



## The Risk Cycle

By John H. Makin

Now that Wall Street and the Federal Reserve have finished congratulating themselves for not having been alarmists—in other words, for failing to recognize that a recession was looming—they are now facing up to the onset of a U.S. recession and a rapidly spreading financial crisis. Having been late to reach that conclusion, they now grudgingly admit that we may have a brief “V-shaped” recession and are apparently hoping that Fed rate cuts and a fiscal stimulus package will quickly solve the economy’s problems.

The more likely situation, however, is that the recession of 2008 will be a longer, “U-shaped” affair, driven by an unusual, persistent drop in consumption and investment. Underlying the intensity and persistence of the cyclical weakness emerging in the U.S. economy and manifest in weaker investment and consumption spending is an “endogenous” risk appetite cycle, one that is tied to the fundamental problem facing the U.S. economy: the build-up and subsequent implosion of the housing bubble.

### Proximate Recession Symptoms

Throughout most of the fourth quarter of last year, the nonalarmists oscillated between outright denial that there could be a U.S. recession—while the Fed was easing—and cautious suggestions that there might be a one-third or so chance of recession in 2008. The Federal Reserve expressed a slightly more sanguine view after its December 11, 2007, meeting, at which it cut the federal funds rate a modest 25 basis points to 4.25 percent. Even at that point, with the yield on the two-year Treasury note

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at about 3.05 percent, or 120 basis points below the federal funds rate, credit markets were hinting strongly that sharper rate cuts would be needed in order to preserve economic momentum.

However, it took data from the real economy to bring the recession skeptics around. With housing data remaining extraordinarily weak, new home sales fell 9 percent in November alone. Then, in early January, the appearance of sharply weaker data from the manufacturing sector reinforced the notion that the recession was spreading from the housing sector. Moreover, the Institute of Supply Management (ISM) survey, a measure of momentum in the manufacturing sector, dropped from 50.8 in November, a level indicating flat growth, to 47.7 in December, a level indicating a contracting manufacturing sector.

On January 4, two days after the weak ISM survey, the Payroll Employment Report signaled a decisive weakening in the labor market, often a harbinger that recession is already underway since employment tends to be a lagging indicator. The year-over-year growth in the nonfarm payroll dropped from 1.1 percent in November to 0.92 percent in December, a level usually associated with the onset of recession. The sharp rise in the unemployment rate from 4.7 percent in November to 5 percent in December provided a decisive signal that recession was at hand. That highly unusual jump in the unemployment rate to a level 0.6 percent above its low in the spring of 2007 seems to have convinced skeptics that a recession is likely. JPMorgan’s highly respected chief economist, Bruce Kasman, simply reiterated a fact: “There is no episode in post–World War II U.S. economic history in which the unemployment rate has

risen this much (0.6 percent) from a cyclical low without signaling that the economy is in recession.”<sup>1</sup>

## Fed Acknowledges Rising Concern

Six days later, on January 10, in a speech on the outlook for the economy, Fed chairman Ben Bernanke admitted that “downside risks to growth have become more pronounced,” while acknowledging that “higher oil prices, lower equity prices, and softening home values seem likely to weigh on consumer spending as we move into 2008.”<sup>2</sup> Bernanke further acknowledged that “financial conditions continue to pose downside risk to the outlook for growth.” He noted that “additional policy easing may well be necessary” and that the Federal Open Market Committee “must remain exceptionally alert and flexible, prepared to act in a decisive and timely manner and, in particular, to counter any adverse dynamics that might threaten economic or financial stability.” Markets took those comments as a virtual assurance—especially in contrast to the far more cautious statement after the Fed’s December 11 meeting—that the Fed would cut the fed funds rate by 50 basis points to 3.75 percent after its meeting on January 29 and 30. In fact, after a panicky global sell-off on January 18 and 21, the Fed cut the fed funds and discount rates by an unprecedented 75 basis points to 3.5 percent on January 22, just a week before its regularly scheduled meeting.

While Bernanke’s comments were comforting to markets, a continued stream of bad economic news further elevated concerns about the intensity and duration of what had become a more widely acknowledged U.S. recession. The January 15 report on December retail sales showed a sharper-than-expected drop of -0.4 percent against an expectation of flat sales, while November retail sales were revised downward from 1.2 percent to 1 percent. The retail sales report was even weaker than the headline numbers suggested because of seasonal adjustment issues. The seasonally unadjusted increase in December retail sales was the weakest on record. The sharp deterioration in retail spending in December signaled the likelihood of negative consumption growth during the first quarter. The realization that consumption growth could turn negative for the first time since 1991 raised the possibility that the recession could be more prolonged and more difficult to counteract.

Fed governor Frederic Mishkin, in a speech given January 11—the day after Bernanke’s speech expressing increased concern about the path of the economy—delved more deeply into the link between financial disruptions

and the real economy. Mishkin repeated a distinction drawn in an earlier speech between valuation risk and macroeconomic risk. Valuation risk is tied to the degree of uncertainty about returns on specific assets. Of late, concern has focused on the repricing of structured credit products in the months since August 2007, when the sub-prime crisis emerged and began to transform itself into a broader increase in risk aversion among investors. Macroeconomic risk concerns the spillover of financial market strains into the broader economy, thereby producing negative consequences for output and employment. If an economic downturn generates even greater uncertainty about asset values—that is, if valuation risk creates macroeconomic risk, which in turn enhances valuation risk further—an “adverse feedback loop” can emerge whereby the economy can deteriorate at a nonlinear (more rapid) pace. In that disturbing case, Mishkin suggested that “monetary policy can reduce the likelihood that a financial disruption might set off an adverse feedback loop.”<sup>3</sup>

## Markets Sense Adverse Feedback Loop

The combination of the Bernanke and Mishkin speeches on January 10 and 11, the weaker employment and manufacturing data that preceded those speeches, and the decisive sign of a sharp consumption slowdown from the retail sales report on January 15 led markets to think that the nonlinear stage of economic deterioration may have been reached as we crossed into 2008. Markets were sending signals of nonlinear deterioration. By the end of the January 15 market day, when the weak retail sales report appeared, the yield on the two-year Treasury note had dropped below 2.5 percent, increasing the spread versus the fed funds rate to 175 basis points. This extreme inversion has rarely been seen before in U.S. history, invariably just before sharp recessions forced the Fed to cut the fed funds rate sharply. More troubling, in this case the inversion arose after the Fed had already moved to reduce the fed funds rate by 100 basis points since its first rate cut in September 2007. Financial market participants are signaling increasing concern of a sharp U.S. recession. A steady stream of negative earnings reports from banks and investment banks coupled with a disappointing report from nonfinancial firms, like Intel and Monsanto, had, by mid-January, reinforced the notion of abrupt deterioration of the financial sector and possibly the real economy. Between late December and mid-January, the S&P Index fell by nearly 10 percent—more than erasing all of 2007’s gains in under three weeks’ time.

The problem that has persistently faced the Fed since the August 2007 onset of a financial crisis tied to collapsing house values is the contrast between its linear response pattern to the resultant financial and economic problems that are emerging at a nonlinear, more rapid pace. After Mishkin's explicit acknowledgement of an adverse feedback loop—from credit markets to the real economy and back to credit markets—and therefore the possible nonlinear path of the economy, financial market conditions, and the Fed's response function, markets began to anticipate a greater than 50-basis-point reduction in the fed funds rate during January. By January 22, the Fed had cut the fed funds rate by 75 basis points, and the accompanying statement led markets to anticipate another 50-basis-point cut after the Fed's regular January 29–30 meeting.

Whatever the outcome, events in the real economy and financial markets since mid-December, coupled with public responses by Fed leaders, have made one thing clear. The economy is slowing rapidly, and it is slowing considerably more rapidly than most analysts and policymakers have heretofore perceived. The risk of an adverse feedback loop has grown.

## The Risk Cycle

Beneath the surprisingly rapid onset of recession and financial weakness at the start of 2008 is an unusual cyclical dynamic operating on the U.S. economy. The underlying cause of a widely acknowledged but not well understood problem is an excess housing stock in the United States (and probably in the United Kingdom, Ireland, Canada, and Spain as well) that can only be eliminated by a sharp reduction in prices. In this sense, the United States is entering an inventory cycle in which the excess inventory is in the form of housing and land as opposed to finished goods, excesses of which drive more typical business cycles. The trouble with an excess inventory of housing and attendant sharply falling prices in the United States is the critical role played by housing on the balance sheets of U.S. consumers, both in terms of owner-occupied housing and more speculative rental or vacation properties.

It is bad enough to have home-building and associated industries collapse as the economy adjusts to an excessive stock of housing. Yet the problem facing the United States

in 2008 is compounded by the fact that the housing bubble has embedded the risk tied to lower real estate prices into financial assets. Furthermore, these are not just claims on homebuilders, but rather far more widely dispersed derivative securities that have been securitized, leveraged,

resecuritized, and then distributed to financial institutions worldwide. The resulting derivative securities are highly illiquid and difficult to value, so as the value of the underlying asset—real estate—continues to fall, the attendant shock to financial markets grows exponentially. The cyclical dynamics tied to a housing inventory cycle have been greatly magnified by the securitization of assets whose intrinsic value is tied to the price of housing.

The temptation during the last half of 2007 was to view the problems tied to falling house prices as contained and manageable. At first, it was just a subprime crisis, but by the end of 2007, it had become

clear that the subprime crisis was expanding into a real-estate sector crisis that, in turn, had been magnified by the securitization of claims on real estate whose value was falling. Every financial statement by a bank or investment bank that failed to specify underlying assumptions about the path of real-estate prices was and is subject to constant revision. Fourth-quarter reports by U.S. commercial and investment banks all reflect the sharply elevated losses attributed to worsening conditions in the real-estate market that, in turn, reduced the value of derivative securities on the balance sheets of U.S. financial institutions.

The negative interaction between the real economy and the financial sector has been exaggerated in this cycle. House prices stopped rising in 2006 because they had exceeded affordability levels for most potential buyers. As house prices leveled off, the initial wave of problems emerged in the subprime sector late in 2006 and early in 2007. The hope of containment of the subprime problem evaporated in the summer of 2007 as leveraged investment funds like the Bear Stearns Asset-Backed Securities Fund collapsed. Unfortunately, in terms of providing a timely response to the rapidly deteriorating financial conditions tied to falling real-estate prices, the real economy grew strongly in the third quarter with substantial help—since reversed—from inventory accumulation and strong net exports. The real economy slowed during the fourth quarter, and the economy probably entered recession at year's end. Substantial damage to the balance sheets of

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U.S. banks and investment houses had occurred that added to the negative pressure on the real economy.

On January 16, 2008, the *Wall Street Journal* ran a story titled “Lenders Rethink Home-Equity Loans.” Basically, the story revealed that more and more households were defaulting on home equity loans, leading banks to start reducing the credit lines available under existing home equity loans that had not yet defaulted. Home equity loans tend to serve as a substitute for large cash balances for middle- and upper-income households, so curtailment of available credit in such loans will lead to further curtailment of spending by middle- and upper-income households. Weaker spending by upper-income consumers, supposedly immune to credit problems tied to the subprime crisis, has already begun to appear in the form of weaker sales at high-end jewelers like Tiffany and higher default rates on credit cards issued by American Express.

As the adverse feedback loop from deteriorating financial conditions to the real economy plays out, a rise in risk aversion by households, firms, and investors threatens to intensify the nonlinear weakening of financial and real economic conditions. The move toward greater risk aversion by investors is already evident in the widening spreads between risky and nonrisky assets in the credit markets, in the underperformance of the stock market relative to expected earnings, and in falling yields on competing assets in the Treasury market. In effect, risk premiums in the financial sector are rising rapidly, thereby magnifying the negative impact flowing from the financial to the real economy that is tied, in turn, to the heretofore unanticipated onset of recession.

## Crisis in Bond Insurance

The nonlinear phase of the adverse feedback loop from financial markets to the real economy was made more tangible on January 18, when the Fitch Rating Agency cut the rating on the insurance unit of Ambac Financial Group from AAA to double AA. The seemingly modest downgrade—laughable since markets are pricing Ambac’s paper as junk bonds—has potentially devastating effects for financial markets. Ambac is—along with MBIA and several other firms—a bond insurer that in effect sells credit rating boosts to municipalities and other weaker borrowers by guaranteeing to pay principal and interest on their loans. If the mortgage insurer loses its AAA rating, so too do its insurees, whose liabilities, held as assets by banks, investment banks, and

pension funds, must then be written down in value. The bond insurers have “insured” about \$2.3 trillion, approximately \$1.3 trillion of which is tied to municipal debt issues and \$1 billion of which is tied to structured finance exposure in the form of complex derivative securities.

Markets have been deeply concerned about the mortgage insurers since last summer when, for example, Ambac’s shares were valued at about \$90 each. The first wave of market turmoil that emerged in August took the shares down by about 30 percent to just over \$60 per share. During the last half of October, Ambac shares fell more sharply, by about 60 percent to about \$25—a move that coincided with the start of a weaker stock market. Between late December and January 18, Ambac shares collapsed yet again, falling another 75 percent in value. Much of the last drop—from \$21 per share to \$6.20 per share—occurred between January 16 and 18, signaling a crisis for Ambac and other bond insurers whose shares moved down in tandem with Ambac’s. The price declines were tied to the actual reduction in Ambac’s rating and the expected reduction in MBIA’s rating.

Tamara Kravec, an analyst at Banc of America Securities, wrote on January 18: “The destruction of the bond insurers would likely bring write-downs at major banks and financial institutions that would put current write-downs to shame.”<sup>4</sup>

The new crisis initiated by the near-collapse of bond insurers adds to the threat of an accelerating, adverse feedback loop from the financial sector to the real economy. Global equity markets fell by more than 5 percent on January 21 after news spread of the possible collapse of U.S. mortgage insurers. Such an exacerbation of downward momentum in financial markets and the real economy threatens to produce a recession far more severe and protracted than is currently expected or priced into asset markets. Investor risk appetite would be sharply curtailed and liquidity preference would be sharply elevated by the emergence of a nonlinear, adverse feedback loop.

The process whereby an endogenous cycle of risk appetite of investors, households, and businesses exacerbates the cyclical movements in financial markets and the real economy has been explored in academic literature. At a recent Philadelphia Federal Reserve Policy Forum, John Geanakoplos of Yale University made a presentation entitled “The Leverage Cycle,” which explored how endogenous flights to liquidity during periods of enhanced market volatility can intensify cyclical behavior. While this brief characterization does not do full justice to the innovative work by Geanakoplos or

other authors working in the field, the fact that signs of risk aversion are emerging rapidly in the financial sector, despite substantial efforts by the Fed to ease liquidity conditions, suggests that the economy and financial markets in the United States, and perhaps globally, are exposed to the risk of enhanced volatility.

### **Fiscal Stimulus Package?**

The sharp deterioration of the U.S. economy signaled late in 2007 and early in 2008 by weaker data on employment, manufacturing, and consumption and still weaker data on housing, together with a 10 percent drop in stock markets worldwide, prompted President Bush on January 18 to propose a fiscal stimulus package. The package was modestly scaled to about 1 percent of GDP. The proposed measures included tax rebates to households and investment incentives, each similar to measures enacted in the 2001 and 2002 stimulus packages.

The severity of the U.S. economic slowdown is underscored by the sudden emergence of at least a stated willingness of both Democrats and Republicans to move ahead rapidly with targeted, temporary fiscal stimulus. Just a month earlier, after a year of partisan struggle punctuated by cries about the dangers of a deficit-finance tax cut, Congress had finally managed to pass a tax bill that protected taxpayers from a \$50 billion tax increase through the outmoded alternative minimum tax. Just weeks later, a bipartisan consensus has emerged on the need for a \$150 billion tax cut stimulus package. That is a very rapid turnaround, especially by Washington standards.

A stimulus package like the one under discussion in Washington can, like the measures in 2001 and 2002, be expected to provide at best a modest, temporary lift to growth, equal to a two-quarter rise in the annual GDP growth rate by about 1 percentage point. The actual impact of the current plan will probably be about half that for two reasons. First, the sharp one-third rise in energy prices during 2007 is the equivalent of an \$80–\$100 billion tax increase on U.S. households that will have boosted unpaid credit card balances. About one-half of a windfall tax increase will probably be used to pay down debt and therefore will not add to spending, although it will help to improve household balance

sheets. Second, the rapid onset of recession and the associated wealth losses tied to falling stock prices and home values have increased uncertainty and reduced tolerance for risk by firms and households. These factors increase the likelihood that tax rebates will be saved, while investment incentives provide less stimulus to add to plant and equipment.

Coming as it does, somewhat late, after a sudden deterioration of household finances tied to the fallout from falling home prices and stocks, the stimulus package will not avert the recession that is already underway and—scaled at a nominal 1 percent of GDP of tax reductions—will not boost growth by enough to lift the economy out of negative growth during mid- to late-2008.

### **Financial Markets Dominating Cyclical Forces**

A collapsing housing bubble and the resulting financial damage tied to the leveraged securitization of claims whose value is highly sensitive to the path of real estate prices has intensified the cyclical pressures operating on the U.S. economy. A problem in the real economy tied to a sharp drop in house prices has caused substantial damage in the financial sector by reducing the value of widely dispersed real estate-based securities. The unexpected intensity of the financial problems has harmed the real economy, which, now that recession has arrived, threatens to further intensify financial problems.

The movement to a nonlinear, adverse feedback mechanism has been underscored by the travails of Ambac and other mortgage insurers. The sharp rise in the ratio of world financial assets to gross national product from 100 percent in 1980 to 316 percent in 2005 (according to values assigned by McKinsey) means that the potential for disruptions in the financial markets to disturb the real economy has grown tremendously since the Federal Reserve under then-chairman Paul Volcker crushed inflation by crushing financial markets in the early 1980s. A 10 percent swing in the roughly \$150 trillion value of global financial assets is now worth more than a full year's U.S. GDP.

As Bernanke concluded his January 10 speech on the economy: "Financial and economic conditions can change quickly. Consequently, the [Federal Reserve Open Market]

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Committee must remain exceptionally alert and flexible, prepared to act in a decisive and timely manner and, in particular, to counter any adverse dynamics that might threaten economic or financial security.”<sup>5</sup>

Let us hope he means it. The 75-basis-point reduction in the fed funds rate and the discount rate on January 22 are a good start. We should see the fed funds rate at 2 percent by spring.

## Notes

1. *JPMorgan Global Data Watch*, November 1, 2008.
2. Ben Bernanke, “Financial Markets, the Economic Outlook, and Monetary Policy” (speech, Women in Housing and Finance and Exchequer Club Joint Luncheon, Washington, DC, January 10, 2008).
3. Frederic S. Mishkin, “Monetary Policy Flexibility, Risk Management, and Financial Disruptions” (speech, Federal Reserve Bank of New York, January 11, 2008).
4. Quoted in Alistair Barr, “Bond-Insurer Woes May Trigger More Write-Downs,” *MarketWatch*, January 18, 2008.
5. Ben Bernanke, “Financial Markets, the Economic Outlook, and Monetary Policy.”