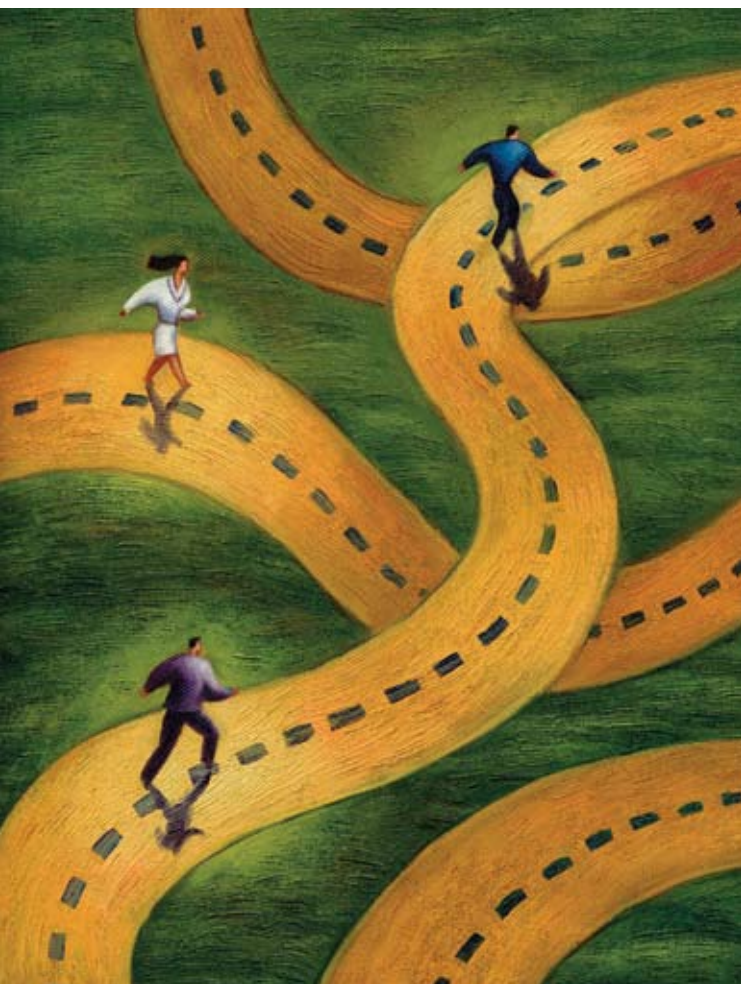


Modern Macroeconomics Is on the **Wrong** Track

William White



EVERYONE is painfully aware that we are in the middle of a major global economic and financial crisis. During a visit to the London School of Economics late last year, Queen Elizabeth II asked why no economists had forecast the crisis. But indeed some had sounded warnings. A more interesting question is why no one, including policymakers, was inclined to listen.

Perhaps the most important reason was that, in the run-up to the crisis, many were making large sums of money. Another, the subject of this article, is that the prevailing paradigm of macroeconomics allows no room for crises of the sort we are experiencing.

The former BIS chief economist argues that the global economic crisis should prompt a rethinking of macroeconomic analysis

Simply improving our macroeconomic analytical frameworks will likely not be sufficient to avoid future crises. Nevertheless, a reevaluation is necessary. There are many dead ends from which to escape, but there are also many promising strands of thought to be pursued.

Mainstream modern macroeconomics

In a recent paper, Gregory Mankiw (2006) offered “a brief history of macroeconomics.” He began with the Keynesian revolution, then moved to the New Classical and New Keynesian schools, which have dominated the teaching of macroeconomics in recent decades.

Perhaps the greatest accomplishment of the Keynesian revolution (named for the late economist John Maynard Keynes) was that it provided a general equilibrium model capable of explaining the simultaneous determination of output, interest rates, and (later) prices and inflation—subject to the assumption that wages reacted only slowly to changes in other economic variables. Large, empirically estimated macroeconomic models made the Keynesian model more concrete. Unfortunately, expectations, which were of crucial concern to Keynes, were treated in a rudimentary fashion in most of these models. There also seemed (at least to many academics) inadequate theoretical justification for assuming that wages and prices reacted only slowly to shocks to the economic system.

Dissatisfaction with these shortcomings led to New Classical models, which assumed away rigidities (such as sticky prices and wages) and postulated that all economic agents formed expectations about the future in a rational way, then acted rationally to maximize their interests. Subsequent New Keynesian models differed from New Classical ones primarily in that they reintroduced the wage and price rigidities assumed by Keynes. This line of thinking has also underpinned the new Dynamic Stochastic General Equilibrium models of the economy—which have become

popular in recent years, even among researchers at leading central banks.

The recent crisis has demonstrated the inadequacy of models based on the assumption of rational expectations. Already under attack on philosophical grounds (Foley, 2004)—what exactly does it mean to be rational?—the rapid rise and subsequent collapse of a wide range of asset prices hardly seemed consistent with a rational pricing process related to underlying values. Rather, it appeared as if expectations in many markets were based simply on the extrapolation of past developments. This led to price levels that eventually proved unsustainable, as fundamentals eventually reasserted themselves. The assumption that most markets have rapidly adjusting prices that quickly reestablish equality between demand and supply (particularly of labor) seemed increasingly inconsistent with observed increases in unemployment. Finally, there was growing recognition that many prices at the heart of the economic system (for example, many exchange rates, interest rates, and the price of energy) were influenced as much by governments as by markets.

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In short, this crisis provides evidence that the simplifying assumptions on which much of modern macroeconomics is based were not useful in explaining real-world developments.

It would be tempting to say that policymakers were led astray because they used these kinds of models. Unfortunately, there is very little evidence that these modern academic theories had much impact on the way most central bankers used policy instruments. Alan Blinder, a highly respected central banker and academic, has written convincingly on this (Blinder, 1988 and 1997). Rather, most senior policymakers continued to rely on Keynesian-based models. However, these models also failed to provide advance warning of mounting problems, so their shortcomings must be considered too.

Shortcomings of Keynesian models

Postwar empirical models with Keynesian underpinnings have never been good at forecasting turning points in the business cycle. This is a fundamental shortcoming, since we hardly need expensive models to assert that the future will be pretty much like the past. Keynes, as Axel Leijonhufvud (1968) documents, was profoundly skeptical about the usefulness of such models, because their construction ignored one of Keynes's greatest insights. Expectations are crucial to all forms of economic behavior, but given the complexity of the economy, the future is uncertain. Faced with uncertainty, economic behavior tends to be guided in large part by

heuristic devices and raw emotion (“animal spirits”—Akerlof and Shiller, 2009), which can produce sudden and sharp departures from the past. If there is anything that would characterize the future, it was not the average of past observations.

So, although they provide a useful theoretical framework for how the world works, traditional Keynesian models, like the modern models, are not very helpful when it comes to prediction and are of limited use to policymakers. Worse, models in the Keynesian tradition also ignore two other considerations suspected of having great practical importance in the current crisis: the insights of the Austrian school of thought and those of Hyman Minsky.

The Austrian school perspective

In contrast to the Keynesian framework, Austrian theory assigns critical importance to how the creation of money and credit by the financial system can often lead to cumulative imbalances over time. These imbalances, which ultimately come down to investments that do not end up profitable, eventually implode in the context of an economic crisis of some sort. In today's terms, unusually rapid monetary and credit growth over the past decade or so led to asset price increases that seemed to have little to do with fundamentals. It also led to spending much higher than historical norms. For example, the household saving rate in many English-speaking countries fell to zero or below, even as the ratio of investment to gross domestic product in China rose to almost 50 percent. From an Austrian perspective the danger would be that these imbalances would revert, respectively, to more justifiable and more normal levels. Over the past two years we have seen something of this nature, in both asset prices and spending patterns in the United States, the United Kingdom, and a number of other countries. This is at the heart of our problems. Moreover, for those with an Austrian perspective, the continued and unprecedented investment-fueled growth in China is more a danger signal than a sign of renewed sustainable growth.

Mistaken spending decisions eventually result in stocks of unprofitable (for corporations) or undesired (for households) investment/durable goods that will take a long time to depreciate. In today's terms, many industries that expanded sharply in response to high demand are now too big and must shrink. Such industries at the global level include financial services (particularly global supply networks), car production, wholesale distribution, construction, and many other intermediate and primary inputs. Moreover, with many production facilities in Asia geared to sell to foreigners, who no longer have the means to pay, a massive geographical reallocation of production facilities seems in order.

From this perspective, Keynesian demand-side stimulus might well have near-term benefits, but could eventually have less desirable effects if it impedes necessary adjustments in production capacities. Over time, such considerations matter. Cash for clunkers programs in countries with very low household saving rates are not optimal. Nor are attempts to hold down exchange rates for countries with huge external trade surpluses. Nor are wage subsidies to support part-time

work, if jobs in the industries being supported will never come back.

While all this restructuring takes place, the structural rate of unemployment will be higher and the level of potential output lower. Moreover, the reduced potential will come on top of the more traditional effects of downturns associated with such factors as lower investment—sometimes suppressed by tighter credit conditions—and employment and wages that do not adjust quickly (see Cerra and Saxena, 2008). This implies that all policies to expand aggregate demand could stimulate inflation pressures sooner than expected. Given that some of these policies, such as quantitative and credit easing, are themselves unprecedented, and their effects commensurately uncertain, the added uncertainty generated by shifts in aggregate supply cannot be judged welcome now.

Hyman Minsky and the role of the financial system

The popular shorthand for our current difficulties is the “global financial crisis.” But the crisis is both real and financial. The associated concern that weakness in the financial system could feed back into the real economy through tighter credit conditions also feeds the perception that it is only a financial crisis. Paradoxically, modern economic analysis hardly mentions problems in the financial sector. As Charles Bean (2009) observed, the fact that financial intermediation is barely acknowledged in the premier analyses of interest rates and prices “speaks volumes” about modern macroeconomics.

Admittedly, bankers create money and credit, and this is seen, by the Austrians at least, as the root of the crises that emerge from time to time in capitalist societies. However, even in that literature, problems in the financial sector and negative feedback effects from the financial sector to the real economy are barely mentioned.

One relatively early attempt to factor in such considerations was made by Irving Fisher (1933). Against the backdrop of the thousands of bank failures in the United States in the 1930s, he spoke of successive stages of lending with ever easier credit conditions. (The last of these he speaks of as aiding “speculation and outright fraud.”) In the end, this laxity threatened the banks themselves.

For a fuller evaluation of such financial considerations, we really need to turn to Hyman Minsky. Minsky (1982) also spoke of stages of credit growth, with the horizon of the credit getting ever shorter, culminating in what was essentially Ponzi finance. Loans would, in the last stage of the boom, be made to pay the interest on previous loans. Then, at a moment impossible to predict, creditors would suddenly admit to their folly. They would focus first on their own exposures, but then almost instantaneously on what they assumed to be the even more imprudent behavior of others. At this “Minsky moment,” the bust would begin, with important implications for the real economy. While it looked like a liquidity crisis, the underlying reason for the drying up of the availability of credit was, in Minsky’s view, deep concerns about the insolvency of counterparts, including other banks. Against the backdrop of the decision by BNP Paribas in August 2007 to freeze withdrawals from three of their mutual

funds, and the subsequent failure of Lehman Brothers in 2008, there seems to be much in Minsky’s work that is relevant to current problems.

The way forward for macroeconomics

What do the above considerations imply for the future of macroeconomics? The simplifying assumptions of the New Classical and New Keynesian models do not make them obvious candidates for near-term guidance on how best to conduct macroeconomic policies.

We are left then with the Keynesian framework, with all the likely fuzziness and uncertainties implicit in the principal functional forms being subject to “animal spirits.” At the least, this implies appropriate skepticism of the forecasts generated by the available empirical models. Recent experience of very large forecast errors—not least by the IMF, the Organization for Economic Cooperation and Development, and other official bodies—only accentuates a tendency under way in most forecasting shops for many years. Conscious of the potential shortcomings of individual models, many institutions have begun to maintain a variety of such models. Judgments about policy requirements are based on an overview of them all, plus whatever intuition experienced policymakers are prone to add. This blend of art and science may be the best we can ever hope for.

But there are other challenges to the conventional way of doing things as well. How can we blend into the Keynesian framework some of the insights of Austrian theory? In normal circumstances, using this Keynesian framework in a straightforward way to project output gaps and inflationary tendencies might seem satisfactory. For example, earlier this decade, such a framework seemed to provide an adequate explanation of the simultaneous observation of rapid growth, falling inflation, and very low real interest rates in the global economy (White, 2008). However, beneath this calm surface, Austrian “imbalances” were building up, which eventually culminated in the current crisis. The future macroeconomic research agenda must find ways to identify and react to these pressures. Fortunately, a significant amount of work in the area of identification has been done, and some promising areas for further progress suggested (see Borio and Drehmann, 2009).

One tendency that must be resisted is to see this work on imbalances as related solely to “financial stability.” In part, this tendency is related to the misconception that our current problems are limited to those of a financial crisis. Rather, an important aspect of the issue is how excessive credit and monetary creation can lead to imbalances outside the financial system, with significant macroeconomic implications. Today, for example, households in the United States and a number of other countries seem likely to spend less, save more, and try to pay down debt. This seems likely to happen regardless of the capacity or incapacity of the financial system to give previous borrowers more credit. How the state of household and corporate balance sheets affects the desire to spend (as opposed to the capacity to spend) is a crucial issue for future research.

Viewing the problem as a broader macroeconomic issue, rather than one simply of financial stability, also has important institutional implications. It suggests that the ultimate responsibility for monitoring the buildup of these kinds of Austrian imbalances, and for directing the policy response, falls more naturally into the realm of central banks than into that of financial supervisors. This creates a bit of a political

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problem, because regulatory instruments—particularly ones that can be based on rules rather than discretion (White, 2009)—seem to be the preferred policy response to the buildup of these kinds of problems. Further research into these questions would be very welcome. In particular, the scope for monetary policy to “lean against the wind” of rapid credit growth would merit significant attention.

To say that the problem is a broad macroeconomic problem is not to deny that it has a crucial financial component. Imbalances and excessive leverage in household and corporate balance sheets will generally be matched by excessive leverage on the part of financial firms. Indeed, it is the need to unwind both sets of leverage simultaneously that tends to make associated economic downturns so severe. This implies that research into the functioning of the financial system remains a high priority.

The current crisis has led many to disavow most versions of efficient market theory, but what is to replace them? Again,

and fortunately, there already exists a body of finance literature on information deficiencies, network problems, flawed incentives, and the like. The insights of behavioral finance are also receiving more serious treatment (for example, Akerlof and Shiller, 2009), as are the contributions of market practitioners with particular insights into the interactions among participants that can generate unwarranted market outcomes (for example, Soros, 2009).

As with the broader macro problems, new ways of thinking about financial problems can also have important institutional implications. No question is currently more important than the role of government safety nets. In various ways, they have been expanding for decades, and we have just observed another massive step in that direction. Whether the growing moral hazard (flawed incentives) associated with expanding safety nets has contributed to the increasing severity of financial cycles cries out for the attention of researchers. Current concerns that banks have become too big/complex/interrelated/global to fail/save are only one aspect of this much bigger issue.

In short, when it comes to further macroeconomic research, the current crisis has highlighted what appear to be some dead ends. At the same time, it has also revealed many outstanding questions of highly practical significance with implications both for how crises should be managed and how they might be prevented. Whether these analytical insights will amount to a paradigm shift in how we think about these things remains to be seen. But, however we label it, a change in our thinking is highly desirable. ■

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References:

- Akerlof, George A., and Robert J. Shiller, 2009, *Animal Spirits: How Human Psychology Drives the Economy, and Why It Matters for Global Capitalism* (Princeton, New Jersey: Princeton University Press).
- Bean, Charles, 2009, “The Great Moderation, the Great Panic, and the Great Contraction,” *Schumpeter Lecture, Annual Congress of the European Economic Association, Barcelona, August 25*.
- Blinder, Alan, 1988, “The Fall and Rise of Keynesian Economics,” *The Economic Record*, Vol. 64, No. 4, pp. 278–94.
- , 1997, “What Central Bankers Could Learn from Academics— and Vice Versa,” *Journal of Economic Perspectives*, Vol. 11, No. 2, pp. 3–19.
- Borio, Claudio, and Mathias Drehmann, 2009, “Towards an Operational Framework for Financial Stability: ‘Fuzzy’ Measurement and Its Consequences,” *BIS Working Paper 284* (Basel: Bank for International Settlements).
- Cerra, Valerie, and Sweta Saxena, 2008, “Growth Dynamics: The Myth of Economic Recovery,” *American Economic Review*, Vol. 98, No. 1, pp. 439–57.
- Fisher, Irving, 1933, “The Debt-Deflation Theory of Great Depressions,” *Econometrica*, Vol. 1, No. 4, pp. 337–57.
- Foley, Duncan, 2004, “Rationality and Ideology in Economics,” *Social Research*, Vol. 71, No. 2, pp. 329–39.
- Leijonhufvud, Axel, 1968, *On Keynesian Economics and the Economics of Keynes* (New York: Oxford University Press).
- Mankiw, N. Gregory, 2006, “The Macroeconomist as Scientist and Engineer,” *NBER Working Paper 12349* (Cambridge, Massachusetts: National Bureau of Economic Research).
- Minsky, Hyman P., 1982, “The Financial-Instability Hypothesis: Capitalist Processes and the Behaviour of the Economy,” in *Financial Crises*, ed. by Charles P. Kindleberger and Jean-Pierre Laffargue (Cambridge, United Kingdom: Cambridge University Press).
- Soros, George, 2009, *Central European University Lecture Series, Budapest, October 26–30*.
- White, William R., 2008, “Globalisation and the Determinants of Domestic Inflation,” *BIS Working Paper 250* (Basel: Bank for International Settlements).
- , 2009, “Should Monetary Policy ‘Lean or Clean?’” *Globalization and Monetary Policy Institute Working Paper 34* (Dallas, Texas: Federal Reserve Bank of Dallas).