ONE

The 2008–2009 Recession

Market or Policy Maker Failure?

After the end of the Volcker disinflation in 1983 and through the end of 2007, growth in the world economy proceeded steadily, interrupted only by two minor recessions starting in 1990 and in 2001. Economists talked about the Great Moderation. The Great Recession, which began in the United States in December 2007, came as a shock. Once again, economists and the public began to ask fundamental questions about the nature of free-market economies. Are they inherently unstable? What kind of government policy can stabilize economic fluctuations?

This chapter reviews what is at stake in understanding the cause of the 2008–2009 recession. Seemingly commonsensical but misguided responses to the distress suffered during recession not only can be ineffective, but also can harm long-term growth. Such responses can also direct public policy away from the institutional arrangements and policies required to prevent cyclical instability. The following chapters contrast two explanations of the business cycle. One explanation highlights market disorder resulting from swings in the psychology of financial markets from excessive risk taking to excessive risk aversion. The other explanation highlights monetary disorder based on central bank (Federal Reserve) interference with the operation of the price system.

THE LACK OF AN AGREED CONCEPTUAL FRAMEWORK FOR CENTRAL BANKING

There is no agreement over the conceptual framework to use in understanding what the central bank controls and how it exercises its control. This lack of agreement mirrors the lack of consensus within the economics profession about the reasons for economic instability. Economists differ over the efficacy of the price system in maintaining aggregate demand equal to potential output.

They also differ over the role played by expectations about the future. In the terminology employed here, there have been historically two broad schools of thought: the market-disorder view and the monetary-disorder view.

Adherents of the market-disorder view believe that sharp swings in expectations about the future from unfounded optimism to unfounded pessimism overwhelm the ability of offsetting changes in the real interest rate to stabilize economic activity. Those expectational swings arise independently of central bank actions and require discretion in the conduct of monetary policy. The failure of the price system to mitigate fluctuations in output provides an opening for the central bank and government to manage aggregate demand. The central bank can control the real expenditure of the public through controlling the flow of credit and its allocation – that is, through controlling the left (asset) side of its balance sheet.

Adherents of the monetary-disorder view believe that the real interest rate works well as a flywheel to stabilize fluctuations in aggregate demand around potential produced by real demand shocks. However, money creation and destruction can interfere with those self-equilibrating powers. The conduct of monetary policy by a rule providing a nominal anchor and allowing market forces to determine the real interest rate and real output makes expectations into a stabilizing force by causing the public to anticipate that shocks that produce divergences between real aggregate demand and potential output will be short-lived.

HAS MACROECONOMICS FAILED?

The 2008–2009 recession initiated a vigorous debate over the relevance of macroeconomics, which is above all the study of the business cycle. Since Keynes's *General Theory*, macroeconomists have engaged in a prodigious research effort aimed at understanding and ameliorating the business cycle. The knowledge gained obviously did not allow policy makers to avoid a major world recession. In some sense, macroeconomics failed, but how? Has it failed as a methodology for learning about the world? The answer offered here is that the methodology for learning is the correct one. However, there is a need for more emphasis on the empirical study of the shocks that have produced recurring cyclical fluctuations in output. That effort should guide the direction of model development.

Narayana Kocherlakota (2009, 1), president of the Minneapolis Federal Reserve Bank, wrote:

> I believe that during the last financial crisis, macroeconomists (and I include myself among them) failed the country, and indeed the world. In September 2008, central

bankers were in desperate need of a playbook that offered a systematic plan of attack to deal with fast-evolving circumstances. Macroeconomics should have been able to provide that playbook. It could not. Of course, from a longer view, macroeconomists let policymakers down much earlier, because they did not provide policymakers with rules to avoid the circumstances that led to the global financial meltdown.

Kocherlakota (2009, 19, 9, 7, and 9) asserted that there is no difference among economists about methodology. There is a shared ideal of avoiding policy "based on purely verbal intuitions or crude correlations as opposed to tight modeling." All economists recognize the ideal of models that yield numerical predictions and that are not susceptible to the Lucas critique.[1] Kocherlakota said that "modern macro models are designed to be mathematical formalizations of the entire economy" and thus to replace "verbal intuitions." Because such models are "grounded in more fundamental features of the economy, such as the *technology* of capital accumulation and people's *preferences* for consumption today versus in the future," their estimated relationships will not change in unpredictable ways when the "policy regime changes." Moreover, Kocherlakota emphasized the need to be "explicit about the shocks that affect the economy."

According to Kocherlakota, economists' models failed on both criteria: model building and shock identification. With respect to the first criterion, Kocherlakota (2009, 14, 7, and 16) emphasized the limitations in computing power that make solving models difficult. Economists now build models around only a single friction: financial, pricing, or labor market. "This piecemeal approach is again largely attributable to computational limitations." With respect to the second criterion, he wrote, "Finally, and most troubling, macro models are driven by patently unrealistic shocks.... Macroeconomists ... are handicapping themselves by only looking at shocks to fundamentals like preferences and technology."

If existing models cannot yield numerical implications for the behavior of macroeconomic variables based on a realistic description of shocks and policy in a way that both explains the historical experience with recession and predicts the consequences of alternative policy rules, what is their value in policy making? Does this gloomy prognosis mean that there exists no alternative to the conduct of policy within an ad hoc, judgmental framework? The answer given here is that economists can examine the historical record of central banking and can draw conclusions about which class of models is most likely to offer useful guidance for policy making. Even though the

[1] That is, according to Lucas (1976), the behavioral relationships used by models to forecast should not vary in an unpredictable way when policy makers change the way they make policy. See also Marschak (1953).

class of models chosen will not offer numerical guidance to policy makers, it will still impose useful discipline. That discipline will mitigate the problems inherent in the current practice of ad hoc policy making.

Consider the criticisms of purely judgmental policy making made by James Tobin and Milton Friedman. Tobin (1977 [1980], 41) wrote:

> There is really no substitute for making policy backwards, from the desired feasible paths of the objective variables that really matter to the mixture of policy instruments that can bring them about.... The procedure requires a model – there is no getting away from that. Models are highly imperfect, but they are indispensable. The model used for policymaking need not be any of the well-known forecasting models. It should represent the policymakers' beliefs about the way the world works, and it should be explicit. Any policymaker or advisor who thinks he is not using a model is kidding both himself and us. He would be well advised to make explicit both his objectives for the economy and the model that expresses his view of the links of the economic variables of ultimate social concern to his policy instruments.

Friedman (1988) wrote:

> Every now and then a reporter asks my opinion about "current monetary policy." My standard reply has become that I would be glad to answer if he would first tell me what "current monetary policy" is. I know, or can find out, what monetary actions have been: open-market purchases and sales and discount rates at Federal Reserve Banks. I know also the federal funds rate and rates of growth of various monetary aggregates that have accompanied these actions. What I do not know is the policy that produced these actions.... [T]he closest I can come to an official specification of current monetary policy is that it is to take those actions that the monetary authorities, in light of all evidence available, judge will best promote price stability and full employment – i.e., to do the right thing at the right time. But that surely is not a "policy." It is simply an expression of good intentions and an injunction to "trust us."

Tobin's point is that to understand the impact of their actions, policy makers must use models. That is, they make policy based on conditional rather than on unconditional forecasts. When they take a policy action by setting a value for the funds rate, they are making a conditional forecast about the effect of that action on the variables of ultimate concern to them. To make that forecast, they must necessarily draw on past experience. Specifically, they must abstract the essential characteristics of the current economic situation and then base their forecast on outcomes of past periods possessing the same essential characteristics. Such abstraction requires a rudimentary model.

Friedman's point is complementary to Tobin's point. To understand the impact of their actions, policy makers need to place their individual policy actions (funds-rate decisions) into a broader context of what is systematic

about their behavior. In a similar spirit, Friedman and Schwartz (1963a, 252–3) criticized the section in the Federal Reserve Board's 1923 *Tenth Annual Report*, "Guides to Credit Policy," in which the Fed authors argued that policy "is and must be a matter of judgment." Friedman and Schwartz (1963a, 252) commented that "the section offers little beyond glittering generalities instructing the men exercising the judgment to do the right thing at the right time with only the vaguest indications of what is the right thing to do."

Friedman's point also concerns learning. Thinking about policy as a systematic procedure for responding to incoming information in a way designed to achieve ultimate objectives allows policy makers to summarize succinctly their behavior at different times. If their forecasts turn out to be wrong, they are then positioned to ask whether their understanding of the past was correct.

Models and systematic characterizations of policy discipline the learning that takes place in this ongoing dialectic between present and past. They aid policy makers in evaluating how well their understanding of the past conditions their contingent forecasts of current policy actions. When outcomes belie forecasts, policy makers then possess a framework for asking whether the failure lay with the model (the understanding of the world), with policy (the systematic response of policy makers to incoming information about the economy), or with unforeseen shocks. Models make manageable the task of asking whether adverse outcomes (inflation and recession) derive from powerful exogenous shocks or from destabilizing policy. There is a need for the systematic study of past recessions to determine how best to construct models that are useful for policy makers. The Federal Reserve especially needs to examine its past behavior in a way that summarizes how the evolution of the consistent part of its policy procedures has defined the evolution of the monetary standard.

To provide a continual vetting of the appropriateness of monetary policy, academic economists and monetary policy makers need to engage in an ongoing dialogue about the kinds of models most useful for understanding the historical experience with central banking. That dialogue would provide the context for an exchange of views about the appropriateness of current policy. What has been de-emphasized in modern macroeconomics is the methodology pioneered by Friedman and Schwartz (1963a; 1991) to use events and beliefs about appropriate policy at particular times in the past to identify shocks capable of distinguishing between classes of models. The economist must treat history as a series of event studies in which information outside the model is used to discipline the choice of shocks.

RULES VERSUS DISCRETION

The view that financial fragility produces real instability is associated with the belief that markets are inherently unstable. From this view, it follows that economic stability requires the regulation of markets through government intervention.[2] In contrast, the free-market tradition, which takes Adam Smith as its founding father, holds that markets are self-regulating provided that government allows competitive markets and the price system to allocate resources and gives individuals an incentive to monitor the use of their resources, physical and financial, through the protection of property rights. One manifestation of this free-market-versus-interventionist debate is the rules-versus-discretion debate.

Historically, the Federal Reserve has always argued for the conduct of policy based on ongoing discretion. For example, Allan Sproul (1963 [1980], 124 and 127), former president of the New York Fed, wrote with reference to the rule proposed by Milton Friedman (1960) for steady money growth:

> I find it impossible to swallow his (Friedman's) prescription which would reduce monetary management to the definitive act of forcing a constant drip of money into the economic blood stream. It seems to me patent that the uncertain hand of man is needed in a world of uncertainties and change and human beings, to try to accommodate the performance of the monetary system to the needs of particular times and circumstances and people.… "Money will not manage itself." It needs managers who are aware of the fact that they are dealing primarily with problems of human motivation and human reactions.

The market-disorder explanation for the 2008–2009 recession, which blames the speculative excesses of financial markets and the inevitable collapse of this excess, naturally implies the desirability of discretionary monetary policy. The herd behavior of investors creates an amount of market power that overwhelms the self-equilibrating powers of the price system and the ability of fluctuations in the real interest rate to maintain aggregate demand at

[2] For example, Paul Krugman generalized from his interpretation of the Great Depression and placed the blame for the current recession on the excesses of unregulated banks. Krugman (2008) wrote, "What turned an ordinary recession into a civilization-threatening slump was the wave of bank runs that swept across America in 1930 and 1931. This banking crisis of the 1930s showed that unregulated, unsupervised financial markets can all too easily suffer catastrophic failure." More succinctly, Krugman (2009a) wrote of the current recession, "[F]inance turned into the monster that ate the world economy." More generally, the pro–free market management consulting firm McKinsey & Company (2009a) wrote in a newsletter, "The parallels between financial crises and natural disasters … suggest that the economy, just like complex natural systems, is inherently unstable and prone to occasional huge failures that are very hard or impossible to foresee."

potential. In these psychological-factors explanations of the business cycle (the credit-cycle view), the emphasis is on the unpredictability of shifts in investor psychology between unrealistic levels of optimism and pessimism about the future. Similarly, the panicky, herd behavior of depositors can close banks indiscriminately through runs. Necessarily, policy makers require discretion to respond to these unpredictable shifts in psychology.

In contrast, explanations of the business cycle in the neoclassical tradition of economics stress an ongoing continuity in the structure of the economy that derives from the operation of the price system. In the two main schools in this tradition, the price system works well to maintain real aggregate demand at potential either unambiguously (the real business cycle model) or in the absence of monetary shocks that cause the price level to evolve in an unpredictable fashion (the monetary-disorder view). It is desirable to have a rule that allows the price system to work.

These contrasting views about the stabilizing properties of the price system yield different implications for the ability of policy makers to learn. If the price system works well apart from monetary shocks that interfere with its operation, significant benefits accrue to an effort to evaluate past policies by asking: "How has the systematic component of policy evolved over time?" and "What were the implications for macroeconomic and financial stability?" In contrast, in a world buffeted by the vagaries of investor psychology in a way that periodically overwhelms the stabilizing properties of the price system at unpredictable intervals, learning is difficult. With discretion, the monetary policy maker chooses the optimal setting of policy each period based on prevailing economic and financial conditions – that is, independently of past and future policy settings. A recession or inflation then naturally leads to the conclusion that powerful real forces have overwhelmed the stabilizing actions of policy. The adherence of the Fed to the rhetoric of discretion in its public communication can explain the observed lack of any attempt to institutionalize an effort to draw lessons for the conduct of policy from its past experience.

Contrasting views about the ability of the price system to stabilize economic fluctuations yield different implications about the role the central bank should play in stabilizing economic fluctuations. This difference in views arises from different ways of disentangling the historical joint association between instability of the real economy and financial markets as opposed to instability of the real economy and money creation. Do fluctuations in the business cycle originate in instability in financial markets due to excessive risk taking? Alternatively, do they originate in instability in money creation due to the failure of central banks to allow the price system

to work? The first perspective focuses attention on central bank control over excessive risk taking in financial markets. The second perspective focuses attention on central bank control over money creation and the role of the real interest rate in mitigating fluctuations in real output around trend.

AN EMPIRICAL ROAD MAP

Do waves of optimism and pessimism overwhelm the working of the price system and prevent the real interest rate from serving an equilibrating role for economic activity? If so, periods of economic stability should correspond to behavior by the central bank that entails a vigorous response to the emergence of asset bubbles. The unpredictable nature of the shifts in psychology that trigger booms and busts will require the exercise of discretion and judgment on the part of the policy maker.

Alternatively, does the price system work well to equilibrate economic activity in the absence of monetary disorder that interferes with the market determination of the real interest rate? If so, the central bank exacerbates cyclical instability in downturns with money destruction that limits declines in the real interest rate and, similarly, during expansions, with money creation that limits increases in the real interest rate. Support for the monetary-disorder view of the world requires successful generalization across history of a monetary rule that allows market forces to determine real variables while providing a nominal anchor.

The presence or absence of such a rule should separate periods of economic stability from instability. Consistency in the operation of the price system implies that economic stability requires consistent application of such a rule without periodic departures in response to special events like perceived asset bubbles. Departures from the rule most often take the form of increases in interest rates that are exaggerated relative to strength in economic activity. Such increases precede business cycle peaks and for prolonged recessions entail inertia in declines in interest rates subsequent to cycle peaks. For the period prior to 1981, given the existence of a stable demand function for the monetary aggregates M1 and M2, monetary instability should serve as a "smoking gun" in the identification of instances in which the central bank induced a behavior of interest rates incompatible with steady growth of output around trend (Chapters 7 and 8).

Hetzel (2008b) attributed the Great Moderation to the overall consistency imposed on policy by the desire to stabilize the public's expectation of inflation at a low value corresponding to the Federal Open Market Committee's (FOMC) implicit inflation target. That consistent set of procedures, termed

lean-against-the-wind (LAW) with credibility, entailed moving the funds rate in a measured, persistent way in response to sustained changes in the economy's rate of resource utilization, subject to the constraint that financial markets believed that funds-rate changes would cumulate to whatever extent necessary to maintain trend inflation unchanged in response to inflation shocks and aggregate demand shocks. The stabilizing properties of the rule derived from the way in which it conditioned expectations. Credibility for maintaining constant the expectation of trend inflation coordinated the price setting of firms setting prices for multiple periods. The discipline imposed on policy during economic recovery of maintaining nominal expectational stability required turning over the determination of real variables such as the unemployment rate to the operation of the price system. Markets believed that the funds-rate changes engineered by LAW would result in a level of real interest rates high enough or low enough to keep aggregate real demand equal to potential output.

Both the market-disorder and the monetary-disorder views offer an explanation for the historical record of recurrent recessions. Each must answer the question of why a low price of resources today (a low real interest rate) does not create sufficient demand to keep output at potential. As summarized in the market-disorder (credit-cycle) view, the herd behavior of investors overwhelms the stabilizing properties of the price system with alternating periods of greed and fear. Alternatively, as summarized in the monetary-disorder view, recessions manifest excess supply produced by central bank price fixing – that is, episodes in which the central bank set the real interest rate too high through money destruction. In short, does financial or monetary instability cause real instability?

How does one give predictive content to these contrasting views in such a way that one can use the historical record to distinguish them? What does one do in the contemporary world in which the monetarist assumption of a stable, interest-insensitive money demand function no longer allows money to serve as a useful measure of expansionary and contractionary monetary policy? What about the 2008–2009 recession? Does it represent a return to an earlier pattern of recessions epitomized by the Great Depression in which the risky behavior of banks purportedly overwhelmed the stabilizing properties of the price system? Alternatively, does it conform to the pattern highlighted by the monetary-disorder view in which the central bank imparts inertia to reductions in real interest rates despite deteriorating economic conditions? Perhaps also the 2008–2009 recession is a black swan sighting (a unique occurrence) that disproves the Smithian assumption of a price system that works well to clear markets both intertemporally as well as intratemporally.

WHAT IS AT STAKE?

Is there a trade-off between secular growth and the smoothing of cyclical instability? Since the Civil War, the growth rate of per capita output in the United States has averaged a little more than 2 percent a year. However, sustained declines in output below trend have punctuated secular growth. These declines are associated with enormous human suffering. Comparison of the U.S. economy with the numerous examples of economies that lack competitive markets demonstrates that competitive markets drive secular growth. The defining characteristic of a competitive market economy is the free entry and free exit (bankruptcy) of firms that allow the price system to control the allocation of resources. The desire to limit the high unemployment accompanying recession, however, leads governments to implement policies that prevent bankruptcy, especially for banks, and that supersede the working of the price system. A trade-off appears to arise between policies that engender secular growth and polices that mitigate cyclical fluctuations.[3] Moreover, government intervention into the economy, especially to bail out troubled banks, creates the impression that government is fixing a problem created by the private market.

The current regulatory system combines a financial safety net with government regulation of risk taking. Does the 2008–2009 recession demonstrate the need for increased government regulation of risk taking? Alternatively, does the moral hazard inherent in the existence of a financial safety net encourage excessive risk taking by skewing innovation toward strategies that provide high returns to financial institutions in good times while imposing losses to taxpayers in bad times (Hetzel 2009a)? Specifically, did moral hazard bias financial innovation toward finding ways to leverage portfolios of long-term, risky assets with short-term funding?

[3] The direct limitation of all financial innovation through government regulation as a way of limiting risk taking in financial markets will impede the ability of financial innovation to increase living standards over time. In particular, families are better off to the extent that financial markets have allowed them to smooth consumption over time in response to transitory income shocks. As argued by Perri (2008), a broader availability of credit instruments has yielded a fall over time in the correlation between individuals' income and consumption.