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Is State Ownership in the Indian Banking Sector Desirable?*

ABSTRACT A large part of the Indian banking system is still state-owned, at the same time when there are several private banks as well as nonbank financial institutions. This article provides evidence that the state ownership—by implicitly conferring stronger guarantees on state-owned banks—distorts the level playing field between various banking sector players. It then relates this lack of level playing field to the role played by government-sponsored enterprises (GSEs)—Fannie Mae and Freddie Mac—in the recent housing boom and bust in the United States. It therefore proposes a graceful exit of the state from the Indian banking sector.

Keywords: *Bailout, Government Guarantees, Government-sponsored Enterprises, Level Playing Field, State-owned Banks*

JEL Classification: *G01, G2, D6, K23*

I

The global crisis which began in the fall of 2007, and progressively worsened in 2008, affected the Indian financial sector beginning only 2008. While Indian financial firms have been fairly resilient compared to their global counterparts, Indian private sector firms faced greater losses compared to public sector firms during 2008–09. This was in spite of private sector firms having lower exposure to the crisis based on precrisis market indicators. By relocating their deposits, investors seemed to reward

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public sector firms while penalizing private sector firms with similar risk. This should not be interpreted as greater resilience of state-owned banks vis-à-vis the private financial sector. It was access to implicit and explicit government backing rather than ownership by the state that helped public sector banks (PSBs) perform better.

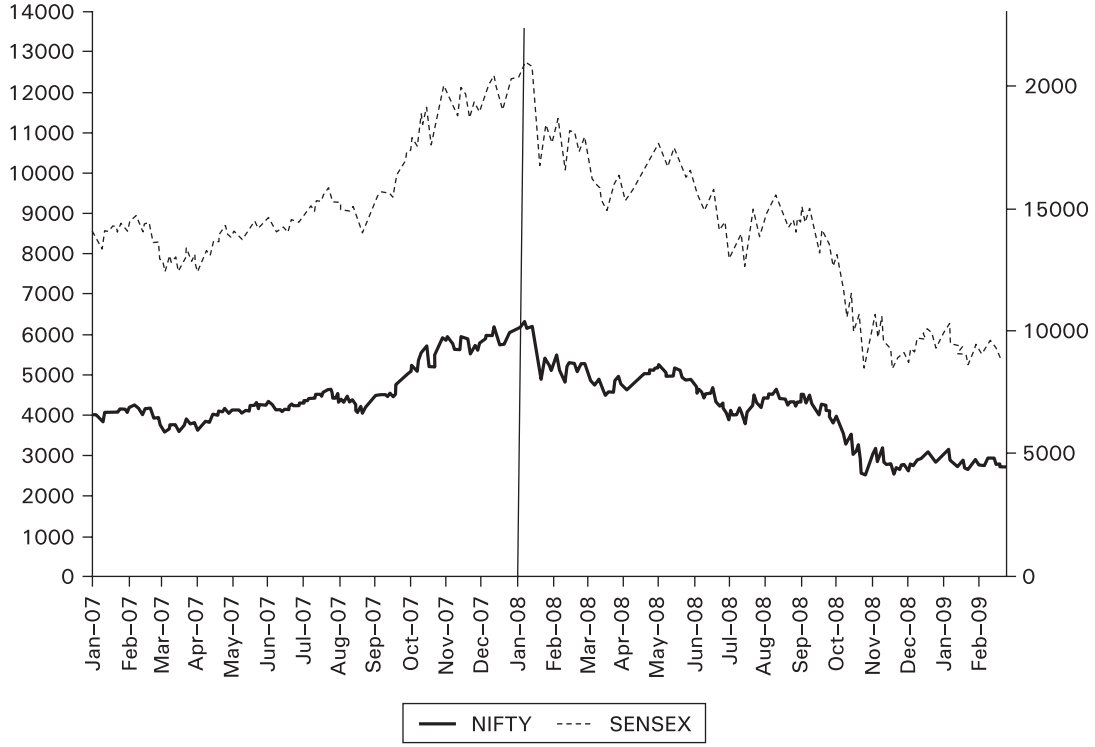
II

In 2008, the global financial crisis hit India with the Indian stock market losing more than 60 percent of its peak valuation. Figure 1 shows that the stock market index—S&P CNX NIFTY index—declined sharply starting January 2008. Index prices fell from a peak of 6,288 in January 2008 to 2,524 in October 2008, representing a decline of nearly 60 percent. Another market index—the Bombay Stock Exchange (BSE) index—similarly fell nearly 59 percent from 20,873 in January 2008 to 8,510 in October 2008. Starting 2008, foreign institutional investors (FIIs) facing a liquidity squeeze from abroad, started pulling out capital from India resulting in a sharp decline in the stock market. In 2008–09, FIIs withdrew nearly ₹43,337 crores (approx $9–10 billion).

Experiencing a dearth of capital from overseas markets, Indian banks and corporations had to turn to domestic markets for their funding requirements. At the same time, Indian banks and financial institutions facing uncertain market conditions started cutting back on credit, resulting in a liquidity crisis in 2008. Corporations, especially ones relying on foreign funding, feared further worsening of global market conditions and withdrew from money market mutual funds (MMFs). The MMFs, which were heavily invested in nonbanking financial companies, were forced to liquidate their positions. It is estimated that MMFs withdrew nearly ₹22,355 crores in 2008–09. As a result of the capital outflows, the rupee also came under pressure. There was further liquidity tightening as the Reserve Bank of India (RBI) intervened in the Forex market to manage rupee volatility. All these events resulted in a money market and credit squeeze which eventually spilled over into the real economy (Subbarao, 2009). The global slowdown also resulted in a slump in demand for exports. This impact was felt economy-wide and the Indian GDP fell from 9 percent in 2007 to nearly 6.1 percent in 2008. Eventually, the Government of India, fearing an even rapid deterioration of the economy, announced wide-ranging stimulus packages in 2009 that appeared to restore the economy back to its pre-2008 growth.

FIGURE 1. Stock Index Performance

The figure shows stock index performance for the period from January 2007 to February 2009. Two indices, S&P NIFTY and BSE SENSEX, are represented. The S&P CNX NIFTY (or NIFTY; base level of 1000 defined as of November 1995) is a free-float market capitalization index on the National Stock Exchange and consists of 50 companies. Bombay Stock Exchange Sensitive Index (BSE Sensex or Sensex) is a value-weighted index composed of 30 stocks with a base level of 100 in 1978–79.



An important observation during 2008 was the apparent weakness of private financial firms against the (relative) growing strength of public sector or state-owned banks. Historically, Indian banks had been wholly owned by the government. Though in the 1990s, after economic liberalization, the government reduced its stake and allowed private banks and foreign players to enter the market, the Indian financial system retains a substantive public sector ownership. In fact, PSBs dominate the Indian banking sector and, as of March 2009, they accounted for nearly 71.9 percent of aggregate assets. This mixed model of public and private ownership, popular in emerging markets and also referred to as the Asian model, has been credited with the relative strength of the Indian financial sector compared to its global counterparts.

Consider three striking pieces of evidence illustrating this relative strength.

First, and as Figure 2 shows, the substantial gains made by the private financial firms in the period leading up to January of 2008 were almost entirely wiped out by February of 2009.

Second, market reaction to public versus private sector banks can also be gauged from the widening of credit default swap (CDS) spreads for two illustrative firms, namely, State Bank of India (SBI, a PSB) and ICICI Bank (a private sector bank) during the crisis of 2008. A CDS spread represents the cost of purchasing insurance against the default of an underlying entity (such as SBI or ICICI). From Figure 3, we see that the cost of purchasing one-year protection on SBI and ICICI banks were within the same range in 2007, suggesting that investors viewed both firms as being equally risky. Beginning 2008, however, the difference between the spreads started widening in SBI's favor, indicating that investors possibly viewed the public sector financial firm to be healthier compared to the private sector firm.

Third, Figure 4 shows that while the banking sector as a whole experienced a slowdown in deposit growth, private sector banks were affected to a larger extent. According to RBI estimates, PSB deposits grew by 24.1 percent in fiscal year 2009 (March 2008–March 2009) compared to 22.9 percent a year earlier. In comparison, private sector deposit growth slowed from 19.9 percent to a mere 8 percent for the same period. Credit growth showed similar trends: PSB credit grew by 20.4 percent (compared to 22.5 percent in 2008), while for private sector banks, it grew by only 10.9 percent (compared to 19.9 percent in 2008).

This apparent strength of PSBs has in fact strengthened the resolve to persist with them. Until recently, there had been a consistent trend toward

FIGURE 2. Stock Performance for Public and Private Sector Firms

The figure shows the equally weighted average returns for public and private sector financial firms for the period from January 2007 to February 2009. The indexed value weighted returns for the private (public) sector represents the returns weighted by the market capitalization of the private (public) sector firms used in the analysis. Both series use a base value of 100 as of January 2, 2007.

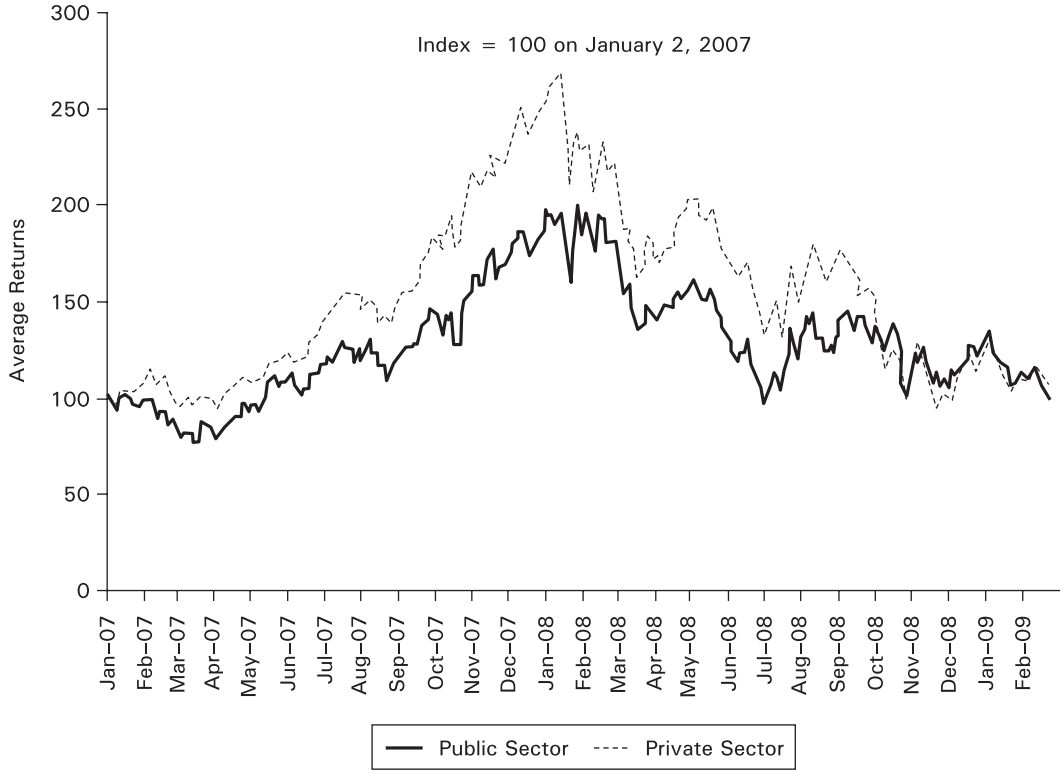
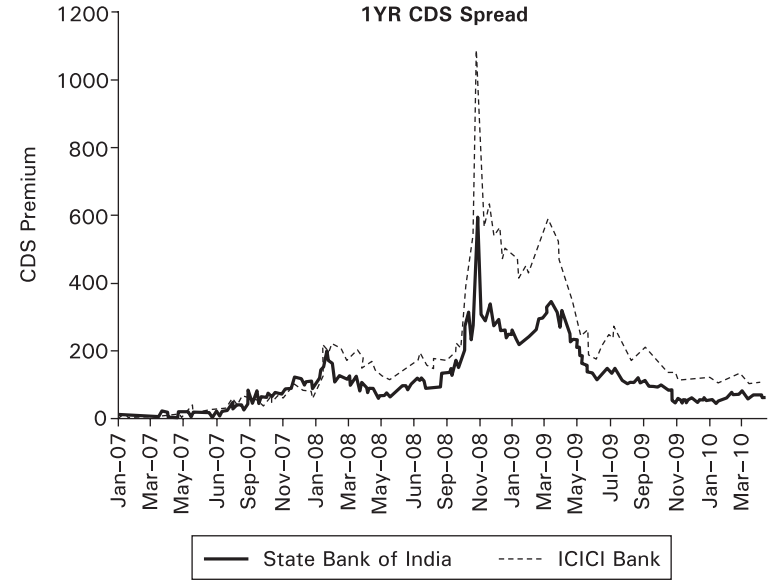
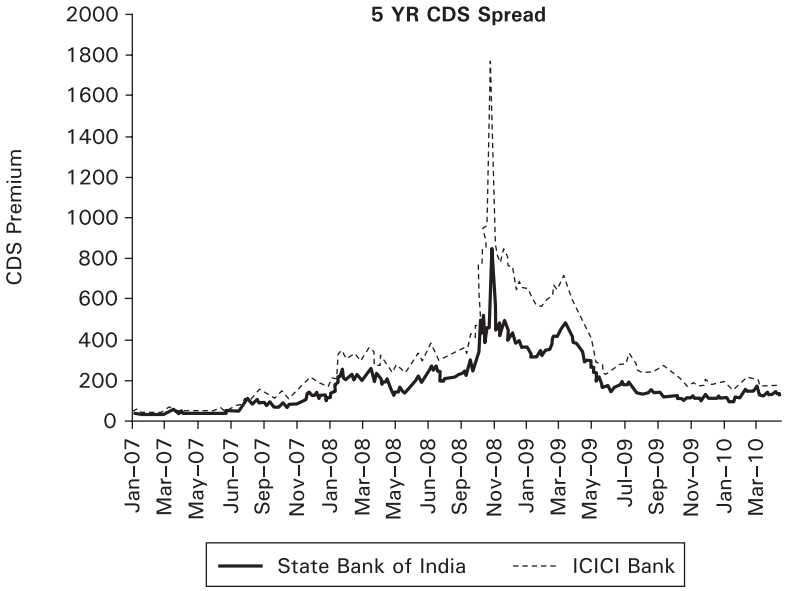


FIGURE 3. CDS Spreads for ICICI and SBI

The graphs below show the 1-year and 5-year CDS spreads for ICICI Bank (private sector bank with the largest MES) and State Bank of India (PSB with the largest MES). Market return is based on the S&P CNX NIFTY for the precrisis period from January 2007 to December 2007.

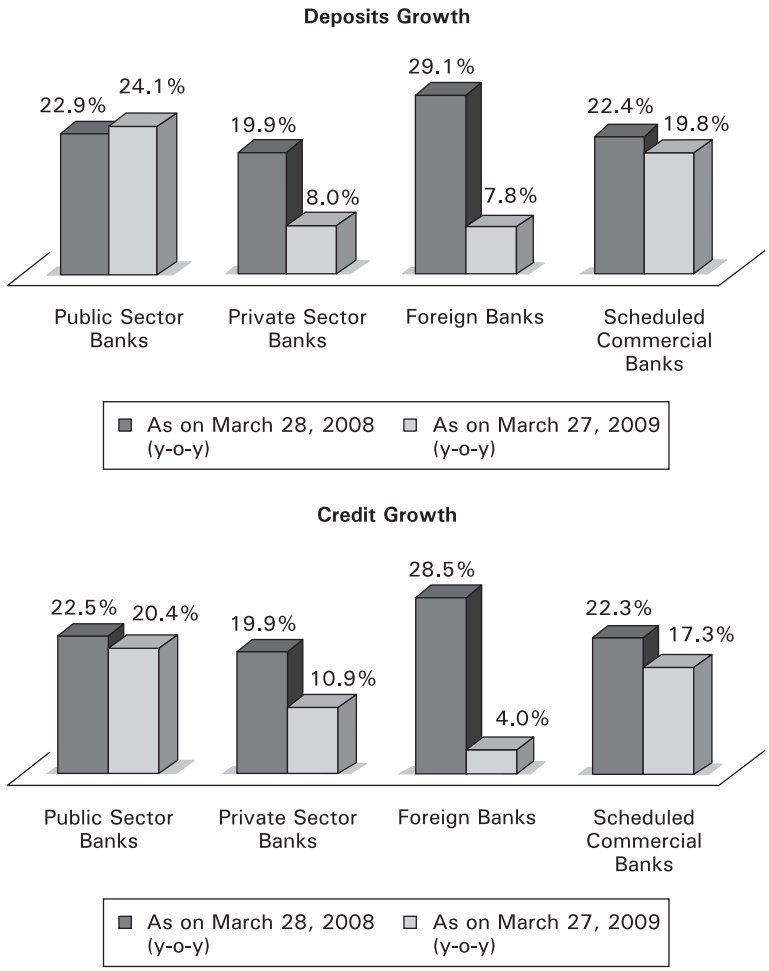




Source: Datastream.

FIGURE 4. Deposit and Credit Growth

The graphs below show the group-wise growth in deposits and credit in banks. Growth rates are year-on-year (y-o-y) as of March 28, 2008 and March 27, 2009.



Source: RBI, 2009–10.

privatization of the Indian banking system. However, the recent underperformance of private sector banks has raised some doubts regarding this approach.[1] Such sentiments have important policy implications and could

1. The ruling party leader, Sonia Gandhi, claimed that "public sector financial institutions have given our economy the stability and resilience we are now witnessing in the face of

alter the timeline and extent of privatization initially envisioned by the government. All recent evidence seems to suggest that government ownership in PSBs will gradually decline, but only after the ongoing crisis has subsided, and that it is unlikely the state-owned banks will be fully privatized as was previously envisioned.

There is good reason to guard against reaching such policy decisions. As explained later in this essay, it seems that it was access to government guarantees rather than ownership by the state that appears to have ensured greater stability of the PSBs than their private sector counterparts. In fact, PSBs appeared *more* risky in the sense of being vulnerable to a crisis, not less, than the private financial firms, and yet grew substantially in terms of their deposit base.

The conjecture is that the relative underperformance of private sector banks during the crisis, in spite of their superior precrisis risk–return profile, is attributable to the implicit and explicit sovereign backing of PSBs. The Indian Bank Nationalisation Act provides an explicit guarantee that all obligations of PSBs will be fulfilled by the Indian government in the event of a failure. It is conceivable that, as a result of this guarantee, private sector banks experienced a loss of confidence and capital gravitated to PSBs during the crisis of 2008–09—even when their exposures to an economy-wide crisis were ex ante similar—because investors believed that the PSBs would be bailed out by the government in the event of a failure. And that, given this expectation, capital (primarily deposits) flew from the riskier private sector banks to the more stable PSBs, resulting in a decline in equity valuations of the private sector financial firms during the crisis. If this were true, then PSBs would outperform private sector banks in a crisis even if they were a priori, i.e., in absence of government guarantees, more vulnerable to a crisis.

To examine if this conjecture is true, consider the ex ante (pre-2008) measure of vulnerability to a crisis (*systemic risk*) of public and private financial firms and how that relates to their ex post (2008–09) or realized performance—for instance, their deposit growth. We use the marginal expected shortfall (MES) measure to calculate the systemic risk of financial institutions in the Indian financial sector.[2] The MES measure essentially

the economic slowdown." Then finance minister, P. Chidambaram, echoed these sentiments when he claimed that India's public sector banks were strong pillars in the world's banking industry (Chandrashekhar, 2008).

2. The strength of the measure lies in its ability to predict which firms are likely to be most negatively affected during a financial crisis, as demonstrated by Acharya et al. (2010) in their analysis of the systemic risk of large US financial institutions around the financial crisis of 2007–09.

captures the tail dependence of the stock return of a financial firm on the market as a whole. It estimates, in a given past period (say one year preceding a crisis), for the worst 5 percent days of the market or the financial sector index, the negative of the average market return of a given financial firm. The greater the MES, the more vulnerable to a crisis is the firm. The question then is whether riskier PSBs as measured by ex ante MES fared better or worse than private sector banks with similar risk.

There are some interesting insights to be gathered from such analysis.

First, average MES value measured during January to December 2007 was higher for PSBs (4.34 percent) compared to private sector banks (3.58 percent). That is, the PSBs had, on average, negative 4.34 percent returns on the days the market return (S&P CNX NIFTY) was below its fifth percentile for the precrisis period from January 2007 to December 2007. India Infoline (6.99 percent), IFCI (6.80 percent), and Indiabulls financial services (6.44 percent) had the highest MES among the private sector financial firms. In the public sector, IDBI Bank (6.67 percent), Union Bank of India (5.41 percent), and Dena Bank (5.23 percent) had the highest MES. Focusing next on losses in terms of rupees, in the PSBs, SBI had the highest market capitalization loss of ₹30 crores, whereas for private sector banks, ICICI had the highest loss of ₹37 crores.

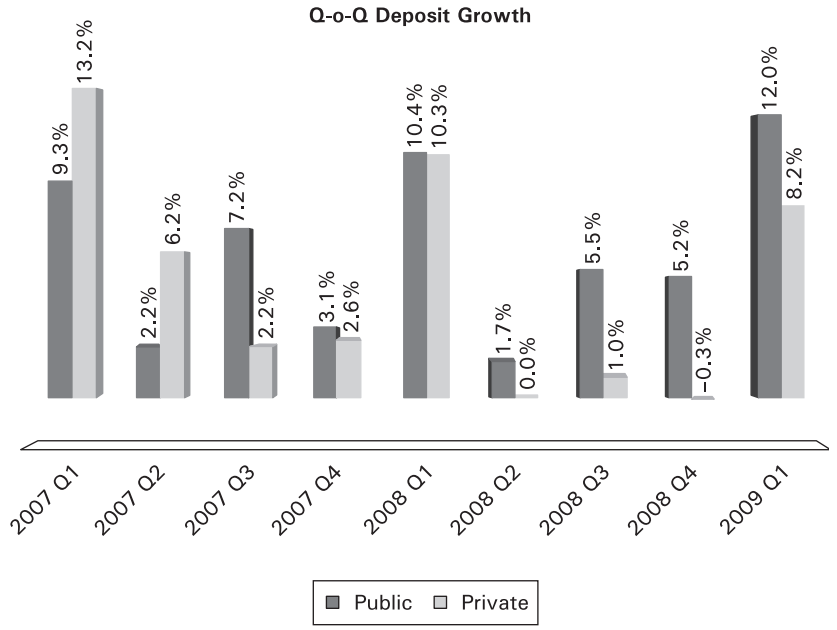
Second, PSBs performed *better* than private banks during the crisis in spite of having *higher* systemic risk. While private banks with high MES prior to the crisis (such as ICICI Bank) suffered heavily during the crisis, equally systemic state-owned banks (such as the SBI) gained in a relative sense. For example, both ICICI and SBI had an MES of 5 percent. However, during the crisis period from January 2008 to February 2009, ICICI stock fell by 73 percent, whereas SBI stock fell by a significantly lower 54 percent.

Third, while private sector banks with higher vulnerability to a crisis experienced deposit contractions, the reverse was true for PSBs. Using the RBI deposit flow data, Figure 5 shows the quarterly change in deposits for public and private sector banks. We see that when the crisis initially hit India in 2008, both public and private sector had similar deposit growth rates. In Q1 2008, deposits for both sectors grew by 10 percent. However, as the crisis worsened, the disparity between public and private sectors is evident. PSB deposits grew by 1.7 percent (Q2), 5.5 percent (Q3), and 5.2 percent (Q4) compared to a much lower growth of 0.0 percent, 1 percent, and –0.3 percent for private sector banks.[3] This suggests that investors treated public

3. Toward the end of the crisis, both sectors posted relatively higher growth rates of 12 percent for the public sector and 8.2 percent for the private sector, a fact that can be explained by government stimulus package discussed later.

FIGURE 5. Q-o-Q Deposit Amounts and Growth for Public and Private Banks

The graph below shows the quarter-over-quarter (q-o-q) changes in deposit amounts for public and private sector banks. Deposit amount data is in INR crores for the period Q1 2007 to Q1 2009.



Source: RBI.

and private firms differently during the crisis. In particular, there was a shift in deposits from private sector firms to the public sector.[4]

And fourth, perhaps most strikingly, Figure 6 confirms that PSBs benefited from deposit growth even when they had greater vulnerability to a crisis.

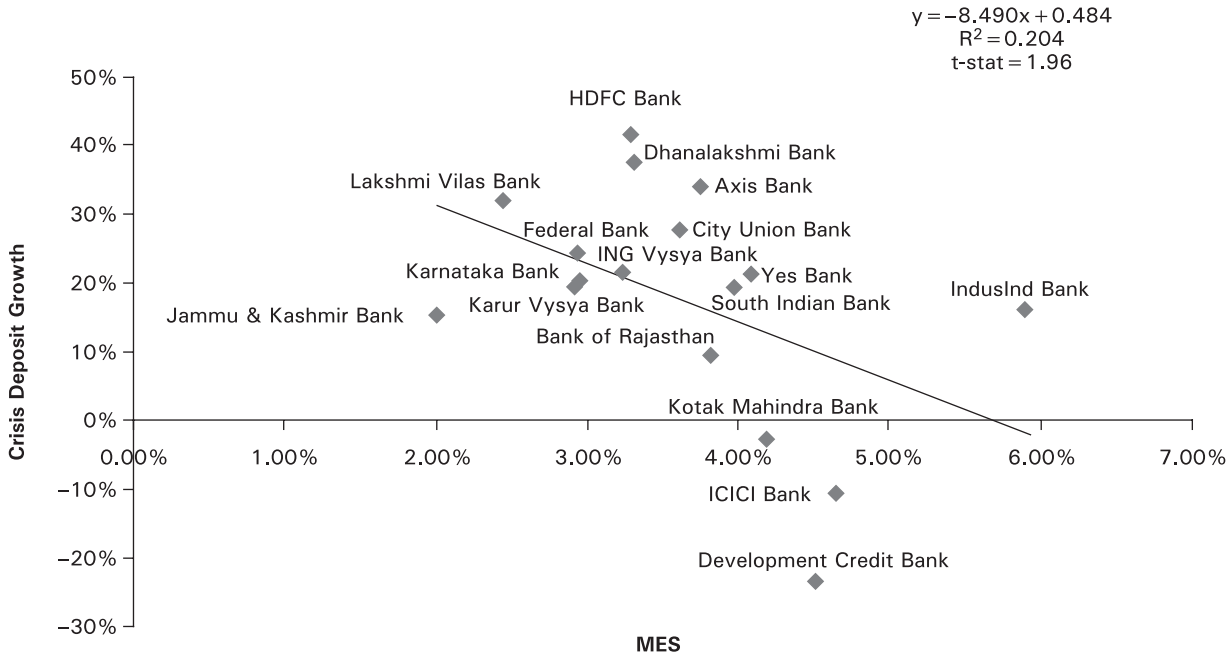
Graph A shows that vulnerability to a crisis (MES) does a good job of explaining the growth in deposits for private sector firms. As we would expect intuitively, private sector banks with high exposure to a crisis experienced greater deposit contraction during the crisis. A few cases illustrate this

4. Anecdotal evidence is consistent with this "flight-to-quality": Infosys transferred nearly ₹10 billion of deposits from ICICI to SBI just after Lehman's collapse in the third quarter of 2008 (*Economic Times*, 2009): *"SBI was the biggest gainer in the 'flight to safety' phenomenon observed after the collapse of Lehman. With rumours about banks being in trouble, investors shifted funds away from foreign and private banks into government banks … In the post-crisis quarter, even large corporates like Infosys moved their deposits to SBI. Infosys has disclosed that it transferred deposits of nearly ₹1,000 crore from ICICI Bank to State Bank of India last year."*

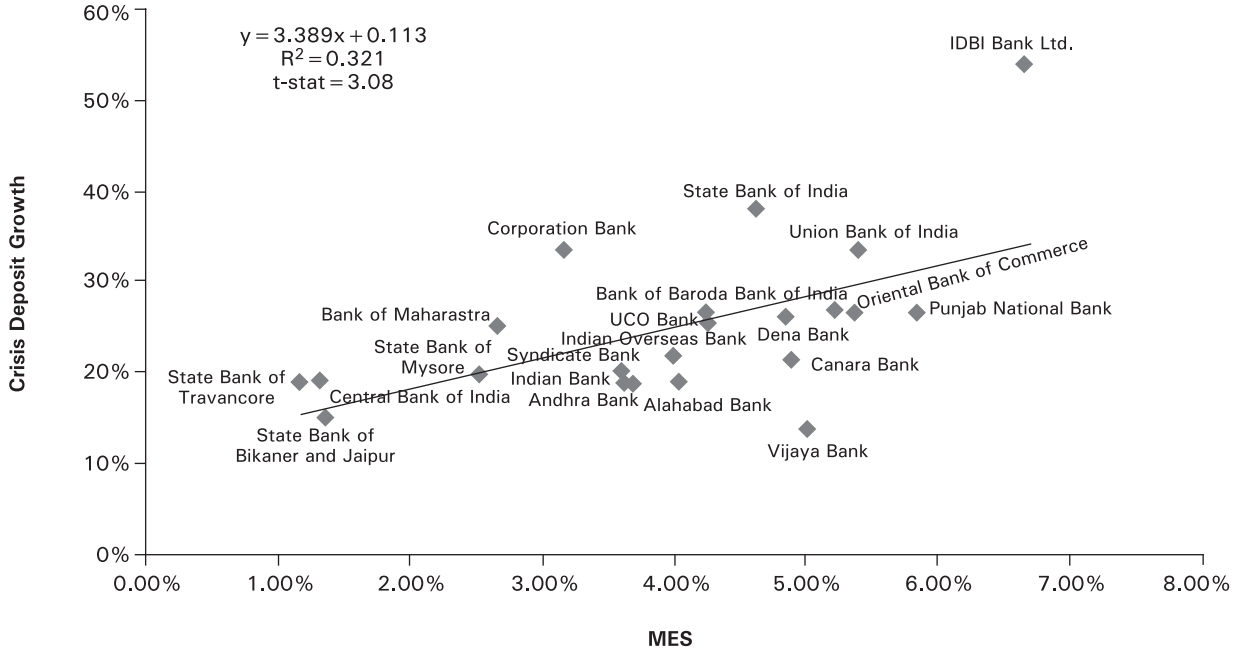
FIGURE 6. Deposit Growth versus MES for Private and Public Banks

The graphs below show the scatter plot of the MES computed for the period January 1, 2007 to December 31, 2007 versus the deposit growth for PSBs from March 31, 2008 to March 31, 2009. Market return is based on the S&P CNX NIFTY for the precrisis period from January 2007 to December 2007. Deposit growth for the crisis period is measured from March 31, 2008 to March 31, 2009. The 39 firms for which both MES data and RBI deposit growth estimates are available were used in this analysis.

Graph A: Private Banks



Graph B: Public Banks



Source: Acharya and Kulkarni (2012).

point well. Indusland Bank with a high MES of 5.90 percent had a deposit growth of 16 percent in the crisis period. Compared to this, Axis Bank, with a relatively lower systemic risk exposure (MES of 3.75 percent), had a higher growth rate of 34 percent.

Graph B shows that, for PSBs, there is a somewhat counter-intuitive finding: greater vulnerability to a crisis in fact led to greater deposit expansion! Looking at specific examples, we see that deposits for SBI (MES of 4.63 percent) grew by 38 percent whereas, in contrast, deposits for Andhra Bank (with a lower MES of 3.61 percent) grew by only 20 percent.

Is it possible that the government backing of public sector firms distorted investor and market behavior during the crisis, rewarding public sector firms with greater vulnerability to the crisis, given the greater likelihood that more vulnerable banks will be bailed out in the event of a failure during the crisis? Evidence does suggest that weaker PSBs received capital injections, in whose anticipation depositors and stock market investors rewarded riskier PSBs while penalizing private sector banks with similar risk.

When the Indian government announced a number of wide-ranging stimulus plans to jumpstart the banking system, PSBs were promised capital injections to help them maintain a CRAR (risk-adjusted capital ratio) of 12 percent. The government launched three fiscal stimulus packages during December 2008–February 2009. As part of the second stimulus package, the government recapitalized state-run banks and infused nearly ₹3,100 crores in 2008–09 as tier-I capital in a few PSBs. In order to fulfill the funding gap, the government requested financing of ₹1,700 crores ($3.4 billion) from the World Bank in December 2008. Importantly, the timing and size of the capital injections was left up to the discretion of the government. Capital injections were to be determined based on PSBs' ability to access equity markets, capital requirements for growth, and existing capital resources (World Bank, 2009). An additional infusion of ₹16,500 crores was projected for the year 2010–11 to help PSBs maintain the minimum 8 percent tier-I capital to risk weighted asset ratio (Government of India, press release, 2010).

Investigating who received support tells the familiar story of worst performers being propped up. In February 2009, the government announced a capital injection in three PSBs: UCO Bank (₹450 crores), Central Bank of India (₹700 crores), and Vijaya Bank (₹500 crores). For the 2008–09 period the government injected a total of ₹250 crores into United Bank of India. The government also announced capital infusion of ₹6,121 crores in five more PSBs: IDBI Bank (₹3,119 crores), Central Bank (₹2,016 crores), Bank of Maharashtra (₹590 crores), UCO Bank (₹375 crores), and Union Bank (₹111 crores).

As of March 2009, all these banks (except Union Bank) had tier-I capital less than 8 percent: Bank of Maharashtra (6.1 percent), Central Bank of India (7.0 percent), UCO Bank (6.5 percent), Union Bank of India (8.2 percent), Vijaya Bank (7,7 percent), and IDBI Bank (6.8 percent). Based on the MES measure of vulnerability to a crisis, these were also among the riskiest banks in our analysis. For example, IDBI had an MES of 6.67 percent; Union Bank of India, 5.41 percent; and Vijaya Bank, 5.02 percent. UCO had a relatively lower MES of 4.26 percent. Indeed, IDBI with a high MES of 6.67 percent received the highest capital injection of ₹3,119 crores.

With such generous backing of the Indian government, PSBs came out in the retail sector with inexpensive housing, auto, and education loans. For example, they were the lead financers in the Tata Nano auto purchases. They were also able to offer housing loans at lower rates than those charged by other banks and mortgage companies, such as Housing Development Finance Corporation (HDFC). Private financial firms, in fact, have complained that SBI schemes do not draw in new customers, but are instead targeted at existing customers and are, thus, targeted more to undercut competitors rather than stimulate the economy (Wharton, 2009). All this suggests that the state banking sector may have grown during the crisis at the expense of private banks. Measures taken by the government may have helped bolster PSBs, but they have also made it difficult for private sector financial firms to compete with them.

III

That financial firms with access to explicit and implicit government guarantees for public sector firms fared better *during* the financial crisis has, in fact, been the theme worldwide: these firms survived the crisis or even expanded post-crisis while the ones without such access have failed or shrunk. A striking case in point has been the growth of the GSEs (Fannie Mae and Freddie Mac) and commercial banks in the United States—both sets of institutions with explicit government support and ready access to central bank emergency lending. These institutions expanded their holdings of mortgage-backed securities during the crisis while investment banks and hedge funds de-leveraged and sold these securities. Fannie Mae and Freddie Mac were hardly the better-performing institutions of this crisis based on their precrisis risk-taking behavior; they were, in fact, "guaranteed to fail" (Acharya et al., 2011).

So what are the similarities between the United States and India as far as government involvement in finance is concerned? Are there lingering risks for India of the form that were manifested for the United States through the risk-taking and eventual collapse of Fannie and Freddie? What preventive—or corrective—measures can India undertake in order to avoid a government-sponsored crisis? Or is India, the democracy with the greatest growth potential over the next few decades, destined to run into similar problems as United States, its democratic counterpart of the last century?

First and foremost, it is important to recognize that India is a tale of two parallel economies—not the white-money and the black-money economies, as immediately comes to mind—but of fast-paced urban India and sluggish rural India. Urban India provides most of the significant manufacturing and services growth to the economy; has affluent families even if coexisting with highly poor ones; and exhibits reasonable levels of access to bank savings, stock markets, mutual funds, insurance products, and the like. Rural India, in contrast, is farming-focused, is relatively poorer with current earning that is less than $2 per day, and has abysmal levels of financial inclusion. While agricultural wage labor does have access to informal savings schemes, that is a second-best solution (in the economic parlance), rather than the first-best. Given such a lack of financial inclusion in rural India, comprising over 75 percent of India's population by most estimates, there is both an economic and a political case for improving access to finance. How can the government achieve the transition of rural India in terms of growth and financial access to levels that are at least comparable to those of urban India, if not of the most developed economies?

Unfortunately, answers in India to questions of this sort have by and large been of brute-force interventions, rather than a nuanced enabling of the private sector in aiding such a transition. The experiment of Fabian Socialism sapped the private sector of its growth potential for close to four decades post independence, and continued to leave an indelible imprint even through the reforms of the 1990s. Political forces ensured that a series of successive governments, under one pretext or the other, preserved the government hegemony over a large number of business segments (oil, natural gas, power, aviation, among others) that have yet to be privatized or are, at best, poorly privatized. While this imprint in itself would call for a separate treatment, more to the point of this book have been the government efforts to improve financial inclusion.

This is where the Indian government-sponsored enterprises in the financial sector come into play. Currently, the Indian banking sector is partly state-owned. State-owned banks own over 70 percent of banking assets;

until the 1990s reforms, the state ownership of the banking sector was in fact 100 percent. Indeed, India is one of the nine countries in the world to have a predominantly state-owned banking sector (the others being Bhutan, Libya, Algeria, Belarus, Turkmenistan, Egypt, and Costa Rica). Among fast-growing emerging markets, its state presence in banking is paralleled only by China. The state-owned banks in India enjoy privileged branching, especially in rural areas, where the private sector, often eager to enter, is by and large restricted from entry, or at least not allowed to enter by default.

The origins of such desire for state control of rural finance are many. It is partly rooted in the socialist view of the economy that took immediate hold following independence, but it is largely a matter of political convenience. It is important to keep over 75 percent of India's population happy, at least in the short term, when they are about to cast important votes. Not surprisingly, a study by Cole (2009) found that agricultural lending in India has a cyclical pattern that is not coincident with the economic cycle of India, but is coincident with the political cycle instead.

There are distinct parallels between this foray of the Indian government into rural banking and the role of Fannie Mae and Freddie Mac in the United States.

First, affordable home ownership goals of the United States (applicable to low-income and thereby poor–credit quality households) relate to "priority sector lending norms" in India (focused on agriculture and small-scale industries, but also include housing).

Second, the GSEs in the United States underwrote over 50 percent of mortgage credit risk in the residential housing market. This corresponds to the large, close to 70 percent, share of state-owned banks in India.

Third, the forbearance that was exhibited toward the GSEs—in good times, through generous capital requirements (2–2.5 percent of capital against underwriting the credit risk of residential mortgage pools versus 4 percent for private sector) and in bad times, through government conservatorship—mirrors closely the reluctance of the Indian government to shut down any state-owned bank as discussed in section II (or for that matter, even pull down shutters on rural cooperatives that also aid the priority sector lending goals).

Fourth, the GSEs crowded out the private financial sector in prime (high credit quality) residential housing market and eventually also in affordable housing loans. So have the state-owned banks in India crowded out the private-sector counterparts. The annual incomes of bank customers in private and foreign banks in India are substantially greater than those of the customers of public sector and cooperative banks; and yet, like the quality

of subprime loans of GSEs, the nonperforming assets from priority sector loans are greater for state-owned Indian banks than for private and foreign banks in India.

The Indian state has thus freely traded in credit extension to the poor in a manner that is similar to that of the United States government. Alas, it too has condemned its poor to be even poorer in the process. A bulk of the priority sector lending in India goes to farming loans. Since banks are effectively forced to lend at quantities that they would not lend had they been entirely private and free of state-enforced lending norms, the quality of the lending is poor. Put simply, lending happens down the quality curve up to a point that is not worthy of finance. In turn, even low-productivity farming and agricultural investment in rural India can be readily financed. Of course, loans in such investments go bad, but most of the losses are concentrated in state-owned and cooperative banks. The strong clutch of the government now becomes a crutch, readily extending forbearance where the invisible hand of the market would result in shutting down of banks. Since these banks never fail, they do not care about the quality of their loans. Since they do not exercise due diligence with respect to borrowers, the farmers do not invest in high-productivity and innovative agricultural methods. And, of course, they do not consider retooling to any other skill set besides farming. Thus, neither the banks nor the farmers are subject to the capitalist creative destruction that would seem essential to success in a country where the rural, farming-focused sector is so large and yet low on productivity.

One wonders in fact if the demographic dividends that India is supposed to reap in the next few decades, by virtue of an anticipated decline in its ratio of the dependent to the working-age population, will be more than offset by the negative dividends resulting from the poor quality of farming? In a country of over 1.21 billion people by the latest census, with a rapidly expanding middle class, investments in productive farming ought to find a center stage. Yet, India stumbles from year to year, facing acute food shortages that fluctuate with the vicissitudes of tropical monsoons and create a never-ending predicament for the RBI, India's central bank, in whether to fight food inflation through interest-rate rises or aid the economy's reaping of its demographic dividends through interest-rate cuts. As RBI's deputy governor, Subir Gokarn (2011), comments:

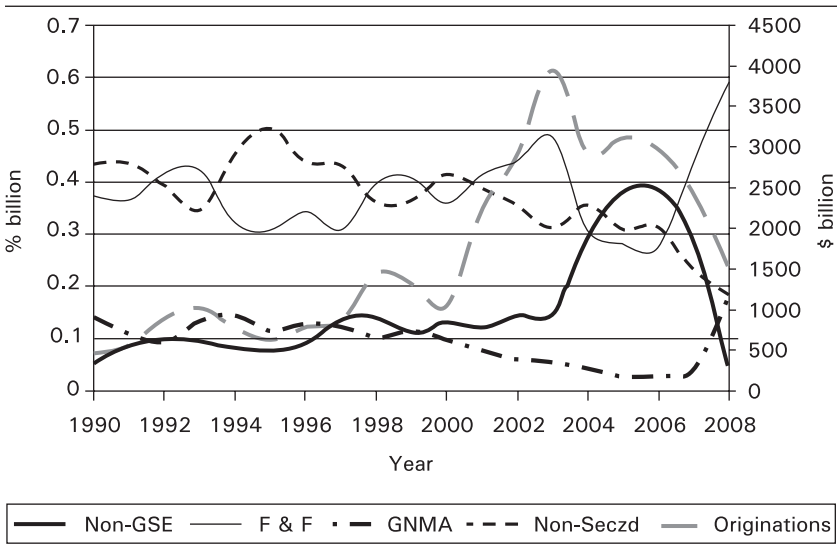
> Food inflation, covering both unprocessed and processed items, already at a relatively high 10.4 per cent in June 2009 (when the headline rate troughed) soared to 20.2 per cent in December 2009. It has come down since then, but has remained high at 6.4 per cent in February 2011 … All along, the objective was to not disrupt

> the growth recovery, while containing the spread of inflationary pressures from food and energy into a wider process. The Reserve Bank, therefore, chose a steady, calibrated response. Given the significance of supply side inflationary pressures throughout the period, stronger interest rate actions might have slowed growth far more than they would have slowed inflation.

Another concern arises by understanding how Fannie Mae and Freddie Mac eventually failed. There was a "race to the bottom" between the public sector and the private sector in the United States finance. In their important book on the American corporation, Berle and Means (1932) introduce the concept "race to the bottom": the idea that competition can lead to a reduction of standards. While Berle and Means were referring to regulatory standards and competition among the (then) 48 states, it is not difficult to see how the same arguments could be applied to government-sponsored enterprises and likewise financial institutions.

Figure 7 graphs the tremendous growth in the mortgage market in the United States, and the fraction of residential mortgage originations each year that were securitized by the GSEs or private-label firms, as well as the amount not securitized. As can be seen from Figure 7, the mortgage market

FIGURE 7. Growth in Mortgage Market, Securitization and Percentage Share of Market in the United States



Source: Acharya et al., 2011.
Note: GSE = government-sponsored enterprise.

increased dramatically in size, especially in the latter 2003 period, with the emergence of the riskier subprime and Alt-A mortgage lending. Figure 7 shows that mortgage securitization generally increased every year from 1995 onwards, albeit for different reasons in different periods. In the period up to 2003, the GSEs dominated the market, but, then post 2003, non-GSE MBS more than tripled from 12 percent to 38 percent of the origination market. By 2006 and 2007, the Figure illustrates well the competitive struggle as the GSEs recovered their market share.

Was the growth in private-label MBS the culmination of the dream of the 1982 "Commission on Housing" in the United States coming to fruition, albeit two decades later? Or was it the emergence of new government-sponsored enterprises in the form of too-big-to-fail financial institutions? Acharya et al. (2011) convincingly argue for the latter, describing the battle between the GSEs, whose accounting problems in 2002–03 slowed their balance sheet growth, and the too-big-to-fail large complex financial institution (LCFI), who first gained market share when the GSEs slowed but then eventually lost their share by 2006 again to the GSEs which had recapitalized their losses by then. Along the way of this race to the bottom in mortgage finance, underwriting quality deteriorated across board, setting up the stage for an unprecedented housing boom that crashed in 2007.

Paradoxically, the mother of all failures—those of Fannie and Freddie—ended up with these entities' owning the mother of all shares in the mortgage finance post crisis in the United States, so much so that over 90 percent of mortgages currently being issued in the United States are guaranteed by some government-sponsored enterprise. Something similar, albeit on a smaller scale, happened in India in 2008 as well, as the genie of government guarantees surreptitiously crept up, stabilizing the banking sector but eroding the private banks. The genie needs to be put back in the bottle now, but government guarantees are unfortunately being anointed as the pillar of modern Indian banking.

Let us rewind to 2008. The crisis hit India somewhat unexpectedly. In early 2008, there were talks of how "decoupled" emerging markets such as India and China had become from the financial and economic malaise of the Western economies. However, the interconnected nature of the global financial plumbing debunked any such myth rather soon. In the case of India, a number of large multinational firms had external bank and corporate bond borrowings in foreign currencies and markets. As the Western financial sector started unraveling in early September of 2008 and Lehman Brothers filed for bankruptcy on September 15, the market freezes abroad created a severe

liquidity shortage for these Indian firms. Their immediate response was to ask for redemption of their savings from the Indian money market funds. As these funds faced liquidations of their portfolio holdings, they also withdrew from their lending to financial institutions, including banks. The precautionary desire of Indian corporations, stemming from the market freeze abroad, effectively began to translate into a freeze in the Indian interbank markets. While all this was happening, the stock market had already witnessed a 50 percent drop from its peak at the end of 2007, and some private sector Indian banks with foreign exposures were under watch by investors for a potential run. What ensued was in many ways magical in the short run but, as described empirically in section II, entrenched the stronghold of public sector banking in India even further.

Savers in the Indian economy, fearing a banking crisis and runs on the private sector banks, started moving their deposits to PSBs. As per RBI estimates (also shown in section II), PSB deposits grew by 24.1 percent during fiscal year 2009 (March 2008–March 2009) compared to 22.9 percent growth a year earlier. In comparison, private sector deposit growth slowed from 19.9 percent to a mere 8 percent for the same periods. In anecdotal evidence that is consistent with this "flight-to-government-guarantee," Infosys transferred nearly ₹10 billion of deposits from ICICI Bank (a private sector bank) to the SBI (the largest PSB) just after Lehman's collapse. And unsurprisingly, when the Indian government announced a number of wide-ranging stimulus plans to jumpstart the ailing banking system, several weak PSBs received a significant share of stimulus to restore their capital levels.

The flight of deposits in this episode appears to have stacked the odds against the private financial sector considerably since. They are, in effect, getting somewhat crowded out. The credit grew for PSBs by 20.4 percent in 2009 (compared to 22.5 percent in 2008), whereas for private sector banks, it grew by only 10.9 percent (compared to 19.9 percent in 2008). In the retail segment, PSBs came out with inexpensive housing, auto, and education loans, emerging as the lead financers in the Tata Nano auto purchases. The ruling party claimed that "public sector financial institutions have given our economy the stability and resilience we are now witnessing in the face of the economic slowdown." And while such stability and resilience has converted—perhaps just reinforced—Indian PSBs into the equivalent of GSE Godzillas, who now want larger share of all intermediation markets including insurance, the private sector King Kongs have recently complained—as they did in the United States about Fannie and Freddie's low-cost funding—that PSB schemes are primarily undercutting competitors, given the former's implicitly guaranteed funding base.

All evidence presented in section II suggests that the state-banking sector in India grew during the crisis at the expense of private banks. The government, however, has yet to recognize—or acknowledge—that the growth of state-owned banking sector since 2008 has been the effect of state guarantees, *not* state ownership. Banks all over the world were stabilized—whether public or private—once governments backstopped them. This emergency backstop, the emergence of the genie out of the bottle, need not, however, be coincident with the misfortunes associated with state ownership in good times. One, state ownership creates severe moral hazard of directing bank lending for politically expedient goals and of bailouts when such lending goes bad. Second, state ownership restricts the ability of state-owned banks from raising arm's length capital against state's stake, strangling their growth and keeping these banks—and certainly their private capital base—smaller than it need be.

Until recently, there had been a consistent trend toward the privatization of the banking sector in India. However, the recent underperformance by private sector banks has raised some doubts regarding this approach, and created a political consensus against the precrisis notion that the state-owned banks be fully privatized in due course. Many see this as another nail in the coffin of efficient privatization of sectors with significant presence of the Indian state. The government-sponsored enterprises can swiftly morph into hedge funds of the likes of Fannie and Freddie that are *guaranteed to fail*. This should strike a note of caution to the stance of Indian policymakers against drawing conclusions favoring a state presence in the financial sector.

Indeed, an Indian GSE has been before where Fannie and Freddie are now. The free trade by the Indian state historically extended beyond credit markets. In 1963, Indian state created the Unit Trust of India (UTI), which for more than two decades remained the sole vehicle for investment in the capital market by the Indian citizens. In mid 1980s, PSBs were allowed to open mutual funds. UTI rode the stock market rise of 1990s till the "Ketan Parekh scam" burst the market. UTI's flagship and largest scheme, US 64, had promised returns as high as 18 percent over a period going up to two decades. A full-fledged run on the Indian stock markets would have likely ensued had the government not come out with a rescue package. UTI Act was repealed, UTI was broken up, and UTI Mutual Fund still runs, but now like any other mutual fund, controlling less than 10 percent share of the market and operating at a distance from the government. UTI, like Fannie and Freddie, was just that—guaranteed to fail—a government-sponsored hedge fund that brought about a government-sponsored crisis.

And while it has not led to a significant crisis so far, the Life Insurance Corporation (LIC) of India, the largest state-owned life insurance company, is again also the country's largest investor. The penetration of its insurance business in rural India, which might seem to be the primary goal of state owning such an enterprise, is far less impressive, than its penetration as an investor, funding close to 25 percent of the Indian government's expenses, most notably through public sector projects like dams.

IV

Hopefully, this article has made a convincing argument that examining the performance of state-owned banks in a systemic crisis relative to private sector banks that have access to a weaker set of government guarantees is not a sound basis of assessing the overall attractiveness of state presence in the financial sector. While there is always a justification for greater presence of government institutions in the financial sector (or greater extent of government intervention in a crisis), this is likely associated with the misfortune of crowding out the private sector in the long run unless the government intervention has a graceful exit attached to its tail. Without such exit, government bailouts—and investor and depositor anticipation of such bailouts—for PSBs have deep consequences on competitive forces in the financial sector, potentially shaping their long-run form, and always stacking the odds against the flourishing of private banks. The growth of state-owned banks in the recent crisis thus raises several questions.

How will the private sector banks in India respond to the emerging strength of PSBs? Will they undertake greater risks and leverage in order to compensate for their likely underperformance when the next crisis hits? Can India afford such a race to the bottom when over 70 percent of the banking assets are funded in a manner that effectively represent off balance sheet liabilities of the government? And this too, in times when India's fiscal deficit as a percentage of its GDP is among the highest in the world? Similarly, will the private insurance sector be able to grow with reasonable premiums for a deprived population from a starting point where they must compete with LIC's effective monopoly and national champion status? As UTI's "unwinding" shows, things work out well in the private sector when government lets go off its muscular grip.

While the macro-prudential policies of the RBI have stood India in good stead against the real-estate boom and inflation risks to date, they are likely to come under increasing strain if the private financial sector sees

demographic dividends disappearing beyond a few years and feels the heat to compete aggressively with the public players. Will RBI's asset-level leverage restrictions such as loan-to-value (LTV) ratios be meaningful if banks are lending at subpar rates and housing prices—denominators in the LTV ratios—are heavily inflated? Would nonbank financial firms develop a world of "shadow banking" for the private financial sector to park risks away from scrutiny of the RBI? Would it not be better instead to create a level playing field where all financial firms are private, but are charged upfront for government guarantees in the form of deposit insurance (up to reasonable ceilings), allowed to branch freely in rural areas as growth demands, and subject to a clear resolution authority, so that both financial firms and their borrowers undergo creative destruction and are, thus, incentivized to innovate and experiment? With better-run banks and a faster-growing economy, the economy could be weaned off priority-sector norms in due course down to a de minimis level.

The Indian state-owned banks are right now in the best of health they have been. Since many of them are already publicly listed, the way to their privatization and creation of a level playing field in the financial sector is relatively straightforward and needs to be undertaken without any further adieu.

Comments and Discussion

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This interesting paper considers an important question for financial sector stability in India: Does the dominance of state ownership in banking actually raise rather than reduce the risk of financial crises? The paper begins by considering a recent assertion in policy circles in India that the movement of deposits away from private banks to public sector banks in 2008 was a flight from riskier to safer banks. The empirical results show that the flow of deposits into the public sector banks is not explained by the financial positions of these banks. This suggests that the flight to safety is a flight to deposit insurance rather than to more sound banks. Viral proceeds to a more general discussion of the perils of government ownership of financial institutions with lending mandates. He argues that public ownership brings with it implicit, if not explicit, subsidies to insurance of bank liabilities that increase financial instability and pose a crisis risk for India.

The empirical analysis in the paper counters the argument that state ownership of banks is desirable because the public sector banks choose asset portfolios that are less exposed to severe financial risks than do private sector banks. The regressions show that deposit growth in 2008 is positively correlated with the MES for 2007 for private banks alone, but that deposit growth across public sector banks is negatively correlated with their MES. These estimates seem pretty convincing. Viral also shows that this measure of ex ante downside risk does not show any systematic meaningful difference between private and public banks on the eve of the crisis. We can see that something other than just exposure to severe adverse shocks explains the deposit shift. Another suggestive piece is his observation that share prices fell substantially more for private banks than for public sector banks with similar ex ante tail risk.

The natural explanation for the shift in deposits in the crisis is the one favored in the paper: savers perceive that they are more likely to recover their deposits from an insolvent public sector bank than from an insolvent private bank. Public sector banks are privileged in government-financed bailouts so that the interpretation that the deposit shift was caused by distortions in guarantees of the banking sector is sensible.

The raw data implies that relative balance sheet risk does not explain the shift. However, I have some concerns about the regressions. The result that deposit inflows are positively related to MES for public sector banks is perverse. It suggests that deposit growth may be determined by additional bank-specific characteristics or that the measure of risk is missing something about the relative security of deposits. A different measure of downside tail risk or the inclusion of more conditioning variables could change the coefficient sign and be more informative of how the risk of bank failure affects depositors' choices. If we accept that guarantees and prospective bailouts explain the flows, then we should observe either a negative or a null relationship between flows to public sector banks and the balance sheet risk of those banks. The significant positive correlation for the public sector banks does not negate this conclusion, but it does not inform it either. For example, bank size may matter to depositors and matter more for public sector banks because they are guaranteed. I think it is worth including additional regressors to raise our confidence in the regressions and in using the MES to measure the risk that matters to depositors.

It would be interesting to see how the relative growth in deposits is distributed between domestic and foreign depositors. Breaking down foreign resident deposits between nonresident Indian and other foreign sources might be interesting as well. The global flight to safety in the financial crisis is credited with the fall in US treasury yields from the middle of 2007 through 2008 and the coincident rise in yields for US corporate securities. India realized a reversal in capital flows between 2007 and 2008. A possible, and credible, explanation for the reduction in private bank deposits in 2008 is that foreign depositors favor private banks in India and reduced their holdings to purchase US treasuries or similar assets. A general global flight to safety led to a decline in foreign portfolio capital in India. This presumably was reflected in a reduction in bank deposits. Since domestic residents face capital controls for acquiring foreign securities and accounts, a reduction in deposits by foreign residents should not be matched by a proportionate reduction in domestic resident deposits (until the point that cash is safer than deposits). Under these conditions, a global flight to safety would lead to the observed contraction in deposit growth for private banks relative to public sector banks.

The observed increase in deposit growth for the public sector banks is small in comparison to the contraction in deposit growth for the private banks. This could be consistent with foreign and domestic depositors being distributed differently across private and public sector banks. Households and small enterprises probably favor public sector banks and among these,

the ones with more branches. Without access to foreign asset markets, these deposits would continue to grow with domestic income. In the global flight to safety story I am telling, the shift away from private banks would be correlated with the riskiness of the private banks. Any exodus of foreign deposits from the public sector banks would also be correlated with the riskiness of deposits in those banks inclusive of the effects of government guarantees. If foreign residents hold only a small fraction of total deposits in the public sector banks, then the data may not reveal the dependence of foreign deposits on the insurance advantage of state ownership. The distribution of foreign and domestic depositors across private and public sector banks could be determined by government guarantees. Domestic depositors could seek those guarantees while foreign depositors seek higher marginal returns. But, the change in the growth rate of deposits in public sector banks would not show the effects of the difference in guarantees because of the impact of capital controls.

I think this paper makes a valuable contribution in refuting the argument that the shift in deposit growth away from private sector banks in 2008 evidenced less exposure of public sector banks to systemic risk than of private banks. My comments thus far are suggestions for looking more closely at the changes in bank deposit growth and discussing the effect of foreign capital flows on these changes in the crisis. Additional support for the hypothesis that guarantees of state banks drive the shift in deposit growth might be found by looking for differences in the responses to the crisis by depositors who are not protected to the same degree by government guarantees. All commercial banks, including branches of foreign banks are required to insure deposits up to one lakh rupees in size through the Deposit Insurance and Credit Guarantee Corporation. Some deposits are excluded from this regulation (e.g., deposits received outside India and interbank deposits). These could be more sensitive to the guarantees given to public sector banks than other deposits. The disaggregation might be useful for uncovering evidence that guarantees matter.

I now turn to the more expansive part of the paper which concerns the implications of state ownership of banks and of differential government guarantees for financial stability and the allocation of resources. My primary criticism of this very interesting discussion is that it is a big step from showing that the public sector banks are no less exposed to crisis risk than are private banks, and enjoy privileged government financial support to whether public sector banking is poor policy. The arguments in favor of privatization could benefit from more detail and nuance.

The most important topic, however, is that government guarantees of banks raise exposure to financial crises. We have seen the effects of explicit and implicit guarantees of banks following capital account liberalizations in emerging market economies repeatedly, and these are unpleasant. Such guarantees implicitly subsidize capital inflows and risk taking. In the absence of full capital account liberalization, the guarantees still distort the allocation of credit because bank owners and management do not internalize downside risks, but realize benefits from good outcomes. In the case of public ownership, we have examples of directed lending with public subsidization of lending and risk taking that result in boom–bust cycles.

Viral does a nice job explaining how guarantees with lending mandates can lead to overinvestment in socially less valuable capital and asset prices that reflect the private value of guarantees rather than the social value of investments. Since the resources of the government (or the will of its taxpayers) are ultimately bounded, the insurance indemnity cannot grow forever. Eventually, the market value of the claims exhausts investors' perceived value of the public sector guarantee, a crisis ensues and a bailout is demanded.

In this paper, Viral compares state ownership of banking in India to government-supported mortgage lending in the US. In other articles, he has elaborated how the mortgage GSEs in the US contributed to unsustainable investment in residential construction, loans to borrowers who could not service their mortgages and a housing price bubble. Fannie Mae and Freddie Mac are publicly held corporations that enjoy implicit government guarantees and are directed to lend in the interest of social goals. Without sufficient regulatory restraint, this combination encouraged risk taking by the GSEs and by private lenders who anticipated that the GSEs would intervene in the mortgage security market. This is an important story for understanding the financial crisis, although its centrality to the crisis is controversial. Viral's point in this paper is that Fannie Mae and Freddie Mac are examples of what directed lending with government backing can lead to.

The analogy to public ownership of banking in India is the combination of explicit government guarantees, directed lending, and public equity. The implication is that because the US mortgage GSEs were at the center of the housing boom and mortgage securities market that a similar institutional structure of public sector banks in India could also lead to financial crisis. I think that the problem of state ownership and directed lending for financial stability in India needs to be explained and articulated in terms of the characteristics of Indian banking and finance. The similarities in institutions are broad and the details of regulation and mandates matter. Whether a

guarantee leads to excessive insurance liabilities depends on regulation of the activities of the insured. For example, the Housing Regulatory Reform Act of 2005 (US Senate 190) failed to pass. We cannot know if it could have averted the US crisis, but the arguments for it were on point. These concerned illusionary profits in mortgage lending and the stability of the mortgage GSEs. From this perspective, government ownership can inhibit reforms and prudent regulation. The point that privatization without subsidies and correctly priced deposit insurance is a better idea is well taken.

My last comment is that the paper casually states that public ownership of banks in India hampers productive lending to agriculture. There is a literature on how state and private banks lend in India and whether firms are constrained in access to loans. For example, Banerjee, Cole, and Duflo (2003) find a large positive difference between the marginal productivity of loans and bank lending rates. They also find that banks reissue loans at constant nominal values and show empirical evidence that firms are credit-constrained. Despite mandates, both private and public sector banks may not be allocating resources to productive rural investments in agriculture. In his paper, Viral mentions that private banks are inhibited from opening rural branches. The policy goes the other direction: a condition of opening new branches in already served (e.g., urban) markets is the addition of branches in markets without a bank. Viral's suggestion that rural areas and agriculture could benefit from private banking investment is supported by Burgess and Pande (2005). They study the effects of the branch expansion policies of the RBI that were in force between 1977 and 1990 and find that the expansion of banking into rural areas is associated with poverty reduction and diversification of rural investment.

Banks in India reveal a preference for investing in government debt and this tendency is more pronounced in public sector banks. The term "lazy banking" is commonly used at conferences about banking in India. This tendency probably makes the public sector banks less vulnerable to financial crises, but at the cost of lending usefully. I think the warning Viral is raising applies to the prospects for further financial liberalization quite well. In a more competitive environment, banks that enjoy free and expansive guarantees will accumulate risks. Moral hazard could be a big problem for lazy banks that start learning to lend. In this way, I think the analogy to the US mortgage GSEs and housing crisis is a good choice and an important point. For many years, everyone was complacent about these lenders and their mandates. In the 1990s, they were requested to enable more households to own homes as financial market deregulation changed the market environment.

The warning I hear in Viral's paper is to beware of government ownership that has looked innocuous in the past as financial reforms are made.

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My comments as discussant are in six parts. After summarizing the main findings, I proffer alternative explanations for the author's main conclusions. Subsequently, I comment on and question the efficacy of the central applied "tool" of the paper, namely, MES. Then I raise aspects of Indian banking that should have been examined and critically explored to impart an institutionally richer texture to the paper; implication of this for national debt sustainability calculus is highlighted. Later I comment on the analogy to the US GSEs that the author makes. Finally, I conclude.

A. The proximate findings of the paper are:

    1. Indian PSBs came out ahead compared to the private banks during the global crisis in 2008. There was, in some sense, a domestic flight to safety at least in terms of garnering deposits in favor of the PSBs, and this translated into: (*a*) relatively better equity valuation for PSBs vis-à-vis private banks (and the "relative" is important because equity valuation of *all* banks in the sample declined); and (*b*) lower CDS spread for SBI compared to ICICI Bank, although CDS spiked up (and stayed high) for both.
    2. The share of private banks in the sector declined for possibly the first time in two decades after gradually rising up to over 70 percent.

B. The paper asserts that the above outcomes are undesirable and are wholly attributable to government guarantees to PSBs (i.e., driven by moral hazard). The paper also finds that among the private banks, those with higher risk had lower deposit growth and I think this is consistent with the model that the author has in mind (although it is not formally sketched out).

    But since government guarantees are binary in nature, why should there be dispersion around a positive trend between risk and deposit growth among the PSBs? This latter finding is not explained in the paper. Since the model suggests that government guarantees drive

higher deposit growth, individual characteristics of banks are largely irrelevant in the model as is presented in the paper.

There is another explanation for the main findings mentioned earlier. The Indian depositor essentially behaved like an equity investor. They reallocated their deposit portfolios away from private banks to PSBs. Why? A plausible answer is that Indian private banks may have suffered on account of reflected infamy. Around the crisis period, they were viewed as too avaricious for Indian depositors' taste. It was thought that much like their counterparts elsewhere—New York, London, and Reykjavik—who were role models for Indian private banks, they too may have been prone to misbehavior. It was probably also perceived that private banks were more exposed to the external environment than they were admitting to, and certainly the foreign banks based in India had imbibed bad habits like underreporting unhedged risks on their balance sheets. This driver of flight to safety is distinct from government guarantees to PSBs.

Is the decline in the market share of private banks permanent? The deposit reallocation in 2008 and 2009 was on account of the global crisis, but this has now dissipated. More recent data needs to be examined to assess whether a relative decline in the share of private banks compared to PSBs is a persistent and enduring feature, or, whether it was a temporary phenomenon.

Were the PSBs able to attract more deposits because they offered high deposit rates in 2008–09? It could be that they were more desperate than the private banks during the crisis despite ample liquidity support; bank-specific interest rate data on fixed deposits may shed some light in this context.

C. Turning to the MES, the outcome of the flight to safety to PSBs is observed in spite of PSBs, on average, being ex ante more vulnerable compared to private counterparts as measured by the MES.

The specific case study of SBI and ICICI banks is a good one because these are the largest banks in India—the former is government owned and the latter is privately owned. SBI and ICICI banks had the same MES prior to the crisis in January 2008, but divergent performance thereafter with the former gaining post crisis.

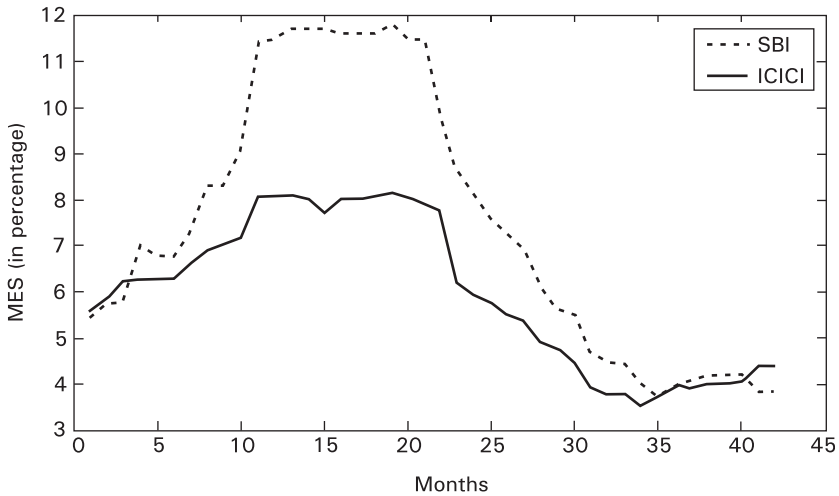
Two dimensions need to be kept in mind for the MES exercise:

- Behavior of the measure beyond the paper's sample period.
- Diagnostics to determine statistical confidence in the MES measure.

It may be informative to extend the analysis to at least one full fiscal year beyond the crisis to determine persistence. It could be that private banks have started to regain market share and we need to be aware that the values of average MES have changed markedly over this period. Using Bloomberg data I calculated the MES measure for 42 months starting January 2008 to June 2011 (see Figure 8). It is obvious how much the MES has varied and, in fact, by June 2011, ICICI Bank had lower risk compared to SBI. I used these two banks only as examples, and it could well be that we would find something different among other (bilateral) comparisons from the sample of banks used in the paper.

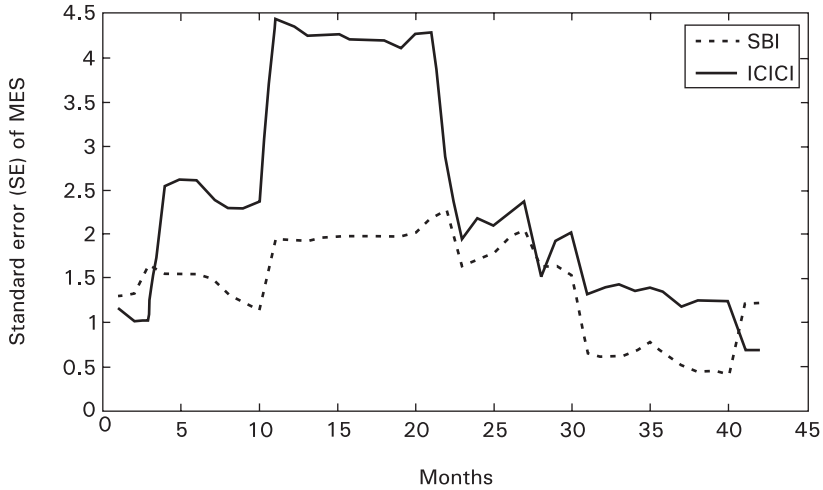
The MES measure may also be very sensitive. The very short trading horizons at which equity markets operate, as also the possibility of return to normality post crisis, suggest that the MES has to be subjected to some diagnostics. At first pass, standard errors would be standard (and useful) in this regard. It could be that the MSEs of individual private and public banks may fall in the standard error band and, therefore, point comparisons at specific dates may be misleading for drawing conclusions. I plotted the standard errors of the MES for the same 42 months and it is clear that there is a large degree of oscillation (Figure 9).

FIGURE 8. Monthly MES, January 2008–June 2011



Source: Bloomberg data.

FIGURE 9. Standard Errors of MES



Source: Bloomberg data.

D. In terms of details regarding the banking system, the paper could benefit by looking at another set of variables, for which data is available, to gauge and examine the underlying forward-looking risk profiles of banks. For example, implications emanating from government ownership related to commercial and operational functions of the banks: these are related to outcomes for nonperforming assets, the asymmetry in provisioning policy that we see between public and private sector banks, differential net interest margins that banks earn, etc. This kind of forensic data would have given the paper's theme not only a highly relevant broader perspective, but would also have enhanced the case that the author sought to make.

How credible are (blanket) guarantees (i.e., when they are given to one and all)? In India, even private sector banks when they have got into problems have brought about early and decisive intervention by the authorities, especially the RBI; assurances have been made that depositors will be protected. Take the case of Global Trust Bank, one of the star private sector banks, which was established, operated/expanded and wound up—all within 10 years! The bank failed and was taken over by a PSB, the Oriental Bank of Commerce, in a deal shepherded by the RBI. ICICI Bank, at the receiving end of, I think unfounded rumors in 2003 and 2008, warranted strong, credible, and fairly prompt guarantees by the RBI that all depositors will be protected. I think when we look at the credibility of the guarantee to

depositors, the ownership per se is not important. Recent crisis in the US, the UK, and the Eurozone has amply demonstrated that entities that are too big, too complex, too interconnected, or too politically connected to fail are always bailed out regardless of ownership, and private debts then become public debts. To then assess how credible this guarantee is (i.e., whether the state actually has the requisite deep pockets), the government's debt sustainability calculus has to be rescrutinized by encompassing the government's assumption of contingent liability for the sector. Ireland is a recent basket case example where the guarantee to the private banks has overwhelmed the country's GDP, let alone the sector.

E. The analogy with US GSEs needs to be nuanced and a fair bit of caution is warranted in this context. The risk exposure of Fannie Mae and Freddie Mac is not only to one sector; it is, in fact to one subsector within a single sector—housing within real estate—and none of the Indian PSBs are anywhere near those kinds of sector risk concentrations. If anything, Indian banks are fairly diversified on the asset side.

   There is another question in the US context, which requires consideration, but which is wholly ignored in the paper. Was it solely the credit enhancement role facilitated implicitly by the government that led to the ultimately unsustainable boom in the US housing market? To be honest, there is a lot of blame to go around, namely, long-standing fiscal incentives for home buyers; the nonrecourse nature of home loans in the US; the overhang of loose monetary policy by Greenspan and his able deputy Bernanke with substantial deviation from Taylor's rule for long periods of time (see, e.g., Taylor, 2009); and the role of (perverse) incentives within Wall Street. In other words, there are broader drivers, deeper explanations, and qualitatively important reasons, rather than just the GSEs guaranteed by Uncle Sam for the housing finance-inspired crisis.

F. On the policy side, the paper argues for privatization of Indian PSBs and other government-owned intermediaries (LIC is mentioned in the paper). It is apposite to ask how closing the safe option for Indian savers be welfare enhancing. Can it impact household financial savings and India's overall savings ratio? It is clearly an issue that needs to be looked at more closely than is the case in the paper, especially if there is a flight to safety cause rather than government guarantees. My conclusion to the paper is that many of us would agree that financial intermediation in India will benefit from privatization and reading

this paper does not dilute this assessment, but unfortunately this paper does not help to reinforce it either.

General Discussion

Renu Kohli questioned the interpretation that the private–public distinction for deposit growth was the result of a government guarantee since past policies seem to be to never allow any bank, public or private, to fail. She thought other factors could account for the divergence of deposit growth. For example, private banks may have had a greater reliance on short-term deposits which could be expected to be more volatile. She thought it would be useful to look at deposit rates in public and private banks to determine if they responded differently.

Dilip Mookherjee said that in terms of the main issue of whether banks ought to be privatized, the evidence in the paper is inconclusive because that issue would involve a much broader set of considerations than are discussed in the paper. The results of the empirical analysis should be expected: when you have a system where one sector has more of a government guarantee, those that have the guarantees take more risks, and when there is a crisis, there is a flight to safety and people move into that sector because of the guarantees, even though they took more risk. That does not necessarily speak to the broader question of whether banks ought to be privatized.

Devesh Kapoor supported a point made in Urjit Patels' comments, which was that the flight to safety to public banks might not have been just because of the guarantees that those banks hold, but also because of how the depositors perceive private banks versus public sector banks. He mentioned a survey done by the Raghurajan Committee which asked about public trust in different types of banks, and it found that while only 5–10 percent of the public trusted private banks, 80 percent trusted PSBs.

Abhijit Banerjee pointed out that it is hard to think that the private sector is very wise in its risk-taking decisions, and conversely, although government banks might be taking on a little more risk because of the guarantees, that might be a good thing because otherwise the people who run them have very little incentive to take on much risk. He also mentioned that there are really two different sources of risk, one being the portfolio, which during normal times might be less for private firms who exert more effort to select the better borrowers. The other is the risk that kicks in during a crisis, which is the risk of the bank going under. Therefore, the change in risk profile is an important and interesting feature to track.

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