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Research Summaries

Credit Conditions and Recoveries from Financial Crises

Prakash Kannan

The prospects for recovery from the 2008 global financial crisis appear to be on the horizon. What determines the path of recovery from a recession associated with a financial crisis? This question is of utmost importance as policymakers debate how soon to withdraw the extraordinary monetary and fiscal stimulus that were put in place soon after the onset of the crisis. This article reviews a recent paper that tackles the issue of recoveries from financial crises.

As the worst of the 2008 global financial crisis appears to be behind us, the focus has shifted to the prospects of recovery. Commentary in the financial press has typically revolved around predicting whether the path of output following the trough of the recession will be U-shaped, V-shaped, W-shaped (a double-dip recession), or L-shaped (a very sluggish recovery).

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Inflation Targeting in Emerging Economies

Turgut Kışınbay

Inflation targeting has recently become a popular monetary policy framework in emerging economies. While institutional set-ups were largely in place in advanced countries during the adoption of inflation targeting, the more recent adoption and implementation of such policies in emerging economies have been more nuanced. This article briefly summarizes recent research in this area, highlighting the key contributions to conceptual and practical issues.

The collapse of the Bretton Woods system, the sharp increase in worldwide inflation in the 1970s, and a series of supply shocks led to a search for alternative monetary frameworks. Although many countries experimented with monetary targeting during the 1980s, the results proved to be unsatisfactory (Goodfriend, 2007). There was a need for a better framework to anchor expectations, especially in countries with a history of high inflation. An explicit commitment to a quantitative inflation objective was proposed as a way to bring about and sustain low and stable inflation. Starting with New Zealand and Canada, an increasing number of advanced countries adopted inflation targeting as their monetary framework. Several emerging economies followed suit in the late 1990s (Freedman and Laxton, 2009a). However, for emerging economies, implementation of inflation targeting posed challenges that are different from those in advanced economies.

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Credit Conditions and Recoveries from Financial Crises

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Recent research at the IMF has examined the patterns of recovery from recessions associated with financial crises in a set of 21 advanced economies (IMF, 2009). The episodes were based on the combination of two databases of banking and financial crises—Reinhart and Rogoff (2008) and Laeven and Valencia (2008)—along with the dating of recession and recovery phases from Claessens, Kose, and Terrones (2009). Recoveries from recessions associated with financial crises were found to be slower relative to a typical recovery. The average time taken for output to return to its previous peak was about six quarters compared to three quarters for all other recoveries. One year after the trough of the recession, the average growth rate of output was only about 2 percent for these episodes compared with an average growth rate of about 4 percent for recessions that were not associated with a financial crisis.

"Policies aimed at recapitalizing financial institutions, resolving distressed financial assets, and ensuring adequate provision of liquidity are crucial to restore the health of the banking system"

One particularly striking finding from this research is that recoveries from recessions associated with financial crises in advanced economies feature a near absence of growth in domestic credit. Credit remains essentially flat even up to two years after the end of the recession, a pattern that is significantly different from all other recovery episodes. Although the demand for credit is generally lower in the aftermath of a financial crisis as households and firms deleverage, stressed credit conditions during these episodes suggest that restrictions in the supply of credit are also important.

Credit conditions become particularly stressed during recessions associated with financial crises due to the occurrence of two distinct events. First, episodes of financial crises are usually accompanied by systemic bank runs, a significant number of bank closures, or a widespread depletion of bank capital, all of which serve to reduce the effectiveness of the financial sector in carrying out its intermediation activities. (See Demirgüç-Kunt and Detragiache, 1998, for more details on the macroeconomic background during banking crises.) Second, the balance sheets of debtors—both households and firms—deteriorate significantly either through bankruptcies, falling asset prices, or failed investments. In the absence of financial frictions, firms should be able to costlessly make up for the decrease in bank credit with other forms of credit, such as debt issuance, leaving investment and output decisions unchanged. The presence of market imperfections, however, implies that these different forms of credit are not perfect substitutes, resulting in higher real costs of credit for firms and industries that are more credit-reliant. Furthermore, any deterioration in the balance sheets of firms also leads to an increase in the cost of external finance due to agency costs (see Bernanke and Gertler, 1989; and Kiyotaki and Moore, 1997).

Kannan (2009) investigates the question of whether or not the stress in credit conditions tends to linger on even after output has started to recover, thus constraining the pace of recovery. Direct measures of credit conditions, however, are difficult to come by. Data on outstanding bank credit conflate supply and demand factors, making identification challenging. Data on bank capital or the net worth of firms would more closely reflect credit conditions, but these are hard to obtain on a systematic basis for a significant cross-section of countries and over a lengthy time period. The paper therefore takes an indirect approach. If credit conditions are important, industries that are more reliant on outside finance, or more subject to financial frictions, should recover relatively slowly following a recession associated with financial crises. Furthermore, as the severity of frictions increases, so should the impact of the dependency on outside finance on growth during recovery.

Kannan (2009) reports that credit conditions play an important role in constraining recovery from recessions associated with financial crises. Industries that rely more on outside finance grow more slowly during recoveries from these episodes relative to all other recoveries, suggesting that credit conditions remain stressed well after the trough of the recession. The effects are strongest during the first year of the recovery phase, and become insignificant only after three years. Importantly, the differential growth pattern across industries with varying dependence on outside finance, which is observed after a recession associated with a financial crisis, is significantly different from the typical behavior during the recovery phase of the business cycle.

Supporting evidence on the importance of credit conditions is obtained by looking at two partitions of the sample along which financial frictions are potentially alleviated:

the average degree of tangibility of assets in an industry and the share of industry output that is traded. Industries characterized by a higher degree of tangible assets are in a better position to pledge these assets as collateral and thus reduce the cost of outside finance, while industries that produce goods that are more tradable have an easier time accessing credit from external sources either through trade credits or by pledging export receivables. The paper finds that variation along these two dimensions matters during the recovery phase. Industries that rely more on external finance perform even worse during recovery from a financial crisis when they also have less tangible assets, or produce goods that are relatively less tradable.

Are these effects unique to banking crises? To answer this question, Kannan (2009) considers an alternative definition of a financial crisis. Instead of relying on the crisis dates of Reinhart and Rogoff (2008) and Laeven and Valencia (2008), which feature primarily banking crises, the paper looks at recessions that featured large drops in equity prices. Such episodes are associated with large falls in the net worth of firms, thus raising the cost of outside finance. Just as in the baseline definition of a recession associated with a financial crisis, the results show that industries that rely more on external finance grow more slowly during recoveries from recession episodes that featured large equity price drops. The magnitude of the differential, however, is much smaller, suggesting that the impact of banking crises on credit conditions tends to linger more forcefully than in the case of recessions associated with equity price collapses.

The focus on recoveries following a financial crisis in Kannan (2009) serves as a natural complement to earlier papers that primarily focused on recessions (Braun and Larraine, 2005) and banking crises (Krozner, Klingebiel, and Laeven, 2007; and Dell'Ariccia, Detriagiache, and Rajan, 2008), all of which build on the seminal work of Rajan and Zingales (1998). These papers find evidence that worsening financing conditions intensify the impact on real activity during these episodes. More recently, Tong and Wei (2008) find that the pattern of stock price declines across a broad cross-section of firms, following the onset of the 2007 subprime crisis, indicates that markets were more concerned about the effects of tighter credit conditions on firms rather than any effects due to the expected contraction in demand.[1]

The findings from this line of research convey an important message regarding the role of policies directed at the financial sector during episodes of financial crises. Policies aimed at recapitalizing financial institutions, resolving distressed financial assets, and ensuring adequate provision of liquidity are crucial to restore the health of the banking system, such that the flow of credit can be resumed quickly. Equally important are policies aimed at improving the balance sheets of nonfinancial firms through expedited bankruptcy procedures, for example. These policies not only ensure a swift return to stability in financial markets and institutions, but also provide a strong foothold for economic recovery.

[1]See the June 2009 issue of the *IMF Research Bulletin* for a review of this paper.

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Inflation Targeting in Emerging Economies

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Key among them are building institutional capacity and overcoming a multitude of policy challenges.

While institutional capacity was largely in place in many developed countries, more work was necessary in emerging economies before inflation targeting could be adopted. An early debate focused on the set of preconditions necessary for successful adoption of inflation targeting. Although initially it was thought that a long and demanding list of strict preconditions should be met, this was later qualified with the successful adoption of inflation targeting in a number of emerging economies (IMF, 2006). Using survey and econometric evidence, Batini and Laxton (2007) show that no inflation targeter—not even industrial economies—had the strict preconditions in place before adopting inflation targeting. The key to successful adoption is the authorities' commitment to the price stability objective and the ability to bring institutional change required to achieve the objective.

In order to prepare the institutional structure for inflation targeting, a number of choices have to be made. These include the choice of the target index and its level; the medium-term targets in the case of disinflation; the long-term definition of price stability; necessary institutional arrangements to establish and enhance transparency; and development of a communications strategy. Heenan, Peters, and Roger (2006) and Freedman and Laxton (2009b) discuss the trade-offs between various organizational choices and provide a cross-country perspective. Inflation targeters use a short-term policy interest rate to provide an anchor for inflation and inflation expectations. In many emerging economies the shift towards a reliance on money market operations has been gradual and, at times, fraught with difficulty. Laurens (2005) proposes a stylized sequencing of reforms that enables countries to tailor the introduction of money market operations to their particular circumstances. An organizational structure within the central bank is essential to support policy decisions in inflation targeting. (Laxton, Rose, and Scott, 2009; Canales and others, 2006).

On the policy front, two areas have proven to be particularly challenging: managing the role of the exchange rate, and conducting policy with limited credibility. While exchange rates historically played a key role in monetary policy in many emerging economies, in inflation targeting, the exchange rate typically floats freely. The switch to more flexible and, ultimately, floating exchange rates has not been easy. Institutional and operational requirements, as well as the need to change public perception of the role of the exchange rate, have required a better understanding of the transition to inflation targeting.

Duttagupta, Fernandez, and Karacadag (2004) describe the operational aspects of a move to a more flexible exchange rate and identify the following successful ingredients for floating: developing a deep and liquid foreign exchange market; formulating intervention policies consistent with the new regime; establishing an alternative nominal anchor in the context of a new monetary policy framework and developing supportive markets; and building a capacity to manage exchange rate risks. In a follow-up study, Ötker-Robe and Vavra (2007) analyze the concrete steps taken by a group of countries that transitioned to greater exchange rate flexibility, with a view to identifying pros and cons of alternative strategies. Many of these countries eventually adopted inflation targeting—some of them soon after they floated their currencies, others more gradually.

Stone and others (2009) further build on these themes using a more macroeconomic view that specifically focuses on the role of the exchange rate in inflation targeting in emerging economies. A key challenge for monetary policymakers at the earlier stages of inflation targeting, or during the transition to it, is whether and how to take the exchange rate into account. Based on case studies and simulations, the paper demonstrates that under certain circumstances there could be a limited role for the exchange rate in inflation-targeting frameworks, but even in these rare cases, too much emphasis on the exchange rate is likely to be harmful. Model simulations distinguish between a financially robust economy and a financially vulnerable emerging market economy. The shocks hitting these two types of economies include demand shocks, cost-push shocks, and risk premium shocks. The results suggest that while inflation targeting performs the best in handling demand and cost-push shocks, dampening of exchange rate changes could be useful in handling risk premium shocks; the results are especially pronounced for the financially vulnerable economy. Responding to the level of the exchange rate, however, performs poorly.

Another challenge on the policy front is implementation of inflation targeting with limited credibility. In countries with good inflation performance, expectations are well anchored, giving policymakers more room to respond to supply and demand shocks compared to counties with limited credibility. This problem became central in 2007 due to food and oil rice shocks. Inflation rates in most developing countries rose significantly above targets in emerging economy inflation targeters. In a comprehensive cross-country study, Habermeier and others (2009) document the shocks that contributed to rising inflation provide policy options for a range of countries, and underline the importance of communications efforts to keep inflation expectations well anchored.

Alichi and others (2009) take a theoretical approach, focusing on the relationship between the level of credibility and the optimal monetary policy. A key feature of their model is the endogenous policy credibility process, by which monetary policy can gain or lose credibility over time. Demand shocks are easy to handle, but adverse supply shocks present the most difficult problems for inflation, particularly if inflation expectations are not well anchored. In the early part of the disinflation path, the central bank has to be prepared to raise interest rates to a level that dampens demand and brings about visible reductions in inflation. Any hesitation, out of excessive concern for limiting short-run output losses, damages credibility, delays the achievement of the low-inflation goal, and results in more prolonged output losses. Battini and Tereanu (2009) use a small, open-economy DSGE model to design the monetary policy response to a protracted supply shock.

The global financial crisis has raised questions about central banks' primary focus on price stability. There is now a debate on what weight central banks should give to financial stability, and whether and how the current consensus on the conduct of monetary policy should be altered (Svensson, 2009; and White, 2006). Carney (2009) highlights several challenges that policymakers will face in the new financial environment. Examples of changes include higher capital requirements for systematically important banks, or procyclical capital requirements. These will change the channels through which monetary policy impacts the economy, even if the monetary policy framework remains intact. Clearly, more research on the linkages between macroeconomic and financial factors is needed. IMF (2009) provides econometric and simulation evidence that suggests policymakers should react more strongly to signs of increasing macrofinancial risks. How to achieve this operationally is another avenue for future research (Evens and others, 2000).

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Seven Questions about Political Influence and the Financial Crisis

Deniz Igan, Prachi Mishra, and Thierry Tressel

As options to reshape the financial landscape are discussed, the issue of how political influence of the financial industry comes into play attracts attention. A few recent papers look at different aspects of this issue. Based on the results of these studies and the broader literature on political economy and financial crises, this article provides brief answers to some commonly asked questions.

Question 1: How did we get here?

Much has been said about the factors that paved the way to the worst financial crisis since the Great Depression. In recounting these factors, Claessens and others (2009) pay particular attention to regulatory failure. Regulators and supervisors have been accused of missing the warning signs and failing to take the necessary actions that would have contained the risks. Yet, an important piece of the puzzle as to why regulators failed seems to be missing. The political process of establishing the legal framework that gives supervisors the ability to guard financial stability is not immune from being influenced by the groups that are affected by this framework. In fact, these groups engage in targeted activities, through campaign contributions and lobbying, in order to impact policymaking.

For example, *The Wall Street Journal* reported on December 31, 2007 that Ameriquest Mortgage and Countrywide Financial spent millions of dollars in political donations, campaign contributions, and lobbying activities from 2002 through 2006 to defeat anti-predatory lending legislation (Simpson, 2007). Does this mean that timely regulatory response that could have mitigated reckless lending practices and the consequent rise in delinquencies and foreclosures was shut down by the industry? Such anecdotes suggest that the political influence of the financial industry contributed to the financial turmoil in subprime mortgages that started in the spring of 2007 and, since then, generalized into a full-blown credit crisis. Recent studies that involve formal analyses of the political economy of the crisis include Igan, Mishra, and Tressel (forthcoming) and Mian, Sufi, and Trebbi (forthcoming).

Question 2: What is lobbying and how does it work in the United States?

Since the 1970s, rent-seeking has been identified as a key activity of economic agents in market economies. In developing countries, rent-seeking by firms is more often performed through personal connections with politicians to obtain private benefits and can materialize through a variety of channels (preferential access to credit, bail-out guarantees, privileged access to licenses, procurement contracts, etc.). In developed countries, lobbying—broadly defined as a legal activity aiming at changing existing rules or policies or procuring individual benefits—is a common form of rent-seeking.

Lobbyists in the United States—often organized in special interest groups—can legally influence the policy formation process through two main channels. First, they offer campaign finance contributions, in particular through political action committees. These activities have received a fair amount of attention in the literature. Second, they spend billions of dollars each year to lobby members of Congress and federal agencies. In contrast to the focus on campaign contributions, these lobbying activities, which account for about 90 percent of expenditures on targeted political activity, have received scant attention in the literature. In order to engage in lobbying, some special interests hire lobbying firms; others have lobbyists working in-house. The Lobbying Disclosure Act of 1995 requires lobbying firms and companies with in-house lobbying units to file reports of their lobbying expenditures with the Secretary of the Senate and the Clerk of the House of Representatives. Legislation requires the disclosure not only of the dollar amounts actually spent, but also of the issues regarding which the lobbying is carried out. Such detailed information is reported by roughly 9,000 companies, around 600 of which are in the finance, insurance, and real estate industry.

Question 3: Was lobbying by the finance, insurance, and real estate industry associated with loosening lending standards?

Igan, Mishra, and Tressel (forthcoming) show that lobbying on specific issues related to mortgage lending and

securitization is linked to riskier lending practices. Risky lending practices are proxied by three alternative measures: loan-to-income ratio, proportion of mortgages securitized, and growth rate of loans originated. The loan-to-income ratio is reminiscent of the requirement that mortgage payments cannot exceed a certain proportion of the applicant's income. As the maximum proportion allowed increases, the burden of servicing the loan becomes more difficult and the default probability increases. Recourse to securitization is considered to weaken monitoring incentives; hence, a higher proportion of mortgages securitized can be associated with lower credit standards. Fast expansion of credit could be associated with lower lending standards because (1) the increased number of applications will, with constraints on training and employing new loan officers, lead to less time and expertise allocated to each application to assess its quality; (2) in a booming economy, rising collateral values increase creditworthiness of intrinsically bad borrowers and, when collateral values drop during the bust, these borrowers are exposed; or (3) competitive pressures compel lenders to loosen lending standards in order to preserve market shares.

The paper finds that, during 2000–07, lenders that lobbied more intensively to prevent tightening of laws and regulations on mortgage lending and securitization (1) originated mortgages with higher loan-to-income ratios, (2) increased their recourse to securitization more rapidly, and (3) had faster growing mortgage loan portfolios. These findings suggest that lobbying by the finance, insurance, and real estate industry was a factor driving the deterioration in credit and build-up of risk prior to the crisis.

Question 4: How effective was lobbying by financial institutions during the crisis?

Given the evidence that lobbying was associated with more risk-taking during 2000–07, the next question is whether loans originated by lenders that lobby performed worse than those originated by lenders that do not lobby. Igan, Mishra, and Tressel (forthcoming) show that the delinquency rates in 2008 were significantly higher in areas where mortgage lending by lobbying lenders expanded relatively faster than mortgage lending by other lenders. The estimated effect is economically significant: a 1 standard deviation increase in the relative growth of mortgage loans of lobbying lenders is associated with almost a 1 percentage point increase in the delinquency rate.

A related issue is whether stocks of lobbying lenders were more severely affected by the arrival of the bad news. Igan, Mishra, and Tressel (forthcoming) conduct an event study around four important dates: August 2007, when the European Central Bank injected overnight liquidity in response to problems in BNP Paribas, IKB, and Sachsen Landesbank; December 2007, when major central banks coordinated liquidity injection to relieve pressures on short-term funding markets; March 2008, the Bear Stearns failure; and September 2008, the Lehman Brothers failure. The analysis reveals that financial institutions that lobbied on specific issues of mortgage market regulation and securitization experienced negative abnormal returns, compared to the market and other financial institutions.

Question 5: What links lobbying to lending and performance?

The evidence that lobbying is associated ex ante with riskier loans and ex post with worse outcomes is consistent with moral hazard, whereby expectations of preferential treatment (e.g., a higher probability of being bailed out in the event of a financial crisis) or the focus on short-term gains distort lending behavior. Of course, alternative explanations exist but appear to be less consistent with the evidence. Suppose, for instance, that "bad" lenders lobby more and do so in order to mimic good lenders, who lobby to signal information to the policymaker. Since bad lenders do not have the knowledge necessary to choose which issues to lobby for, they would lobby more in general and not necessarily on issues related to mortgage lending. Then, lobbying on unrelated issues would be associated with risky lending as well. Falsification tests suggest otherwise. Another alternative interpretation is that lobbying lenders specialize in catering to riskier borrowers. However, inclusion of fixed effects and instrumental variable estimations suggest that the relationship does not capture unobserved characteristics or shocks. Yet another story is that overoptimistic lenders, who underestimate the likelihood of an adverse event affecting the mortgage market, lobby more for relaxation of rules and regulations. The analysis, however, shows that the relationship is stronger in the latter period, 2005–06, and it is not clear why overoptimism would have increased during those years, when signs of stress in housing markets were becoming visible.

Question 6: What are the policy implications of a link between lobbying and lending?

The answer crucially depends on what drives the link. Consider three stories that could explain why financial institutions lobby. First, financial institutions engage in lobbying

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as a form specialized rent-seeking. Then, financial industry lobbying may lead to misallocation of resources, and curtailing lobbying is socially improving. In the second case, misgovernance and distorted incentives urge lenders to lobby and chase short-term gains. Losses in the long term are borne by the economy as a whole. Then, public oversight and enforcement of optimal contracts might be necessary to realign incentives, but curtailing lobbying is not necessarily welfare-improving. In the third case, financial industry lobbying can be an information-provision mechanism: lenders develop new products and lobby policymakers for a regulatory shift that is necessary for financial innovation to reach the market. Then, to the extent that financial innovation is welfare-enhancing, lobbying helps informed decision-making and is socially desirable. Empirical evidence does not definitely rule out any of these three stories. In general, it is hard to distinguish between rent-seeking and information provision, and policy implications are difficult to derive.

Question 7: Can regulatory reform succeed?

The role of political influence is not unique to the current crisis. Cronyism has been widely mentioned in discussions of the Asian crisis, and it has been argued that both the reasons for the crisis and the policies to resolve it were affected by political connections (Johnson and Mitton, 2003). In their analysis of congressional voting during the current episode, Mian, Sufi, and Trebbi (forthcoming) find that higher campaign contributions from the finance, insurance, and real estate industry are associated with an increased likelihood of voting in favor of the Emergency Economic Stabilization Act of 2008, a bill which transfers wealth from taxpayers to the industry. Recent reports show that financial institutions intensified their lobbying efforts in 2009, fighting against an overhaul of derivatives regulation and legislation that would enable judges to reduce mortgage payments of bankrupt households. Johnson (2009) argues that substantial reform will fail unless the political power of the finance, insurance, and real estate industry is broken. Time will tell whether these pessimistic scenarios on the potential of regulatory reform can materialize.

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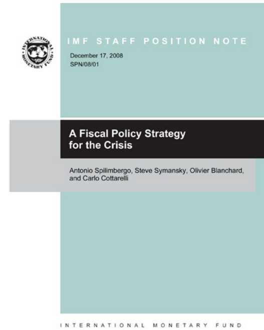

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