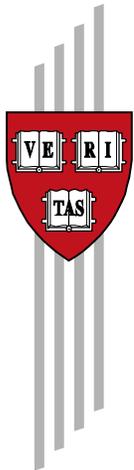


**India's Great Slowdown:
What Happened? What's the Way Out?**

Arvind Subramanian and Josh Felman

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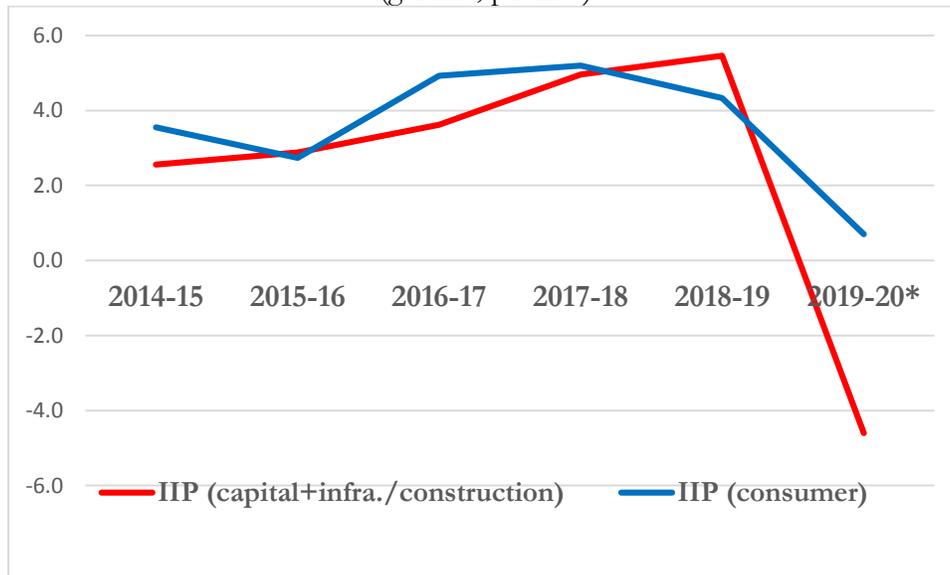
Abstract

We examine the pattern of growth in the 2010s. Standard explanations cannot account for the long slowdown, followed by a sharp collapse. Our explanation stresses both structural and cyclical factors, with finance as the distinctive, common element. In the immediate aftermath of the Global Financial Crisis (GFC), two key drivers of growth decelerated. Export growth slowed sharply as world trade stagnated, while investment fell victim to a homegrown Balance Sheet crisis, which came in two waves. The first wave—the Twin Balance Sheet crisis, encompassing banks and infrastructure companies—arrived when the infrastructure projects started during India’s investment boom of the mid-2000s began to go sour. The economy nonetheless continued to grow, despite temporary, adverse demonetization and GST shocks, propelled first by income gains from the large fall in international oil prices, then by government spending and a non-bank financial company (NBFC)-led credit boom. This credit boom financed unsustainable real estate inventory accumulation, inflating a bubble that finally burst in 2019. Consequently, consumption too has now sputtered, causing growth to collapse. As a result, India is now facing a Four Balance Sheet challenge—the original two sectors, plus NBFCs and real estate companies—and is trapped in an adverse interest-growth dynamic, in which risk aversion is leading to high interest rates, depressing growth, and generating more risk aversion. Standard remedies are unavailable: monetary policy is stymied by a broken transmission mechanism; large fiscal stimulus will only push up already-high interest rates, worsening the growth dynamic. The traditional structural reform agenda—land and labour market measures—are important for the medium run but will not address the current problems. Addressing the Four Balance Sheet problem decisively will be critical to durably reviving growth. Raising agricultural productivity is also high priority. And even before that a Data Big Bang is needed to restore trust and enable better policy design.

I. The Great Slowdown

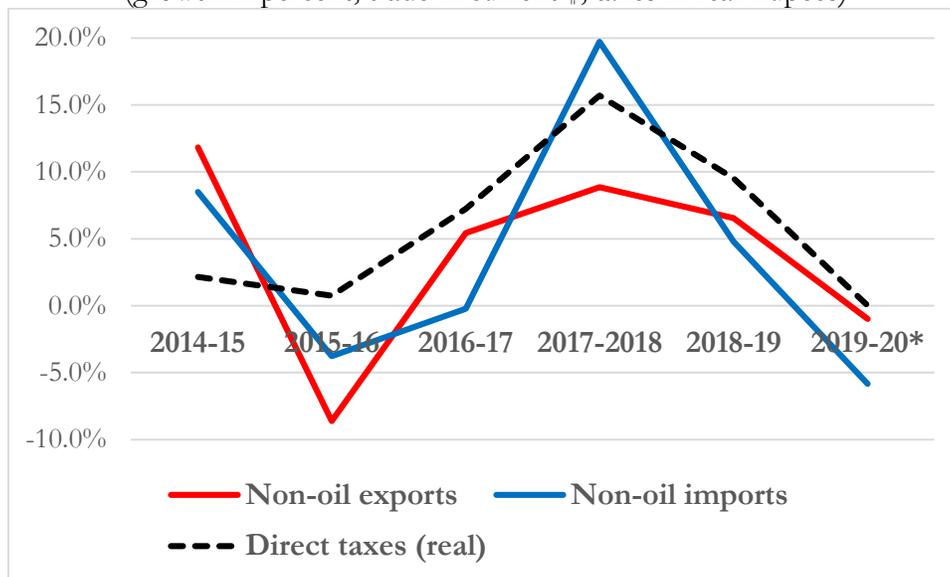
Seemingly suddenly, India's economy has taken ill. The official numbers are worrisome enough, showing that growth slowed in the second quarter of this fiscal year to just 4.5 percent, the worst for a long time. But the disaggregated data are even more distressing. The growth of consumer goods production has virtually ground to a halt; production of investment goods is falling (Figure 1a). Indicators of exports, imports, and government revenues are all close to negative territory (Figure 1b; see also Sandefur and Duggan, 2019).

Figure 1a: Consumption and Investment Indicators
(growth; percent)



Source: MOSPI.

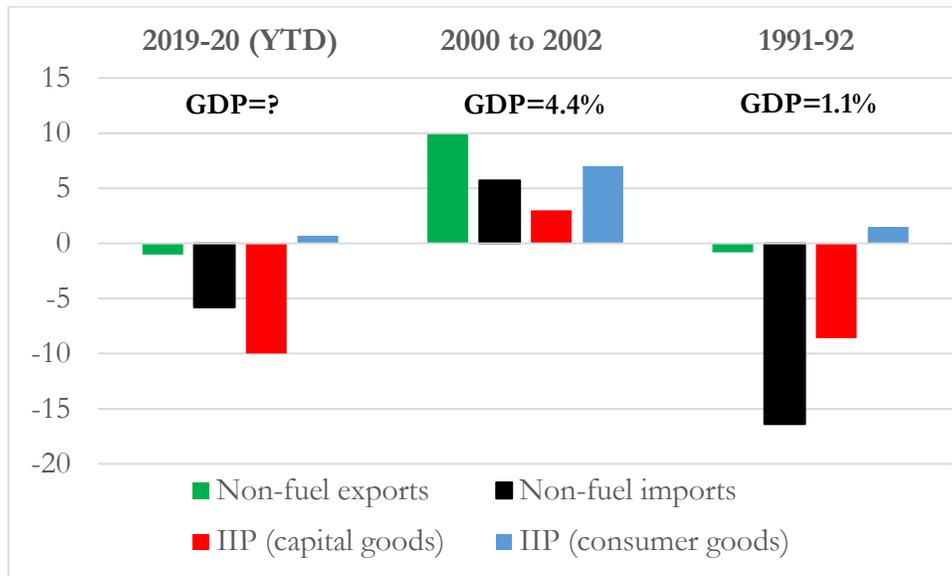
Figure 1b. Trade and Taxes
(growth in percent; trade in current \$; taxes in real Rupees)



Sources: RBI for exports, Ministry of Commerce for imports, and Ministry of Finance for taxes.

These indicators suggest the economy's illness is severe, unusually so. In fact, if one compares the indicators for the first seven months of this year with two previous episodes, the current slowdown seems closer to the 1991 slowdown than the 2000-02 recession (Figure 2a). Electricity generation figures suggest an even grimmer diagnosis: growth is feeble, worse than it was in 1991 or indeed at any other point in the past three decades.¹ Clearly, this is not an ordinary slowdown. It is India's Great Slowdown, where the economy seems headed for the intensive care unit.

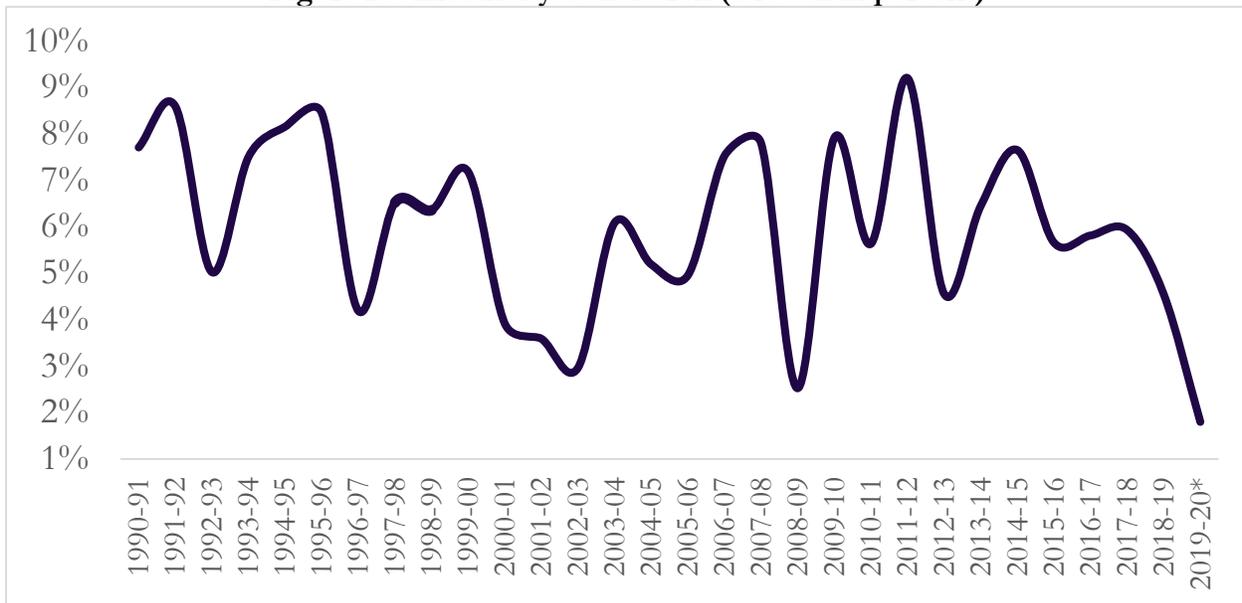
Figure 2a. Present and Previous Slowdowns



Sources: WDI and MOSPI

¹ Latest figures could also partially reflect the impact of regulatory changes requiring discoms to open letters of credit for some power purchases.

Figure 2b. Electricity Generation (Growth in percent)



Sources: *Economic Survey 2016*, Central Electricity Authority. 2019-20 figure is for April-October 2019 compared to the same period in 2018.

The situation is puzzling and frustrating in equal measure. Puzzling because until recently India's economy had seemed in perfect health, growing according to the official numbers at around 7 percent, the fastest rate of any major economy in the world. Nor has the economy been hit by any of the standard triggers of slowdowns, what Harish Damodaran has called the 3 Fs. Food harvests haven't failed. World fuel prices haven't risen. The fisc has not spiraled out of control. So, what has happened—why have things suddenly gone wrong?

Various answers to this question have been proposed; there seem to be as many explanations as analysts. Yet the very number of answers hints at the problem, namely that none of the explanations seems satisfying. Commentators point to various flaws in India's economy, but the economy has always had flaws, and only rarely have they led to predicaments like the current situation.

At the same time, there is frustration. The government and RBI have been trying vigorously to bring the economy back to health. Every few weeks they announce new measures, some of them quite major. Most notably, the government has introduced a large corporate tax cut, perhaps the most sweeping corporate measure ever, in the hopes of reviving investment; and recently it announced a plan to privatize four major public sector undertakings (PSUs). Meanwhile, the RBI cut interest rates by a cumulative 135 basis points during 2019, more than any other central bank in the world over the period and one of the largest rate reductions in India's history, in the hopes of reviving lending. But lending continues to decelerate, and investment remains mired in its slump.

Hence, the current predicament. It is not obvious what more can be done to remedy the downturn, especially because it is still unclear what has caused it. Yet one cannot just accept the current situation; a remedy must be found. Accordingly, this paper attempts to make a contribution. It

offers a different diagnosis of the problem, and provides a prescription, identifying a path that could lead the economy out of the current slowdown.

Our thesis can be summarized briefly. India's economy has been weighed down by both structural and cyclical factors, with finance as the distinctive, unifying element. India is suffering from a Balance Sheet crisis, a crisis that has arrived in two waves.² The first wave—the Twin Balance Sheet crisis, encompassing banks and infrastructure companies—arrived after the Global Financial Crisis (GFC), when the world economy slowed and the infrastructure projects started during India's investment boom of the mid-2000s began to go sour. These problems were not addressed adequately, causing investment and exports, the two engines propelling rapid growth, to sputter.³

But the economy was still able to achieve reasonable growth, on the back of a series of temporary expedients: initially, a large windfall from the precipitous fall in international oil prices; later, an NBFC credit boom accompanied by a large but hidden fiscal stimulus. It is the end of this credit boom beginning late 2018 that has led to the current predicament. All major engines of growth, this time also including consumption, have sputtered, causing growth to collapse.

With growth collapsing, India is now facing a Four Balance Sheet challenge—the original two sectors, plus NBFCs and real estate companies. In this situation, the standard remedies are no longer available. Monetary policy cannot revive the economy because the transmission mechanism is broken. Fiscal policy cannot be used because the financial system would have difficulty absorbing the large bond issues that stimulus would entail. The traditional structural reform agenda—land and labour market measures—will not address the current problems.

Yet something must be done to get India out of its current vicious cycle, in which low growth is further damaging balance sheets, and deteriorating balance sheets are bringing down growth. In fact, there is only one way out, difficult and slow as it may be. The Four Balance Sheet problem must finally be addressed decisively. Until and unless this is done, the economy will not really recover on a sustainable basis. This argument is not new; it has been made before, in the *Economic Survey 2017*. But it is even more true today.

II. Is the Slowdown Structural or Cyclical?

Before we go into detail, it may be useful to explain why other explanations have proved unsatisfactory. Existing explanations fall into two broad camps.⁴ On one side are the structuralists who attribute the problem to structural constraints such as labor and land restrictions and governance (Rajan, 2019; Sharma, 2019) or income inequality (Roy, 2019; Mukherjee 2019). Then there are the cyclicalists, who focus on more recent developments, attributing the slowdown to a slump in aggregate demand, explained by problems in agriculture (Kotwal and Sen, 2019; Damodaran, 2019; Ghosh 2019; Dev and Goyal, 2019); demonetization and GST (Banerjee, 2019;

² The deceleration in export growth and its impact on growth are important but they are not the focus of this paper in part because India's export performance has, contrary to popular perception, not been bad. In fact, it has been much better than average global performance (Chatterjee and Subramanian, forthcoming).

³ Throughout this paper, we are going to use 2011/12 as the cut-off separating the pre-and post-GFC periods. We do so because after the events of 2008 there was a sharp recovery in India (and around the world) in the next two years. The year 2011 is when the long run trends start becoming clear, uncontaminated by the GFC and its aftermath.

⁴ Mehra (2019) focusses on the (lack of) impact of growth, rather than the reasons for the slowdown.

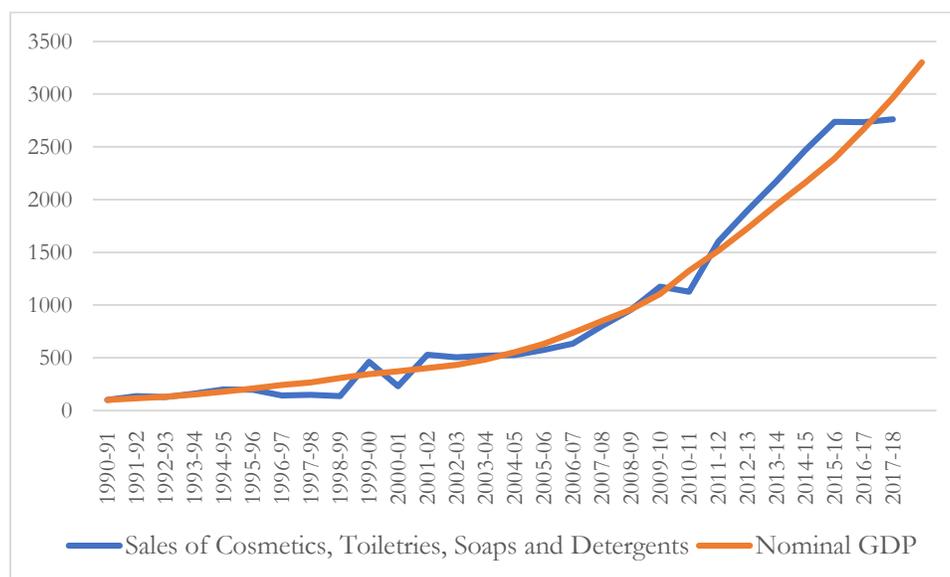
S.Subramaniam, 2019); monetary tightness (Balakrishnan, 2019); or policy and political uncertainty (Singh 2019; Basu 2019).

Start with the structuralist argument. The problem with this explanation is precisely that it focuses on the long-standing structure of the Indian economy, on features such as labour laws which haven't really changed in recent decades. So the theory can't explain why the economy has suddenly decelerated in the past year. Nor for that matter can it explain why the economy boomed in the mid-2000s. After all, if the constraints were not really binding then, it's difficult to understand why they have suddenly become binding now.

Roy's (2019) income inequality hypothesis is that ever since 1991 the economy has been carried along by a consumption boom, as the beneficiaries of reform have spent their new-found earnings on accumulating goods and obtaining services. This growth mechanism has always been precarious, however, because the beneficiaries have been but a small group. And now the inevitable has happened: the top earners have become sated, and the boom has come to an end.

This theory has some attractions, especially as income inequalities do seem to have increased in the post-1991 era. But the theory runs up against the evidence. To begin with, since 1991, the medium-term drivers of India's growth have been exports and investment. Insofar as consumption has any role in driving rather than following growth, we have no serious evidence that it has been propelled solely by the top decile. To the contrary, liberalisation has lifted large segments of the population above subsistence levels, allowing them to consume marketed products, such as cosmetics and toiletries, resulting in a long boom in sales of fast-moving consumption goods (Figure 3).⁵

Figure 3: FMCG sales and Nominal GDP (Index, 1990-91 = 100)



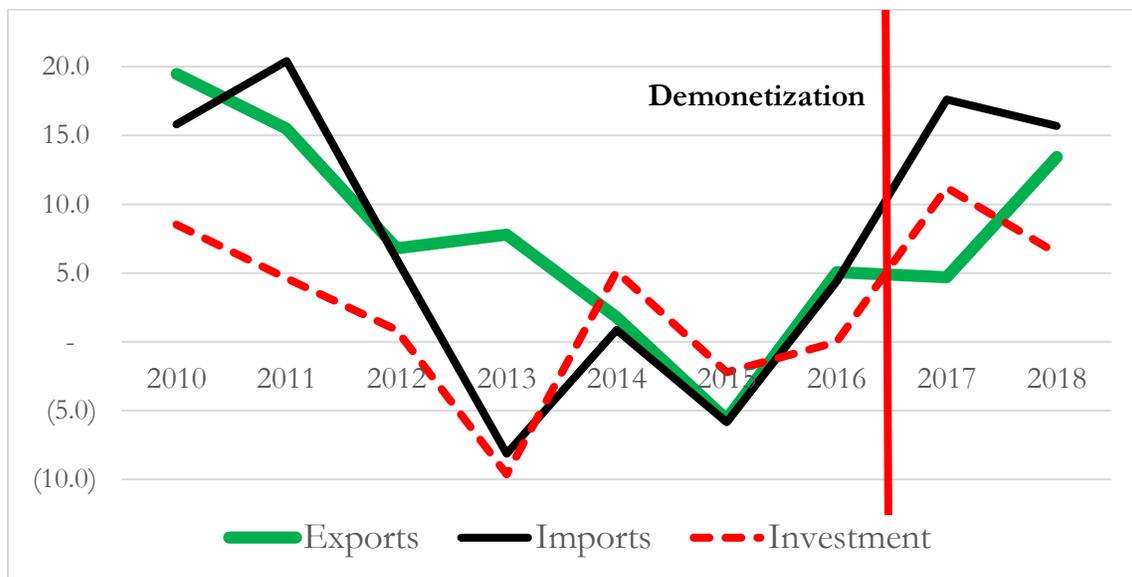
Sources: CSO and CMIE.

⁵ One can see the impact of demonetization in Figure 3, as sales of fast-moving consumer goods faltered in 2016-17 and 2017-18.

So, consider now the cyclicalists. At one level, they are right to say that aggregate demand has fallen. But this is merely definitional, for if supply (production) has decelerated then demand must also have slowed, since the two are always equal, at least in the *ex post* numbers. So, pointing to “demand” doesn’t really resolve the puzzle; the real question is *why* demand has suddenly decelerated.

The answers put forward are not truly satisfactory: GST and demonetization, for example, surely depressed growth at the time the measures were introduced and might also have had some more durable adverse effects on the rural, informal economy, but by 2017-18 the economy was rebounding strongly (Figure 4). So something else must have triggered the downturn now, two years later. Similarly, the problems in agriculture long predate the current slump. And while there may be merit in the argument that policy uncertainty might be dampening economic activity, its link to aggregate demand is tenuous and difficult to establish. Finally, while some have argued that the reduction in the centre’s budget deficits has been depressing demand, as will be explained below the reality is the opposite, as government spending and true deficits have actually been growing rapidly.

Figure 4. Cyclical Indicators (growth rates)



Source: CSO, National Income Accounts

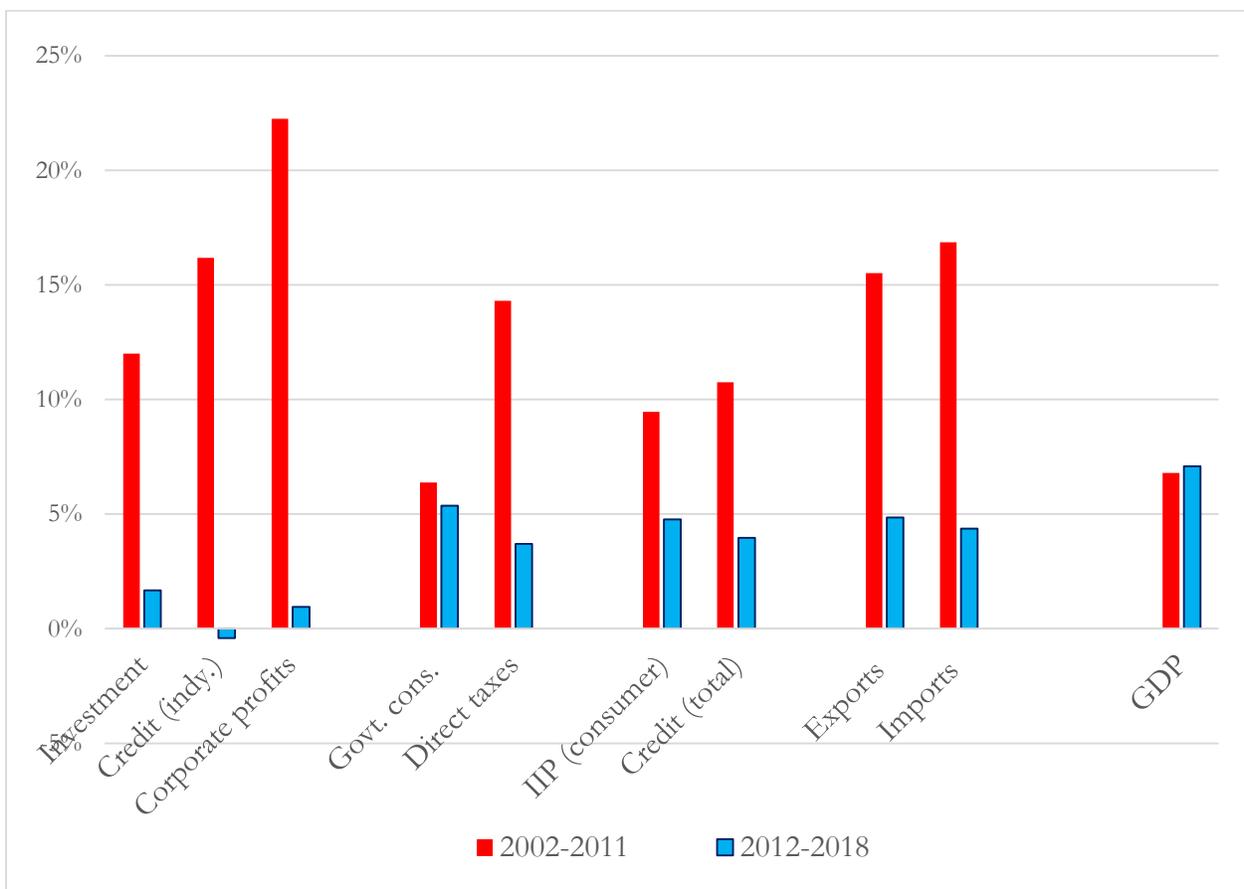
There is an even bigger problem with the cyclicalists: they focus exclusively on the latest developments. As a result, they miss the broader picture, namely that key components of demand have been weakening for nearly a decade. What we are now witnessing is merely the exhaustion of the final engine of growth, namely consumption, with the others having been anemic for nearly a decade.

III. Structural Problems Develop in the Growth Engines

India has never really recovered from the GFC. Figure 5 illustrates the problem, showing the growth in all the major demand indicators or their correlates in the pre- and post-crisis periods. During the 2002-11 period Indian growth boomed, propelled by investment and exports, which also boosted consumption and imports. Since then, all the indicators have dropped – most by double digits. The annual average growth of investment collapsed by 10 percentage points; credit to industry and profits by even more. Real exports and imports have fallen by more than 12 percentage points.

What explains these developments? Why did India first enjoy a boom and then experience a bust? Three broad factors have been at work: cyclical, global, and structural. Initially, all three helped buoy the economy. But more recently they have been dragging it down.

Figure 5. Collapse in the Engines of Growth, post-GFC⁶



Source: Subramanian, 2019

In the early 2000s:

- India's economy began to stir, following a recession at the turn of the decade.

⁶ A notational clarification: a year, say 2002, refers to the period April 2002-March 2003 which would be fiscal year 2003 (or FY2003).

- Simultaneously, there was a major global upswing, with the world economy expanding at its fastest pace in forty years.
- As this occurred, firms and consumers became convinced that India's time had come, that the long-awaited payoff from the post-1991 reforms had arrived, and the country was bound to be the next China, growing at 10 percent per annum for the next several decades.

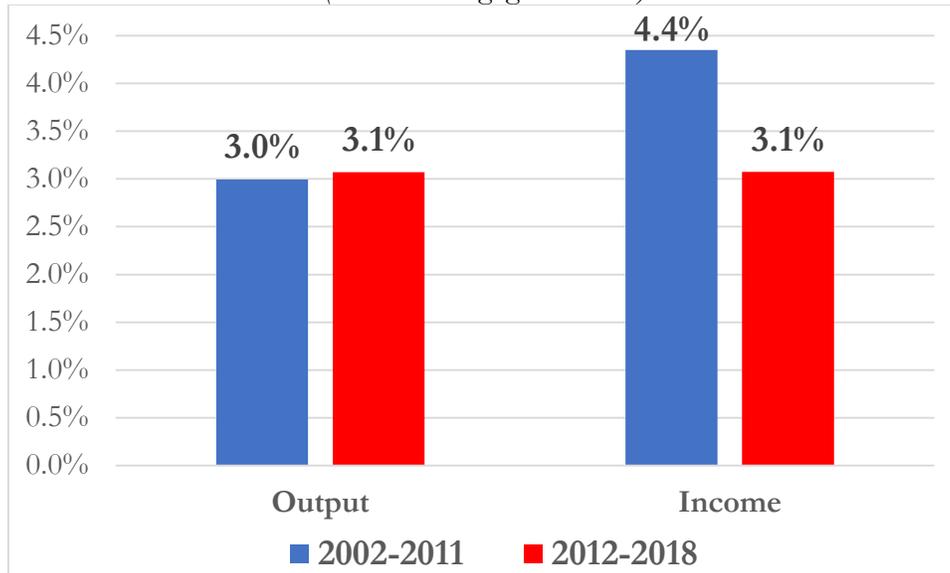
This combination proved a powerful tonic. As global demand surged, India's exports boomed, growing at their fastest rates since independence. And as confidence in the future increased, investment – particularly in infrastructure – soared, climbing by 11 percentage points of GDP within 4 years, reaching an unprecedented 38 percent of GDP. Accompanying this investment boom was an extraordinary expansion of credit: within three years nonfood credit doubled, while in 2007/08 alone capital inflows exceeded 9 percent of GDP.

For a time, GDP growth almost reached 10 percent, at least according to the then-prevailing figures. But just a few years later, the boom collapsed, as the global and structural factors that underpinned it fell away.

- In 2008 came the Global Financial Crisis. The world economy slowed down and global trade growth slowed nearly to a halt, never really to recover. As a result, India's export growth collapsed to just 5 percent, compared to more than 15 percent before the crisis.⁷
- At the same time—and much less well-known—global commodity prices collapsed, undermining farm incomes. Figure 6 shows that real agricultural income growth fell by 1.3 percentage points in the period 2012-2018 compared to 2002-2011, even as output growth remained broadly unchanged.

⁷ Post-GFC, Indian manufacturing exports continued to gain market share in world markets. Indeed, India's exports outperformed those of nearly all countries, barring a few such as Vietnam and Bangladesh. But these gains were overwhelmed by the collapse of world trade. (Chatterjee and Subramanian, forthcoming)

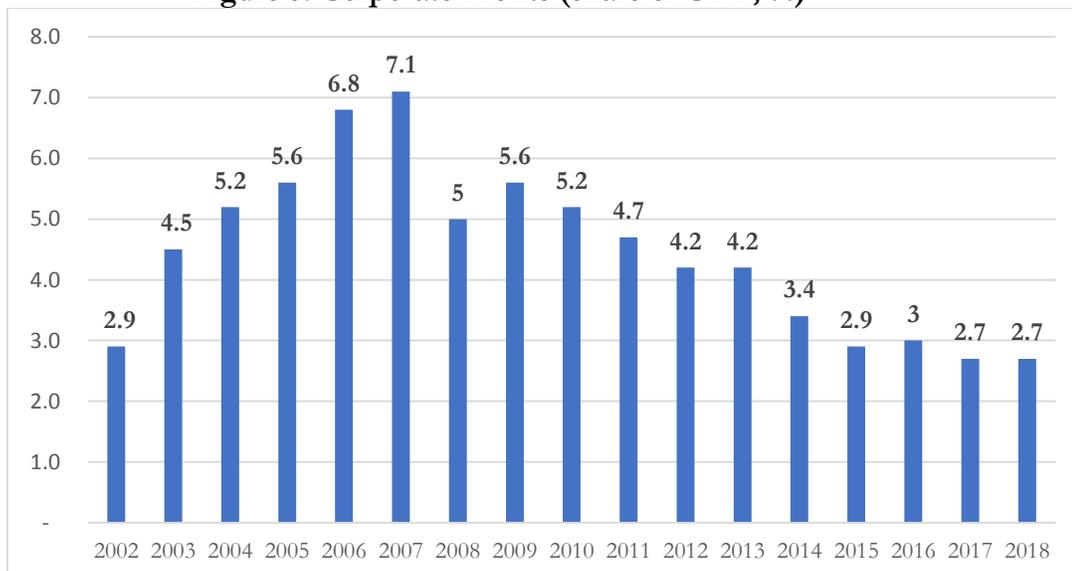
Figure 6. Real Agricultural Output and Income
(Annual average growth in %)



Source: WDI. Income is measured as nominal agricultural value-added deflated by the consumer price index for agricultural labor.

- Meanwhile, domestic investment projects began to go sour. After the GFC, growth was much slower, interest rates much higher, and the exchange rate much more depreciated (Rs 60/dollar and later around Rs 70/dollar, compared to around Rs 40/dollar when much of the external borrowing had taken place), all of which wreaked havoc with firms' financial projections. Profits consequently collapsed, making it difficult for many companies to service the debts they had contracted during the boom (Figure 7).

Figure 7. Corporate Profits (share of GDP; %)



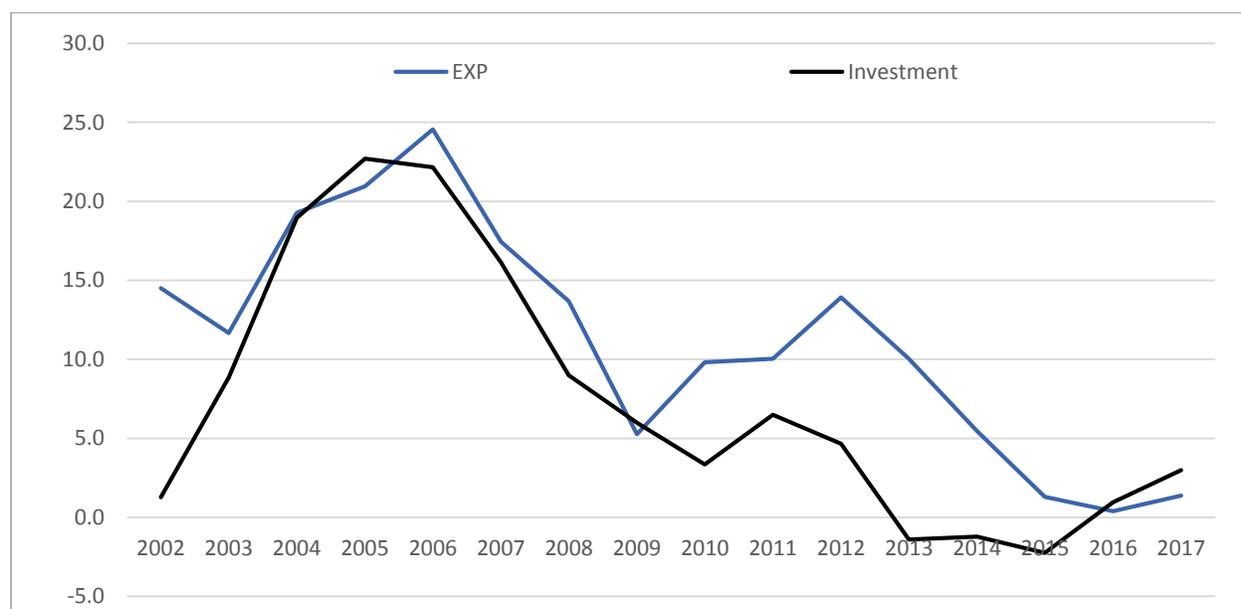
Source: CMIE PROWESS.

Within short order, stressed firms, meaning those which weren't earning enough to service the interest on their debts, accounted for 40 percent of corporate debt. And as corporate debt service problems mounted, nonperforming assets in the banking sector soared, reaching double-digit levels. As a result, India was saddled with a serious structural problem, a Twin Balance Sheet (TBS) crisis. Many corporates were no longer in a financial position to undertake new investments, and those that were still in good shape found it difficult to obtain loans from banks, as the latter were financially impaired.

As a result of these global and structural problems, two of the engines of India's growth shut down. Investment growth decelerated sharply beginning in 2010, while (after a brief post-GFC recovery) exports slowed starting around 2012 (Figure 8).

As investment and real export growth collapsed, real imports of goods and services cratered: the growth rate declined by no less than 13 percentage points, from over 16 percent a year to 3 percent in the post-2011 period.

Figure 8. Growth of Real Exports and Investment (%)



Source: WDI

In sum, global and structural factors have severely weakened the Indian economy since the GFC. But this explanation merely raises more questions. Perhaps the most obvious one is this: isn't this now ancient history? Hasn't the TBS problem already been addressed by recapitalizing the banks and introducing the Insolvency and Bankruptcy Code (IBC)? The short answer is no, not by a long shot.

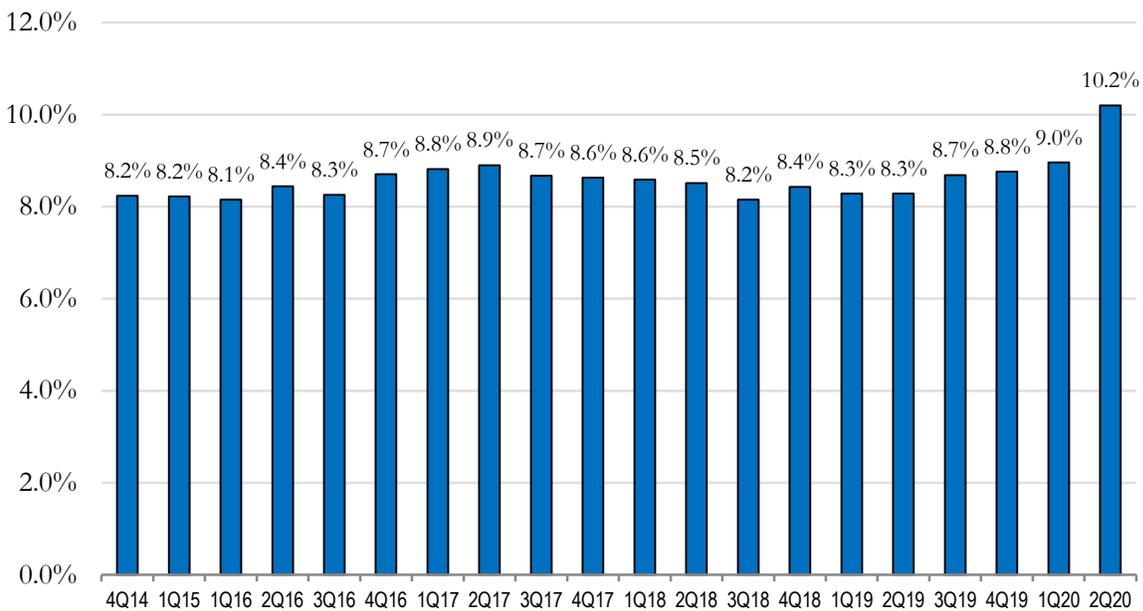
IV. Root Cause of the Great Slowdown: Unresolved TBS Stress

Without doubt, *some* progress in resolving the TBS problem has been made over the past decade. Start on the bank side of the problem. The government has injected large amounts of capital into the public sector banks—Rs 2.8 lakh crore in the past five years alone, not including the Rs 70,000

crores budgeted for the current fiscal year. As a result, common equity tier 1 (CET 1) ratios of public sector banks have increased to 10 percent, after years of hovering just above the regulatory minimum of 8 percent (Figure 9).

At the same time, capital injections have enabled banks since 2014 to write off Rs 7.2 lakh crore of their nonperforming exposures, thereby reducing their nonperforming asset (NPA) ratios by about 2 percentage points, compared to a peak of 11½ percent of bank assets in 2017-18 (Figure 10).⁸

Figure 9. Public Sector Banks' Capital Ratios (Common Equity Tier 1; %)

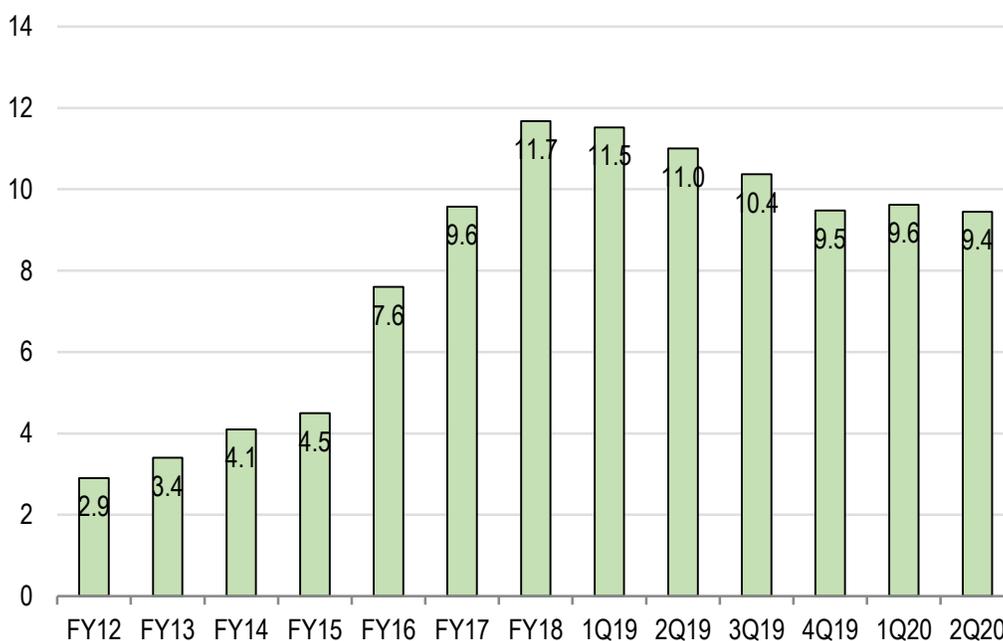


Source: Credit Suisse

Despite these accomplishments, the bulk of the TBS-1 problem remains to be resolved. To begin with, NPAs still amount to Rs 9.2 lakh crores, equivalent to 9½ percent of bank assets, the highest ratio of any major economy in the world, by far. At the public sector banks, where the main part of the problem resides, the NPA ratio is even higher, at 12 percent. And these NPA figures actually understate the problem, as another Rs 2½ lakh crores in debts (mainly in the power sector) are being negotiated as inter-creditor agreements, which is really a euphemism for stressed assets. In contrast, in the United States, which during the GFC suffered a much larger banking crisis, its largest since the Great Depression, the NPA ratio is now less than 1 percent.

⁸ Note that the act of writing off loans reduces the stock of outstanding credit. And as public sector banks have also been cautious in extending new loans to industry, the growth in public sector bank credit has decelerated in recent years.

Figure 10. Gross Non-Performing Assets (in percent of bank assets)



Source: Credit Suisse

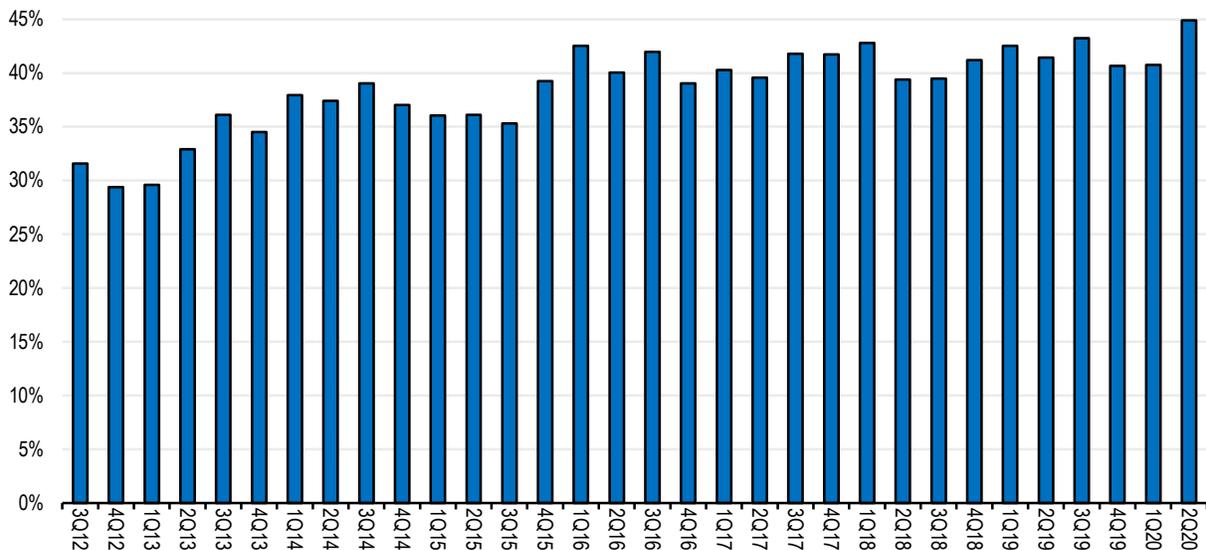
Meanwhile, a large part of the corporate sector remains under stress. For most of the past decade, the share of corporate debt owed by companies unable to service their interest obligations has remained around 40 percent. And as the economy has slowed, the interest coverage ratio has risen even further, to 45 percent in the second quarter of this fiscal year (Figure 11).

Why has progress in resolving the bad loan problem been so slow? Initially, various restructuring schemes were proposed by the RBI, but they did not work. Then the Insolvency and Bankruptcy Code (IBC) was introduced in December 2016, enshrining in law the twin principles that resolution should be prompt and based on commercial criteria.

But these principles have not been respected. In particular, the IBC has proved much slower than envisaged: whereas the law specified that cases should be resolved within 270 days, completed cases have actually taken an average of 409 days so far.⁹ And progress is even slower in the larger cases, which account for the bulk of the bad loan amounts. More than two years after the RBI referred 12 large debtors to the IBC only half of these cases have been resolved, mostly in the steel sector (Table 1).

⁹ In August 2019, the law was amended to allow cases to take 330 days, but this has been stayed by the Supreme Court.

Figure 11. Share of Debt Owed By Companies with Interest Cover Ratio Less Than 1



Source: Credit Suisse. Share of corporate debt. Interest cover based on aggregate earnings before interest and taxes (EBIT).

Consider the big picture. Only Rs 2 lakh crore has been resolved through the IBC so far (with recoveries of just Rs 83,000 crore), a small fraction of the initial stock of NPAs. At this rate, it will take a very, very long time to solve the bad debt problem. And the current rate of resolution actually overstates the prospects, since most of the bankruptcies processed by the IBC so far have been relatively straightforward cases, such as steel producers caught out by downturns in global steel prices. (Consider Table 1 again.) More complex cases, especially those of the independent power producers, which account for a large portion of stressed assets, are still far away from any resolution.

In the meantime, the stressed enterprises will remain stuck in a neverland where their old promoters have been removed but no new owners have assumed responsibility, where their debts are increasing even as their capacity to pay is diminishing, where their value as firms is deteriorating by the day, at ever increasing cost to the banks that lent to them and the taxpayers who must ultimately foot the bill.

Table 1. Status of First Batch of Large IBC Resolutions

The RBI 12				
(In crore rupees)				
Firm	Debt	Amount	Recovery	Acquirer/Status
	Admitted	Realised	Rate	
Completed				
Electrosteel	13,958	5,320	38	Vedanta
Bhushan Steel	57,505	35,571	62	Tata
Monnet Ispat	11,478	2,892	25	JSW
Jyoti Structures	8,179	3,691	45	HNIs
Alok Industries	30,200	5,052	17	RIL and others
Essar	54,550	42,000	77	Arcelor Mittal
Sum	175,870	94,526	54	
In process				
Bhushan Power and Steel	47,887			In NCLAT/contested by ED
Amtek Auto	12,819			Failed resolution
Era Infra	15,050			Under CIRP
JP Infra	24,131			Under CIRP
Lanco Infra	53,158			Marked for liquidation
ABG Shipyard	19,316			Marked for liquidation
Total	348,231			

Sources: IBBI for debt admitted; news reports. Note that Alok Industries and Essar Steel had still not been finalized as of December 9, 2019.

Worse, this “virus” cannot be contained to a few sectors and banks. It naturally spreads, for stressed companies slow their payments to other companies, cut back their operations and investments, and lay off workers. As further discussed below, the stress has now spread far beyond the “legacy problems” of the banks and infrastructure firms, encompassing in particular non-bank financial companies (NBFCs) on the financing side, and companies in the real estate sectors on the corporate side.

In short, the TBS problem has not gone away. If anything, we no longer have a Twin Balance Sheet problem; we have a Four Balance Sheet (FBS) challenge.

But if this is the case, then more questions arise. If the TBS crisis (the structural factor), weak exports and a weak agricultural sector (arising from global factors) have undermined the economy for the past decade, why was there reasonable growth over this time period? And what accounts for

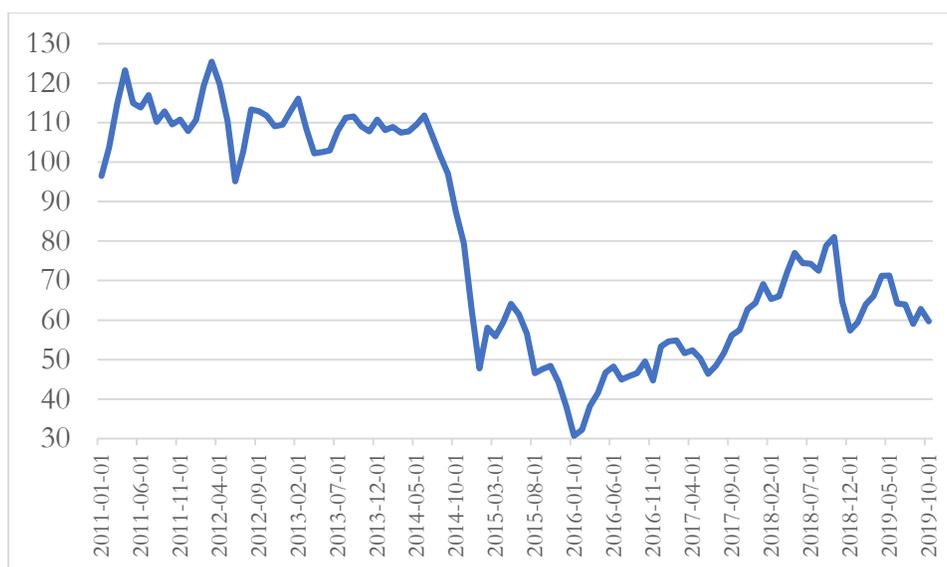
the renewed deterioration over the past year? The answer lies in the third factor: domestic cyclical developments.

V. What has kept the economy going?

Some of the domestic developments have clearly been negative, especially demonetization and GST, which dragged growth down by still-unknown extents over still-to-be-defined periods. But in aggregate, and over the longer period, these negative shocks have been offset by stimulus from a variety of sources.

In the beginning came the international oil price decline. After the GFC, and especially beginning mid-2014, international oil prices collapsed; by 2016, they had fallen to one-third their earlier levels, providing the economy with a large windfall, which boosted growth by about 1 to 1½ percentage points during 2015-17.

Figure 12. Crude Oil Prices (Brent, \$ per barrel)



Source: U.S. Energy Information Administration.

Then, starting in 2017-18, the economy was propped up by three cyclical factors: exports, hidden fiscal stimulus and unexpected credit stimulus.

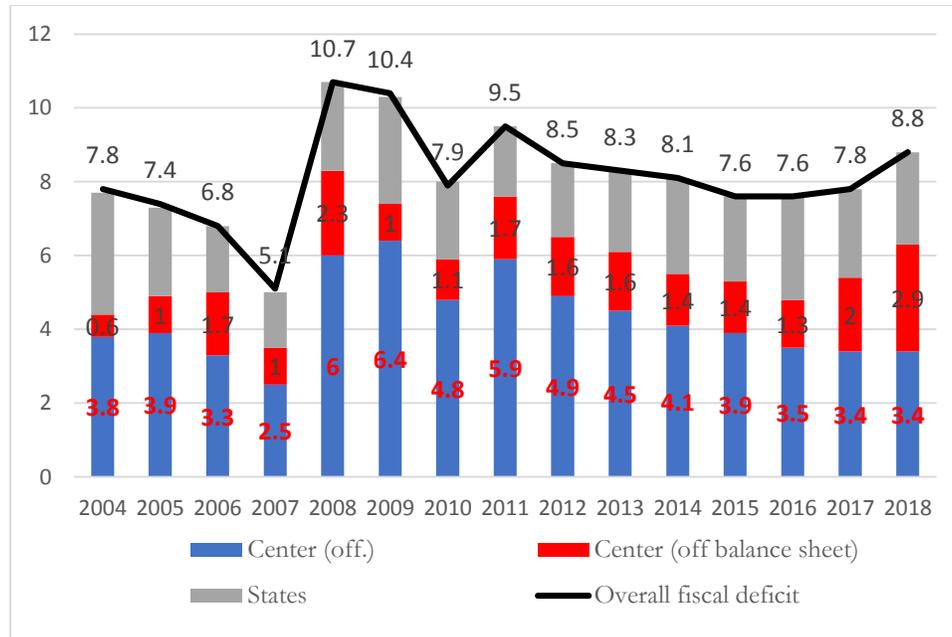
First, 2017 and 2018 saw an uptick in world demand and a real depreciation of the rupee, amounting to about 13 percent in real effective terms by late 2018. As a result, non-oil export growth rose from -8.6 percent in 2015-16 to 8.9 percent in 2017-18.

Second, there has been a conventional if hidden fiscal stimulus. How is this possible when headline numbers show that the fiscal deficit has been reduced? The answer lies in accounting conventions. Since 2016-17, a larger share of spending annum has been shifted off-budget, mainly to the Food Corporation of India (FCI) and various public sector units, such as the National Highways Authority

of India (NHAI). Taking this spending into account, fiscal deficits, both at the centre and consolidated with the states, have actually been increasing.

One careful estimate by Motilal Oswal suggests that the combination of these factors has meant a steady increase in the overall consolidated fiscal deficit from 2016-17 onwards by as much as 1.2 percentage points of GDP to 8.8 percent of GDP, higher than at any time since the GFC (Figure 13).

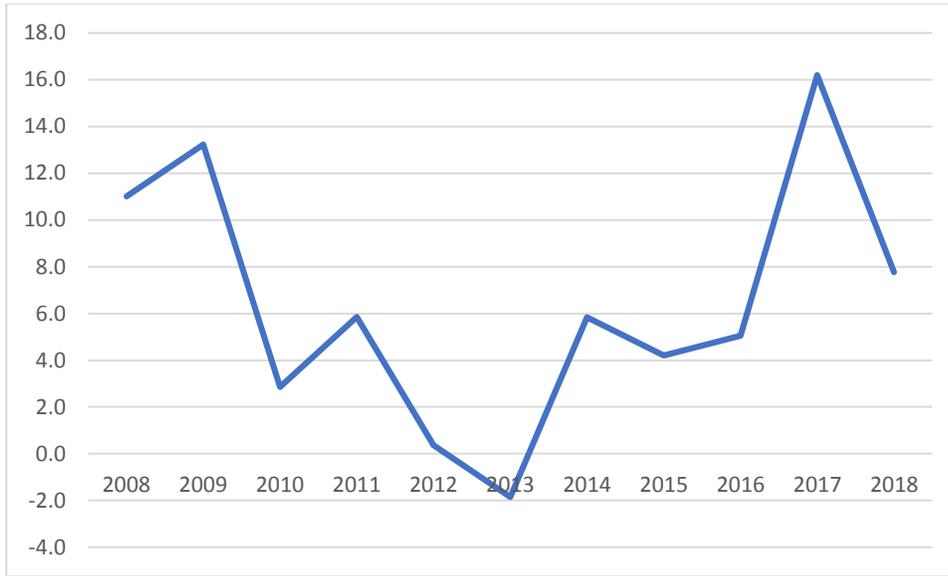
Figure 13. Official and Adjusted Fiscal Deficits (% of GDP)



Source: Motilal Oswal

The fiscal stimulus is clearly visible in the national income accounts. Figure 14 below plots growth in real government consumption expenditure. Beginning in 2016-17 but especially in the last two years, spending growth reached levels exceeding even those in the immediate post-GFC years.

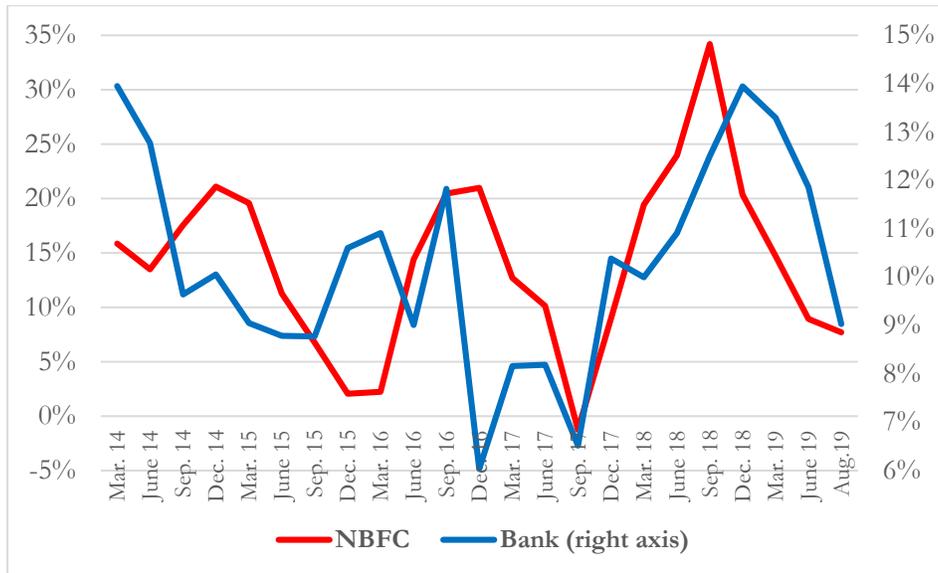
Figure 14. Government Consumption (growth; %)



Source: WDI

The third stimulus was the NBFC lending boom. After demonetization, considerable amounts of cash made their way to banks and mutual funds, which in turn on-lent a considerable portion to NBFCs. And as the economy started to recover after the demonetization and GST shocks, much of these funds were lent out. In Figure 15, we see the impact: starting in December 2017 credit accelerates, led by lending of the NBFCs.

Figure 15. Bank and NBFC Credit Growth (%)



Source: RBI

Summing up the story so far, the structural underpinnings of India's growth were damaged after the GFC, but the economy was buoyed by cyclical factors, most notably the large fiscal-cum-credit stimulus in 2017 and 2018. The effects of the stimulus are clear in Figures 1a and 1b above: consumption growth (as measured by IIP consumer goods) perks up after 2016-17, and imports surge in 2017-18.

VI. Why Slowdown Now? The Bursting of India's Housing "Bubble"

We are finally in a position to explain the current slowdown. Almost by definition, stimulus provides only a temporary boost to the economy, and so it has proved in this case. The trigger for the slowdown was the collapse of ILFS in September 2018. This was a seismic event. One reason was obvious: ILFS was a behemoth, with Rs 90,000 crores of debt, so its failure sent shockwaves throughout the financial system. But there was also a deeper reason: the failure was completely unexpected, prompting markets to wake up and re-assess the entire NBFC sector.

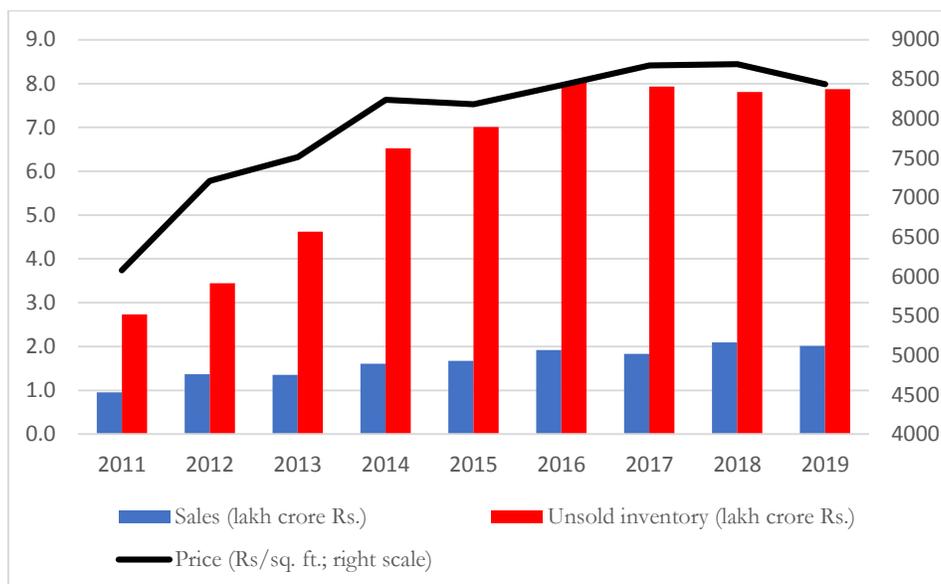
What the markets discovered was profoundly disturbing. Much of the NBFC lending had been channeled to one particular sector, real estate. And that sector itself was in a precarious situation.

The essence of the problem was simple. Starting in the mid-2000s, developers have been very aggressive in launching new housing projects, on the assumption that high earners and the emerging middle class want to live in better homes and deploy their newfound wealth in real estate. But after the GFC demand tapered off. Most of the public attention has naturally been focused on the projects that remain unfinished, as these have the most profound social consequences, especially for those who have prepaid for flats that have not been delivered. But perhaps the bigger problem for the economy is the large inventory of unsold houses. In terms of the number of units, unsold inventory in the top 8 cities has risen to nearly 10 lakhs at end-June 2019, compared to annual sales of just over 2 lakh units. Translated into rupees, unsold inventory amounts to Rs 8 lakh crores, equivalent to around 4 years' worth of sales (Figure 16).¹⁰

This inventory (and the completion of new projects) needed to be financed. Historically the bulk of formal sector real estate funding was provided by banks, but in recent years most of the incremental lending has come from NBFCs, so much so that by 2018-19, NBFCs accounted for about half of the Rs 5 lakh crore in real estate loans outstanding. This funding was provided on the assumption that developers would be able to complete their projects, sell off their inventories, and then repay (Figure 17).

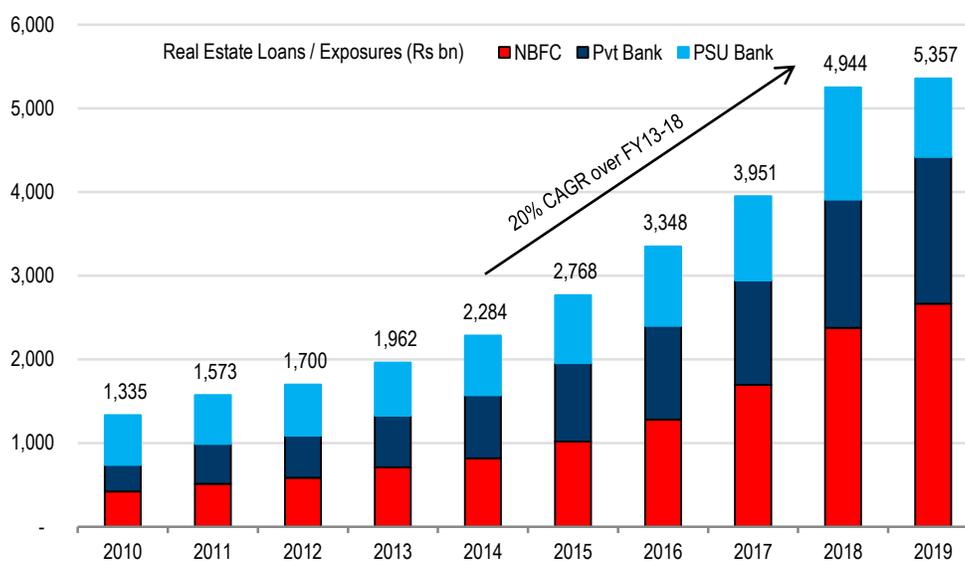
¹⁰ A rough estimate is that unsold inventory for a wider set of 35 cities is about Rs 13 lakh crores.

Figure 16. Unsold Inventory, Sales (in lakh crores) and Prices (Rs/sq. ft) in Top 8 Cities



Source: *Liases Fortas.*

Figure 17. Real Estate Loan Exposures

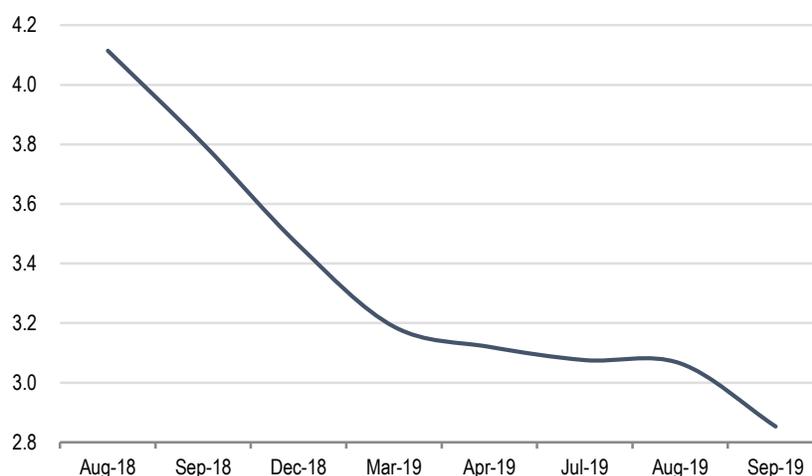


Source: *Credit Suisse (calendar years)*

But as time went on, this premise seemed increasingly doubtful. Prospects that the economy would boom again receded into the distance, making it clear that demand for flats would remain sluggish for some time. And while developers could in principle tempt buyers into the market by reducing prices, they couldn't do this in practice because lower prices would have destroyed the (notional) value of the collateral that they had pledged in order to secure their lending.

As this impasse became apparent, mutual funds began to worry that the NBFCs would not be repaid – and they ran, cutting their exposure by one-third over the past year (Figure 18).

Figure 18. Mutual Fund Exposure to Real Estate Sector (Rs. lakh crores)



Source: Credit Suisse

Banks then stepped into the breach, lending funds directly to the better-run nonbanks and indirectly to the others, by buying some of their better assets. Even so, most NBFCs were caught in a funding squeeze, forcing them to scale back their credit to the real economy. Loans to small businesses and consumers for durable goods (such as cars) were particularly affected, causing these sectors to slow.

In some ways, this may have been India’s version of the US housing bubble, which led to the GFC. Unlike in the US, Indian housing prices did not reach frothy levels, nor did they ultimately collapse. Instead, the problem played out in terms of quantities: after the surge in supply outpaced demand, there was a rapid increase in financing, a sort of Ponzi scheme aiming to prop up the unsustainable lending. It was this bubble that burst in 2019.

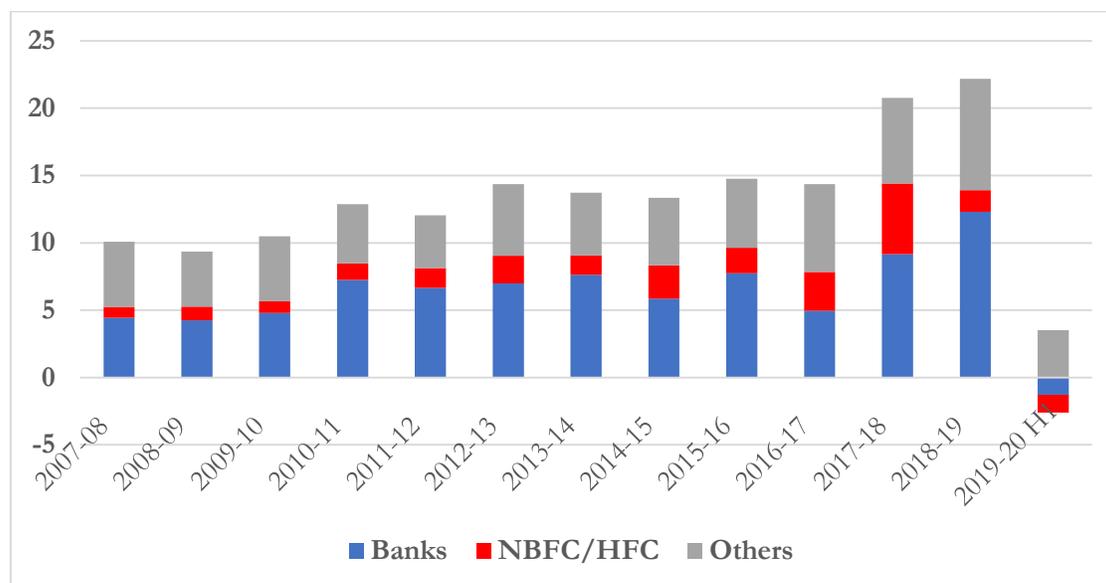
TBS-2 Arrives

As this occurred, stress on banks began to rise. They were already vulnerable from the unresolved bad loans—call them TBS-1. And now there was a prospect of a second wave of problems—call them TBS-2, coming from the crystalizing problems such as real estate, ILFS, and the difficulties in NBFCs. The last problem was significant: at some state banks, lending to NBFCs (excluding the indirect lending) amounts to 10-14 percent of their loan books

As shown above, the recapitalization of the state banks has given them a buffer against future losses. But with a new wave of stress arriving from TBS-2, on top of the unresolved stress from TBS-1, banks have worried that the buffer will be far from adequate. Accordingly, they have taken defensive actions. Like their NBFC counterparts, they have scaled back their lending, causing overall credit expansion to slow to just 7 percent compared with 11 percent as recently as the second quarter of 2018-19. The brutal crunch in the flow of commercial credit is clear in Figure 19 below: from a

peak of more than Rs 20 lakh crores in 2018-19, it collapsed to virtually nothing in the next six months.¹¹ It is no wonder that economic activity has consequentially collapsed.

Figure 19. Flow of Commercial Credit (Lakh crore rupees)



Source: RBI

The Interest-Growth Pincer

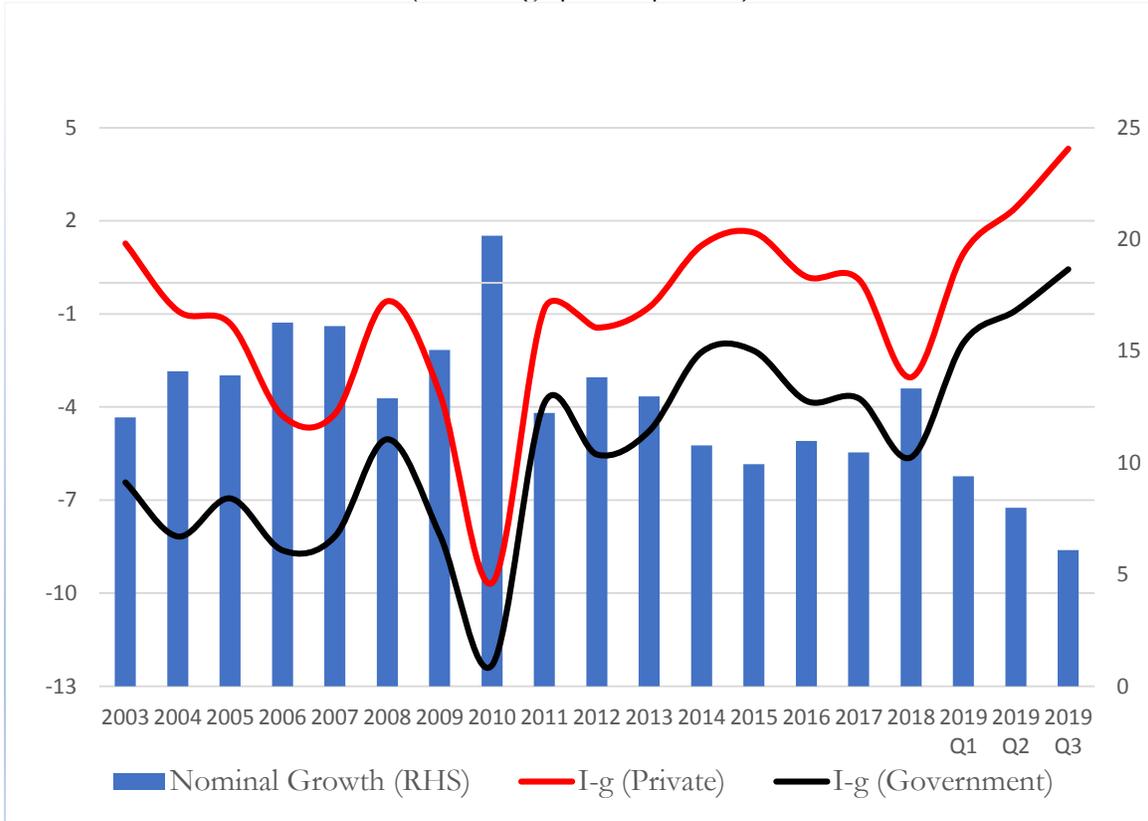
This situation has pushed the economy into a downward spiral. High rates and little credit are causing the economy to slow, which is then intensifying the stress on the corporate sector and thereby on the financial system itself, which then prompts the financial sector to become even more cautious.

Perhaps the best indicator of the stress is the difference between lending rates and the nominal growth of the economy, summarized as (i-g). In normal times, revenues and profits of the average corporate will grow at the nominal rate of growth of the economy. If this growth rate exceeds the rate of interest on corporate debt, as normally does, then corporates will find it easier to service their debt. But if (i-g) is rising, then debt stress is growing (see also Bhandari (2019) for a discussion of the economy's general over-indebtedness).

Right now, this indicator is flashing red. Consider Figure 20 below. In the second quarter of 2019-20, the weighted average lending rate was 10.4 percent, well above the nominal GDP growth rate of 6.1 percent. As a result, the (i-g) differential reached 4.3 percent, an exceptionally high level. Even the government's cost of borrowing is above nominal GDP growth, at a time when it is running a large primary deficit, larger than the official numbers show. As a result, the debt situation of both the private sector and the government is bound to deteriorate further.

¹¹ There is clearly a credit crunch. After all, if the collapse in credit growth merely reflects weak demand, arising from the weak economy, then interest rates should be falling sharply. But they are not. To the contrary, as shown below, rates remain extraordinarily high in real terms.

Figure 20. Interest-Growth Rate Differential for Private Sector and Government
(Percentage points; percent)



Source: RBI

One can summarise the dilemma simply. For the past decade, there has been a race between stimulus and stress. Repeated doses of stimulus have kept the economy afloat, buying time for the Twin Balance Sheet crisis to be addressed. But the bulk of the legacy TBS problem has not been addressed, a second wave of problems has arrived—and now the stimulus has run out. The economy is consequently trapped in a vicious circle, as stress in the corporate and financial sectors are feeding on each other, driving the economy downwards. At this stage, all major constituents of demand—investment and exports, weak since the GFC; and consumption, now no longer propped up by credit—are in reverse gear, leading to a collapse of growth. It is this cycle that must be checked.

VII. Remedies

What is the way out? As with the diagnosis, most prescriptions fall into two camps. Those who see the slowdown as cyclical propose macro-economic stimulus of various kinds, while those who see it as structural propose various structural reforms. But this dichotomy is not really appropriate, because as we have seen the slowdown is *both* cyclical and structural: as cyclical supports to growth have fallen away, they have exposed severe problems sharp in the structural Balance Sheet foundation. It is this combination that has made the slowdown so sharp and severe.

It has also what has made the Great Slowdown so difficult to deal with. In the current situation, some of the standard remedies for ordinary cyclical recessions are ineffective; others are counter-productive. Accordingly, proposed remedies can be divided into two broad categories: those that cannot or should not be done; and those that must be done. In other words, there is a negative list and a positive list. Start with the former.¹²

A. Negative list

The standard tools to revive an economy in the short run are monetary and fiscal policy. But these policies will not work in the current circumstances.

Monetary policy

On monetary policy, the current debate revolves around whether the RBI has scope to lower interest rates further, with some arguing that the central bank needs to give the sluggish economy more help, while others worry more about the recent revival in inflation. This debate is misguided: both views are wrong. The problem is the transmission mechanism is broken, and as long as repo rate cuts are not translated into lending rate reductions, policy easing will neither provide support to the economy nor give much boost to inflation. It will remain ineffective (See also Chinoy, 2019).

Normally, competition ensures that changes in the RBI repo rate are translated into market-determined rates. In essence, the repo rate—the interest rate at which banks borrow from the RBI—determines the minimum cost of funds for banks. When this rate falls, deposit rates tend to follow, as there is little need to pay for high-cost deposits when funds are available for less at the central bank. And when deposit rates fall, competition then brings down rates on all types of credit, such as loans, government securities, corporate bonds. This is the theory, and typically the practice.

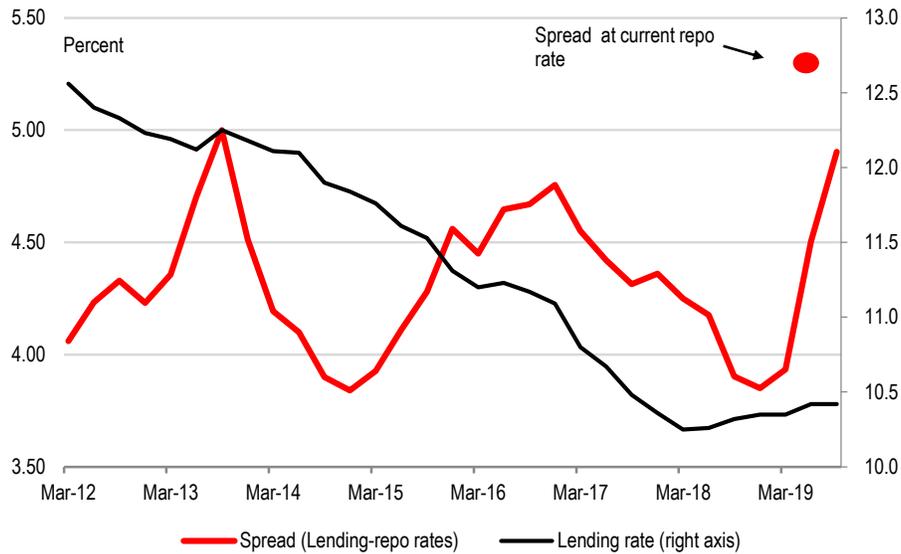
But that is not what has happened this time. At the same time as the RBI has been reducing its rates, banks—conscious of their own weak financial positions and seeing dangers in every area of their operations—have been increasing the risk premia they charge their borrowers. As a result, lending rates have not followed the RBI repo rate down, opening up a virtually unprecedented spread between the two rates, amounting to 5¼ percentage points (Figure 21).¹³ The real weighted average lending rate consequently exceeds 6 percent, a punishingly high level at a time when the economy is weak and firms are struggling to pay their debts.

Consequently, the need of the hour is to fix the transmission mechanism. The temptation is to “solve” the problem through administrative orders, compelling banks to reduce lending rates. But this will only cause more problems, because administratively-determined rates will not provide banks with enough income to cover the very real risks they are facing, putting them under even more stress. The only real solution is to reduce the underlying risks, by strengthening both the financial and corporate sectors. In other words, by tackling the TBS crisis.

¹² Kelkar and Shah (2019) delve into the reform of the deeper institutional underpinnings of India’s economy.

¹³ Note that this poor transmission has occurred even as the RBI has been trying to push interest rates down by injecting considerable amounts of liquidity into the banking system.

Figure 21. Credit Risk: Spread between Lending and Repo Rates



Source: Credit Suisse.

Fiscal policy

If monetary policy won't work right now, then what about a fiscal stimulus? In fact, there are also problems with this strategy, many problems. Consider first the structural issues surrounding the proposal to cut individual income taxes. Tax cuts are easy to make, as they are politically popular. But precisely for that reason they are very difficult to reverse. And from a long-term point of view, it is far from obvious that fiscal resources should be devoted to favouring a small share of the population, who are by no means amongst the most deserving. In fact, structurally, India should be thinking of ways to bring *more* taxpayers into the income tax net. It should not be raising exemption limits, as was done unfortunately in the 2019-20 budget.

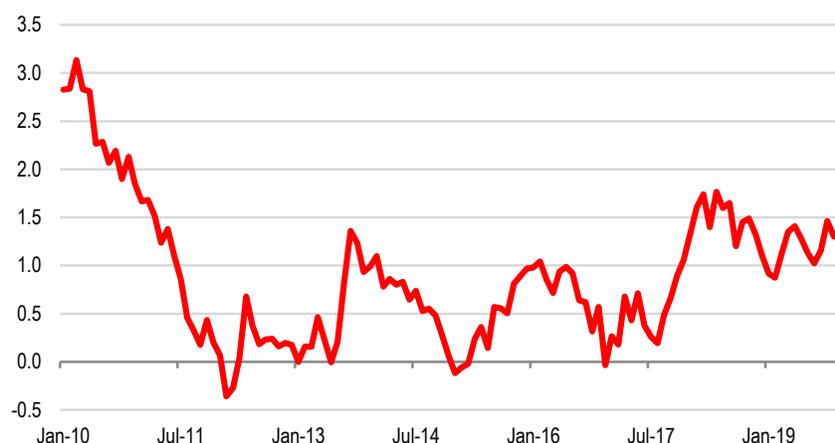
Next consider the cyclical problem: the space for fiscal stimulus doesn't exist. The government is starting from a weak fiscal situation, much weaker than the headline figures suggest. As noted above, India's consolidated fiscal deficit was close to 9 percent of GDP in 2018-19, and this year's outcome will surely be worse. In recent years, the government has been unable to reduce its debt-to-GDP ratio, despite rapid nominal GDP growth. If growth remains low while the "true" deficit reaches double digits, debt sustainability concerns will soon follow.

All of this would place constraints on fiscal expansion in normal times. But these are not normal times. There is a Balance Sheet crisis, and this crisis is placing even tighter constraints on the government's ability to issue debt. The reason is that stressed banks have little appetite for government securities, since they need to be very careful about taking on assets that run the risk of generating losses. And even government securities, which have (virtually) no default risk, can still generate losses because their prices fall when interest rates rise.

In normal times, this doesn't really matter. Normally, banks are willing to take on the risk for just a small interest rate premium over the repo rate, because there are compensating prospects of capital gains if interest rates fall. But these calculations change when stress is high and capital cushions thin;

in these circumstances, the risks of losses loom far larger than any opportunity for gains. Accordingly, banks have been demanding large premia for investing in government securities, with the spread above the repo rate since the second half of 2018-19 running around 150 basis points—an exceptionally high level, larger than any other major economy, by far (Figure 22).

Figure 22. Spread Between G-sec and Repo Rates (In percentage points)



Source: RBI

The implications for fiscal policy are clear. Further expansion of the fiscal deficit is precisely the wrong strategy for an economy where interest rates are already too high relative to GDP growth. (Recall Figure 20).¹⁴ More borrowing will put further upward pressure on government interest rates, which will push up corporate bond rates, and as corporates then shift to borrowing from banks, this will push up bank lending rates as well. Accordingly, a large fiscal expansion will not help the economy. It will only make things worse, by intensifying the vicious corporate stress-bank stress downward spiral.¹⁵

B.Positive List

Addressing the Four Balance Sheet Challenge

The centerpiece of the effort to overcome the current slowdown needs to be a decisive attack on the Balance Sheet problem. We envisage six major actions, each of which is associated with one of the five R's—the five main aspects of the problem:

- Launch a new asset quality review to cover banks and NBFCs (Recognition)
- Make changes to the IBC to better align incentives (Resolution)

¹⁴ Note that the Olivier Blanchard (2019) case for fiscal expansion hinges critically on the cost of borrowing being below nominal growth rates.

¹⁵ And while a small fiscal expansion may not have much effect on interest rates, it won't do much to stimulate recovery, either.

- Create two executive-led public sector asset restructuring companies (“bad banks”), one each for the real estate and power sectors (Resolution)
- Strengthen oversight, especially of NBFCs (Regulation)
- Link recapitalization to resolution (Recapitalization)
- Shrink public sector banking (Reform)

Recognition

After the first Asset Quality Review (AQR) in 2016, we had thought that the first “R” had been accomplished, that all stressed assets had been fully recognized by the banks. That is probably no longer true. More to the point, investors think it is no longer true. Ever since ILFS defaulted—despite its solid AAA rating—investors have worried that corporates and NBFCs might have underlying, unseen solvency problems. As a result, they have been reluctant to purchase NBFC debt.

There is only one way to address this problem, only one path to restoring investor confidence: India must come clean on the entire financial system. There needs to be a comprehensive review of the financial health of the NBFCs and mutual funds, and even for the banks, not least because they have lent so much money to NBFCs, and more generally because a new wave of stress has arrived, which is turning previously good assets into bad ones. Call this new review AQR-2.

What happens if the AQR unearths sizeable amounts of unrecognized problem loans? Most likely, financial tensions would still ease, as investors realise that the problem is not as bad as their worst-case scenarios, and as they gain confidence that the government and RBI will come up with a plan to resolve the problem, as occurred after the initial AQR. This brings us to our second “R”, resolution.

Resolution:

Improving IBC

Clearly, the IBC process needs to be reinvigorated. Doing so, however, will not be easy, as it will require overhauling the framework so as to change the incentives of the main players: bankers, promoters, and the judiciary.

Consider first the bankers. The key problem is that public sector bankers have little incentive to resolve problem loans, while they run personal risks in doing so, since they could be investigated by the anti-corruption agencies for the debt write-downs, inevitable though these may be. In February 2018, under Governor Urjit Patel and Deputy Governor Viral Acharya, the RBI addressed this incentive issue by providing clear restructuring guidelines to bankers, effectively providing them with an assurance that they would be “safe” as long as they followed the rules. This strategy needs to be revived. Specifically, the law should be amended to ensure that default cases (nearly all of them; see below for the exceptions) are sent to the IBC no more than 180 days after a default.

The next step would be to change the incentives of the courts, to discourage them from weighing in on so many different restructuring issues. The government should issue guidelines refocusing the bankruptcy process on the goal of maximizing value—or to put it differently, on minimizing the loss to taxpayers. These guidelines should establish a division of labour, stating that it is the creditors’ responsibility to decide what strategy will maximise value, while the courts should focus on whether creditors have followed proper procedures in coming to this decision. These guidelines should be backed by amendments to the IBC law. In particular, section 31 should be amended to remove the

power of the National Company Law Tribunal (NCLT) to assess the design of resolution plans, while section 61 should be amended to reduce the grounds under which parties can appeal, eliminating frivolous cases or ones where legal precedence is already set.

The third major task would be to change the incentives of promoters. Most of the delays are caused by endless appeals by the promoters of the bankrupt enterprises—and since it is impossible to prevent them from exercising their legal rights, the only way to change this situation is by changing their incentives.

Specifically, the eligibility requirement (under section 29A) of the IBC should be modified to specify that only *willful* defaulters would be barred from bidding for assets. Such a change would have sizeable benefits. It would give promoters an incentive to co-operate with creditors, and not try to stymie the process by withholding information or appealing at every step of the process. It would ease the burden on the courts, since with clear-cut eligibility criteria they would no longer have to spend so much time ascertaining which firms will be allowed to bid. It would increase the returns to taxpayers, since allowing promoters to bid would increase competition in the auctions. And arguably, it would create a fairer system, since the IBC would no longer penalize promoters whose firms went bankrupt through no willful action of their own.

In addition to these main measures, two other steps would also be important. The Debt Recovery Tribunals (DRTs) should be opened up to nonbank creditors, so that any firm that has not been paid can press its recovery claim at the DRTs, rather than clogging the IBC system by inappropriately filing bankruptcy claims. Also, the Ministry of Corporate Affairs (which supervises the IBC system) should allow much more bankruptcy data to be available, in much more user-friendly forms. All the pertinent information, such as debt admitted, debt resolved, and debt recovered, as well the status of each case should be put up on a website, in spreadsheet form, so that the public can see whether the IBC is really succeeding in its aim of resolving the Balance Sheet problem.

Creating “Bad Banks” for Power and Real Estate

Even if all these changes to the bankruptcy framework are made, the IBC will still not be suitable for certain types of cases, notably those where social considerations are as important as commercial criteria, where public subsidies of one kind or another are inevitable. There are two sectors where this problem is acute: real estate and power.

Consider first the real estate sector. In most residential cases, developers have funded their building partly through pre-selling, that is by requiring prospective owners to pay in advance for their promised flats. So when builders go bankrupt, prospective owners are left with neither money nor flats. It is obvious that the plight of these individuals cannot be ignored—a point underscored by the Supreme Court. But it is equally obvious they will not be well-served by the IBC. For a start, it is unclear how the prospective owners could be represented on the Creditors’ Committee. And even if a way could be found, it hardly seems acceptable to ask them to wait for years, only to receive a small fraction of the money that they paid, and perhaps even nothing at all. It would seem far better to provide them with a speedy settlement, with a guaranteed minimum fraction of the amount that they paid. But this will require a government mechanism, most likely with government subsidies, since recovery rates from builders are likely to be very low.

The stressed power-sector assets pose another major quandary. Unlike most assets, they cannot easily be sold, since they are incurring heavy operational losses, and their prospects are highly uncertain.¹⁶ Even the existing public-sector power producers have been reluctant to take them. But neither can they be liquidated; although supply currently outstrips demand, and the plants are only operating at half capacity, eventually the gap will close. And technologically these power plants are good assets, better than many of the fully-utilised plants.

The essence of the problem, the reason there cannot be a private-sector led solution, is that the viability of power assets is inextricably entwined with government policies. For example, demand for power depends on whether the discoms (the state-run wholesalers of electricity) are financially strong enough to buy the power that the public is demanding. Similarly, demand for the stressed assets depends on the pace at which the government—centre and states—phases out much older and thermal and environmentally inefficient public sector plants. As a result, the government would need to be heavily involved in any solution to this sector's problems.

Consider how a bad bank for the power sector might work. The first step would clearly be to take these loans—exceeding Rs 2.5 trillion—off the books of the banks, for that would free up balance sheets and management attention, allowing banks to focus again on their core business of supporting economic growth.

Once removed, the assets will need to go somewhere. A few of the plants could probably be sold off, once their debts are reduced to manageable levels. But most of the plants would need to be 'warehoused'—until they can be returned to the private sector. To do this, the government could create a holding company, which would purchase the assets and manage them.

Essentially, the holding company would operate like a public-sector asset rehabilitation agency (or a "bad bank") and would be capitalized by the government. The holding company would buy power companies at prices based on the recommendations of independent parties, such as investment banks, which would take into account a regulatory regime, including pre-announced levels of subsidies, set established by the government.¹⁷ This procedure would allow the transaction to be seen as fair by all stakeholders—the holding company, the banks, and perhaps most importantly, the public. In addition, fair prices would give the holding company some chance to make a profit in the long run, as power demand increases. Finally, the prospect of profits might induce private investors to provide some of the capital needed, thereby alleviating the upfront cost to the government.

One may then ask what the holding company would do with the assets. The ultimate objective would be to sell the plants back to the private sector. In fact, this objective should be built into the charter of the company: it should state that the purpose of the company is to sell off the assets within five years, after which it would be dissolved. To realize this objective, the holding company should endeavour to reduce uncertainty, especially by securing long-term contractual arrangements for coal inputs to be supplied by Coal India and output to be purchased by state electricity boards. Once this is done, and as demand for electricity grows to the point where the plants can operate at somewhere

¹⁶ Private power plants are currently running at about half capacity; many have problems securing coal supplies; many receive exceptionally low tariffs for electricity sold on the exchanges; some have problems obtaining payments from the State Electricity Boards.

¹⁷ Since state governments would be involved, perhaps a national electricity council could be established along the lines of the very successful GST Council.

close to full capacity (at present their plant load factors are abysmally low), the appetite for these assets will gradually revive, at which point they could be sold.

Regulation

For some time, financial sector regulation and supervision has clearly been inadequate. From the lending excesses in public sector banks during the boom; to delays in acknowledging the true size of the problem during 2012-16; to the delayed response to troubles in private sector banks such as ICICI and Yes; to the Nirav Modi scandal at a major public sector bank; to the shenanigans at ILFS and other NBFCs (DHFL) and the mutual funds to the collapse of the Punjab and Maharashtra Cooperative Bank—all of these have exposed serious shortcomings at the RBI and government.

A major re-haul of the regulatory framework is consequently in order, especially for the NBFCs. In the meanwhile, the RBI should at least do a few things such as shutting down arbitrage possibilities, for example, by increasing the risk weights of lending to NBFCs. In fact, one of the anomalies was that during 2017 and 2018, even banks under the PCA framework were increasing their lending to NBFCs, because the lending restrictions imposed on them were risk-weighted. So, by increasing the share of lending to the NBFCs, which carried lower risk weights, troubled banks could maximise the size of their balance sheets.¹⁸

The RBI should also implement more seriously the PCA framework. For the weaker banks, currently under the PCA framework, the regime instituted in 2017 and 2018 needs to be brought back; the dilution after December 2018 needs to be reversed.

Recapitalization

The government has already spent considerable sums recapitalizing the PSBs. At this stage, there needs to be a link between recapitalization and resolution. Of course, the government should continue to ensure that its banks meet the minimal capital requirements. But additional funds beyond the minimum should be linked to each bank's progress in cleaning up its balance sheet. That way, banks will have an incentive to resolve their bad loans, rather than continue to “extend and pretend” that someday they will be repaid.

Reform

Private banking has proved imperfect but public sector banking (PSBs) has proved to be decisively flawed. The age-old problem of political interference and decision-making inertia is well-known. But the problems go much deeper. We must finally acknowledge that India's public sector banks lack—and will always lack—the basic risk management framework to conduct any semblance of prudent banking. And once the imprudent loans turn bad, public sector bankers have little incentive to resolve the problems.

It is worth reminding ourselves that even the jewel in the public sector banking crown—State Bank of India—has not consistently returned a positive return on assets. In the end, to think that

¹⁸ Consider the case where a builder wanted to take a loan to finish a risky project. If a bank lent directly to the builder, this would result in a large increase in the bank's risk-weighted assets. But if the bank lent to an NBFC, which then funded the builder, the charge to the bank's risk-weighted assets would be much smaller.

governance of PSBs can be improved is to fall prey to the mistake of “trying the same things again and again and expecting different results”—Einstein’s definition of insanity.

There are many ways to change this. The simplest, most direct but politically most difficult would be to amend the Bank Nationalization Act to allow majority private sector participation in the PSBs. The alternative suggested by the PJ Nayak report is to group the PSBs under a government-owned holding company, distancing the government from the operations of the banks and helping to focus the government on the financial returns it is getting from its assets.

The holding company model may be politically more attractive but carries all the risks of the status quo: that the banks continue to be de facto controlled by government, while no serious incentives for change are created at the level of the bank itself. Its only attraction would be if it does not require changing the Bank Nationalization Act. But that needs to be assessed.

Better data for policy navigation: A Big Bang

The list of tasks required to solve the TBS is long and difficult. So one hesitates before adding to the policy agenda. But there is one more reform that cannot be ignored, that must be addressed almost before anything else, because it will inform all the other policy actions. This reform relates to data, specifically the process of generating and disseminating accurate data.

Reliable data is important for several reasons. For some time, we have known that confidence—in the economy and government—is critical in shaping private actions. Keynes himself stressed the importance of “animal spirits” in getting entrepreneurs to invest. Others have stressed the importance of consumer confidence in getting households to spend on durable goods such as cars. There is something of a bootstrap effect at work: confidence can change behaviour, which changes reality, and hence confidence.

Accurate data is arguably even more important for guiding government actions. Consider the following policy questions facing India today:

- Does the economy require little support, a reasonable amount, or urgent and massive measures?
- Is there really an employment problem? Has poverty come down or gone up?
- Do poor government revenues simply reflect a deep economic downturn – or serious collection problems, requiring urgent measures to improve tax administration?
- Is there no room, a little room or considerable room for expansionary fiscal policy?
- Has the financial system turned the corner—or are stressed assets actually rising?

All these are serious questions confronting policymakers right now. Yet the data are simply not reliable or incontrovertible enough to allow them to be answered with any degree of certainty. And that makes it difficult to formulate policy responses. In some cases, we don’t even know whether a response is needed.

Accordingly, the government's immediate task is to re-boot the data systems in three sectors: real, fiscal and financial.

On the real sector, measurement of GDP, employment, and consumption have all proved problematic. To remedy this, the government should set up a committee, perhaps under the leadership of Nobel Prize winner Professor Abhijit Banerjee, who knows and cares deeply about these issues. This committee could be asked to address two sets of problems. Its forward-looking task would be to propose improvements to data collection and statistical methodology, which could be implemented in conjunction with the planned updating of the base year. To do this, its backward-looking task would be to identify the problems in the GDP estimates and the PLFS/NSSO surveys. This difficult task will require the assistance of the professional economic community, which in turn means that the unreleased surveys should be published.

On the fiscal accounts, the government should use the next budget as an opportunity to present a revised and cleaned-up set of fiscal accounts, allowing it to put behind the problems of the last budget. The aim should be to clean up not just the flow (deficit) numbers but also the stock (debt) numbers. Particular attention should be paid to identifying—and paying—arrears to suppliers.

In this effort, the government could build on some work already done. The Comptroller and Auditor General (CAG) in its recent report set out a rigorous accounting methodology, especially for taking off-balance sheet transactions into account. The previous Secretary of the Department of Economic Affairs, Subhash Garg, has also made some very useful suggestions in this regard.

Once a sound budgetary accounting system is created, it needs to be institutionalized. Perhaps the best way to do this is by creating a Fiscal Council, as proposed unanimously by the N.K. Singh FRBM Committee. Such a council could help ensure that the accounting framework is being followed and the budget projections are realistic, based on reasonable forecasts for GDP and tax buoyancy. Of course, the Council needs to be designed so that it does not undermine the sovereignty of the executive and legislature. This could be done in several ways, for example, by ensuring that its members include the Chairman of the Finance Commission; a representative of the CAG; and a representative of the GST Council, such as a Finance Minister from one of the Opposition states; as well as respected experts outside government.

On the financial sector, given the recent credit bubble and the series of problems, involving so many financial institutions, the time is ripe for a second Asset Quality Review (AQR). A regulatory system that failed to spot, let alone head off, the spate of problems from Nirav Modi to Punjab and Maharashtra Cooperative Bank to Dewan Housing and NBFC financing of real estate, and above all the behemoth that we have now discovered ILFS to be, has to work extra hard to regain trust; and transparency about stressed assets will be an essential pre-requisite for that effort.

A new AQR—perhaps even led by a former RBI Governor—will allow the government and RBI to assess the precise magnitude and sectoral nature of the problem, thereby facilitating better-tailored and better-designed policies to solve the problem. It should cover not just the NBFCs but also the banks, which are experiencing renewed stress from the real estate, steel, power, and telecom sectors.

Driving a car requires considerable information: a good speedometer, data on whether the fuel tank is empty or full, gauges of tire pressure etc. Running an economy, especially one that is in a

predicament such as India's today, is infinitely more complicated and the data demands are hence commensurately greater. A Data Big Bang effort along the lines proposed here would make that difficult task less challenging.

Agriculture

Finally, agriculture. It is now abundantly clear that rural livelihoods and incomes need to be reinvigorated, for the sake of the farmers and the overall economy. High and rising agricultural productivity is critical for long run structural transformation (Kotwal and Eswaran, 1994). Getting it done requires some major reforms, many of which have been advocated by Professors Ashok Gulati, Bharat Ramaswami and Harish Damodaran:

- Replace fertilizer and power subsidies with direct transfers;
- Create a single market for agricultural products;
- End the stop-and-go trade policies, that is the imposition of export restrictions when domestic prices are high and import restrictions when prices are low, which ultimately penalize farmers by increasing uncertainty;
- Exercising forbearance on zealous implementation of policies that affect livestock activity and exports;
- Incentivize water conservation including use of drip irrigation; and
- Grant permission to new GMO technologies

The only way to make progress here—recognized the late Finance Minister, Arun Jaitley—is to work within a cooperative federalism framework because policies affecting agriculture are controlled both by the center and the states.

That said, we feel a certain weariness in making these recommendations not because they are unimportant—far from it—but because they have been made many times before, and each time have ended up in the political wasteland of discarded advice.

In the short run, and if boosting consumption is considered a political imperative, a better alternative than income tax cuts would be cash transfers to farmers along the lines we proposed: a quasi-universal basic rural income (Felman et. al. 2019). In practice, implementing it would involve extending in size and scope the government's PM-Kisan scheme.

VIII. Conclusions

Since the Global Financial Crisis, India's long-term growth has slowed as the two engines propelling rapid growth—investment and exports—sputtered. Today, the other engine—consumption—has also stalled. As a result, growth has plummeted precipitously over the past few quarters.

Indeed, the economy seems locked in a downward spiral. Best capturing this stark reality is the astonishingly high interest-growth differential. The corporate cost of borrowing now exceeds the GDP growth rate by more than 4 percentage points, meaning that interest on debt is accumulating far faster than the revenues that companies are generating. Already, this has caused a resurgence in the amount of stressed debt, a second wave of the Balance Sheet Crisis. If this process is left unchecked, the economy will continue to spiral downward, as stress reduces growth, which then intensifies the stress.

Clearly, action must be taken to stabilize the economy and get it back on the path of rapid growth. But in the current circumstances the standard macroeconomic tools are not very useful. There are actions that the government cannot do (further significant fiscal stimulus); must not do (reducing personal income tax rates or raising GST rates); can do with only limited effectiveness (easing monetary policy). What, then, is to be done?

First, can anything be done quickly? A major first action-- almost a pre-condition for righting the economy—could be a Data Big Bang, both instill confidence and produce a reliable basis for policy-making. This must comprise the publication of unreleased reports together with a strategy for improving official statistics in at least three areas: the real sector (GDP, consumption and employment), fiscal accounts, and stressed assets in the banking system.

Next, we propose several strategies to halt the current vicious economic spiral, the most critical one being to address the Four Balance Sheet challenge – the stress in banks and NBFCs on the financial side, and infrastructure companies and real estate on the corporate side.

Policies need to act on the 5 Rs:

- Conducting a new Asset Quality Review to cover banks and NBFCs (Recognition)
- Making changes to the IBC to ensure that participants actually have incentives to solve the problem (Resolution)
- Create two executive-led public sector asset restructuring companies (“bad banks”), one each for the real estate and power sectors (Resolution)
- Strengthening oversight, especially of NBFCs (Regulation)
- Linking recapitalization to resolution (Recapitalization)
- Shrinking public sector banking (Reform)

There is, of course, a reason why these policies have not been implemented before. They are politically difficult, and other, easier alternatives have seemed more attractive. But the government currently has a tremendous amount of political capital. And by now all the alternatives have been tried, and found wanting. So, finally, after a long and difficult decade, the government has both the opportunity and the clear need to resolve the Four Balance Sheet (FBS) problem.

But we must be clear. Realism demands a recognition that resolving the FBS problem, as well as the difficulties in agriculture, will inevitably take time. A slow-bleed over many years led to the current predicament. The way out will also be laborious. India’s weak state capacity and the entrenched stigmatized capitalism has stymied private initiative and honest public officials for a very long time. There are no quick solutions.

A corollary is that sustained effort will be needed. Complacency remains an abiding danger. The economy was buoyed by a series of cyclical factors in the 2010s; another fortuitous factor may well arrive in 2020, at which point there could be euphoria, lulling us back into policy inertia. Such a reaction would be dangerous, for the FBS challenge is deep and intractable, defying easy or quick corrections. Any signs of an incipient upturn must therefore not be interpreted as harbingers of durable improvement. They must be seen for what they are: sirens that must be resisted.

Another reason to be realistic and even moderate India's medium term growth expectations is the external environment. The *Economic Survey* of 2018 spoke of headwinds facing "late convergers" such as India, countries that have not even attained proper upper-middle income status. These headwinds include the declining trading opportunities that sustained the East Asian and Chinese growth miracles, labour-saving technologies, and climate change.

But being realistic is not an invitation to succumb to pessimism. It is important to realise that India has agency. Even "middle income traps" can be sprung. After all, some of the problems have been domestic and self-inflicted. If we got into India's Great Slowdown in part because of what we did in the past, surely we can also emerge out of it by what we do next.

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