower than normal recovery after a banking crisis, similar to what is happening at present.

NPAs are a part and parcel of banking activity. However when the NPA problem persists for years without getting recognised or resolved and starts hampering normal bank lending, it takes the shape of an economic crisis and becomes difficult to get out of. In India time and again this problem rears its head and the current crisis has been lingering on for years. Unless NPAs are dealt with quickly and efficiently, profitability and liquidity of banks can get severely affected and resource allocation in the economy becomes inefficient.

RBI as the banking regulator, government as a major stake-holder and the banks themselves must step up to ensure that the current crisis is resolved rapidly and in future, the flow of the credit to the real sector is not disrupted so much so that public finances have to be involved to rescue the banks.