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Recovering from the Housing and Financial Crisis

by John V. Duca and David Luttrell

Since the second half of 2009, four negative shocks to the economy have been unwinding. Nevertheless, the U.S. recovery still faces downside risks.

The recent recession was unusual because it stemmed from an unsustainable easing of credit standards and financing, which fueled the prior expansion but also the imbalances that led to the worst recession since the 1930s.[1] When losses on new financial practices ended excessive lending, the economy was hit by housing and credit shocks, culminating in a financial crisis. Home construction plunged, wealth fell, credit standards tightened and financial markets seized up.

The initial impacts of these four shocks on gross domestic product (GDP) were amplified by cyclical interactions between income and spending. Since the second half of 2009, these negative shocks have been unwinding, setting the stage for economic recovery. An analysis of the shocks and their aftermath offers clues to the direction and pace of the recovery.

Home Construction and GDP

Housing demand is driven not only by income and mortgage interest rates but also the credit standards used to approve or deny mortgage applications. The easing of credit standards associated with the rise of nonprime mortgages enabled more people to obtain mortgages and contributed to a large upswing in housing demand through the mid-2000s. Standards quickly tightened in 2007, causing housing demand to plummet.[2]

Home construction, which normally makes up 5 percent of GDP, added 0.6 percentage points to GDP growth at the height of the housing boom and subtracted 0.3 to 1.4 percentage points for 14 straight quarters after (*Chart 1*). These are notable effects on GDP growth, which averages about 2.5 percent annually. When new construction slipped below levels needed to replace depreciation and accommodate population growth, the stock of unsold homes fell and home construction shifted from having a negative to a neutral impact on GDP growth.

Housing's Wealth Effect

The home price increases earlier in the decade began to reverse as housing demand retrenched.

Because mortgages are collateralized, housing wealth enabled many families to borrow at lower interest rates or in higher amounts than they might have otherwise. In this way, house price gains boosted consumer spending. Borrowing against housing rose to as much as 8 percent of disposable income in the mid-2000s. When home prices fell, so did such borrowing. Studies indicate that the swing in housing wealth had a significant effect on consumption growth, adding 1 to 3 percentage points and then subtracting a similar amount by late 2008.[3]

The economic impact of housing spurred declines in other asset prices, such as stocks, imparting a negative wealth effect on consumption. Since early 2009, the economic outlook and investor tolerance of risk have improved, partially reversing the 29 percent drop in inflation-adjusted wealth from second quarter 2007 to first quarter 2009. The decline was the largest since the data series began in 1952 (*Chart 2*).

Financial industry losses on residential mortgage loans and securities were sizable, estimated at $370 billion at U.S. banks since 2007.[4] The losses were large enough to result in the failure, assisted sale or rescue of many banks and nonbank financial firms, including investment bank Lehman Brothers. These losses were large enough to impart two additional negative impulses to GDP in the form of tighter credit availability from lenders and the reduced ability of large firms to borrow from securities markets.

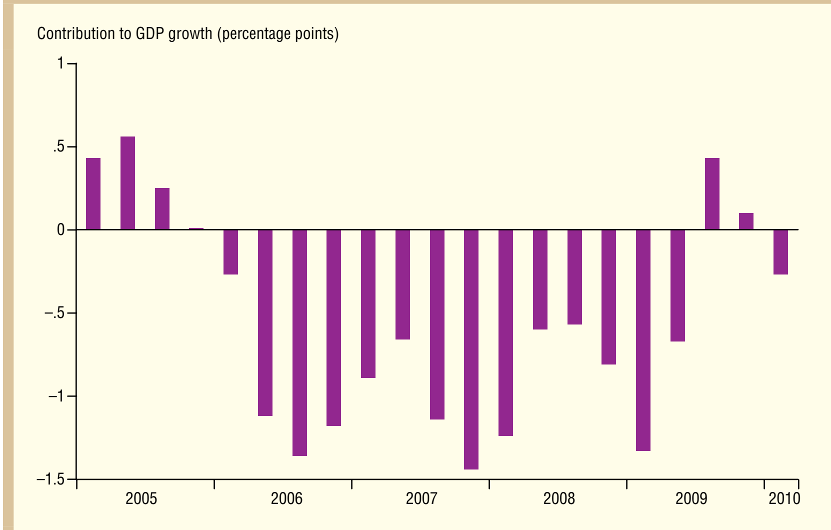
Credit Availability

Many long-lasting goods, like autos and business equipment, are bought on credit. Consequently, their sales and output partly depend on loan interest rates and the credit standards of lenders. Thus, the willingness and ability of bank and nonbank lenders to extend credit can affect these financially sensitive sectors of the economy.

Banks are required to fund loans held in portfolio with at least 8 percent in equity capital by issuing stock or retaining earnings; government-insured deposits or other debt fund the rest. Losses on loans and securities are first borne by capital. Reacting to a weaker real estate outlook, banks mainly tightened credit standards on mortgage loans in 2007.[5] But many banks did not have enough capital to make new loans after they suffered large losses in 2008 and

Chart 1

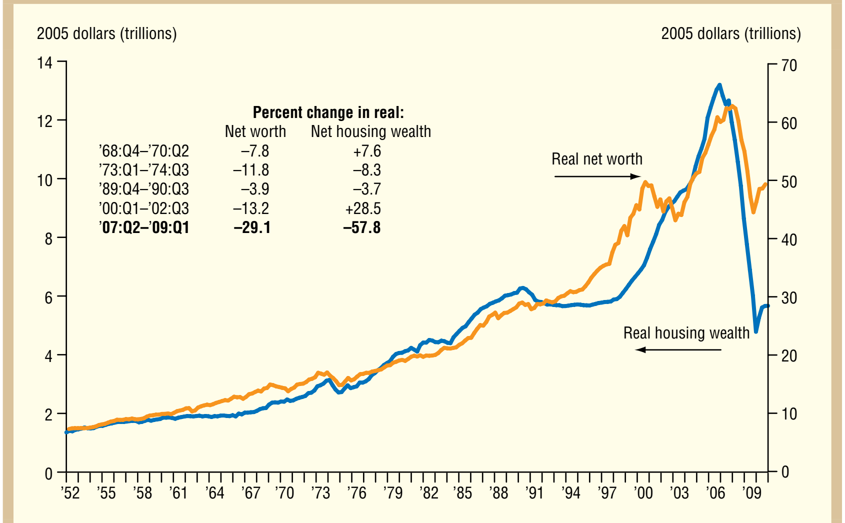
Housing Construction's Drag on GDP Ebbs



SOURCES: Bureau of Economic Analysis; authors' calculations.

Chart 2

After Plunging, Net Worth and Housing Wealth Stabilize



SOURCES: Flow of Funds Accounts (June 2010); Bureau of Economic Analysis; authors' calculations.

Lehman Brothers failed in September of that year. As a result, banks tightened credit standards on all types of loans, resulting in a credit crunch.

Unlike banks, nonbank lenders cannot issue insured deposits and must assure investors that they are liquid and capitalized enough to raise funds by issuing debt that isn't government-insured. When losses on subprime and other investments mounted, investors stopped buying nonbank debt. Lacking funding for new loans or facing maturing debt that financed existing loans, nonbank lenders cut lending sharply by charging higher loan rates and tightening credit standards. Such changes at banks and nonbank lenders contributed to steep declines in the sale and production of consumer durable and business investment goods, especially in late 2008 and early 2009.

By spring 2009, many banks and nonbank financial firms had raised or received new capital, and risk premiums charged by debt investors fell as liquidity and default risks declined with an improved economic outlook. For banks and nonbanks alike, this meant decreased loan funding costs and a greater capacity to lend. By mid-2009, institutions had lowered loan interest rates and stopped tightening credit standards on non-real-estate loans.

Securities Market Swings

The fourth recessionary impulse occurred in securities markets as large losses on subprime mortgage securities exposed risks in the structured financial product innovations that had fueled the prior economic expansion. Markets realized the lack of clarity regarding which firms bore the risks directly or indirectly through their customers. To hedge risk, some investors bought default insurance on the bonds they held via credit default swaps (CDS). However, CDS issuers traded in largely unregulated markets, weren't required to hold reserves against potential payouts and had exposures that were unclear. When large losses on subprime securities and derivatives materialized, risk premiums soared on private debt as investors could no longer buy low-cost default insurance or assess the risk exposures of many firms. The situation worsened following the failure of Lehman Brothers, which had issued many derivatives and whose default exposed many CDS issuers that backed Lehman's debt.

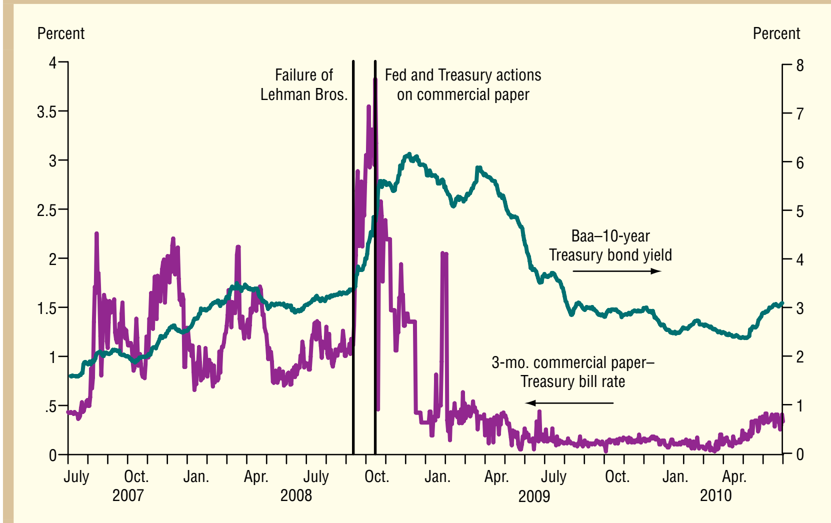
Private debt issuance halted in late 2008, while interest rates on private debt soared. Spreads between interest rates on corporate and Treasury bonds rose to levels not seen since the Great Depression, and spreads jumped between interest rates on short-term commercial paper and Treasury bills (*Chart 3*). In response to reduced availability and higher costs of funding from securities markets and lenders in late 2008, firms cut software and business equipment investment, accounting for about 44 percent of the large GDP declines in fourth quarter 2008 and first quarter 2009. Faced with weaker sales and tighter credit, many firms quickly laid off workers, deepening the recession. In the nine months following Lehman's demise, the unemployment rate jumped 3.3 percentage points to 9.5 percent by June 2009.

Unusual actions by the Federal Reserve and the Treasury helped reopen the prime residential mortgage and commercial paper markets in late 2008.[6] Lacking such help but benefiting from an improving economic outlook, corporate bond interest rates began falling and corporate bond issuance began rising by spring 2009. This aided an upturn in business investment in the second half of 2009.

From Recession to Recovery

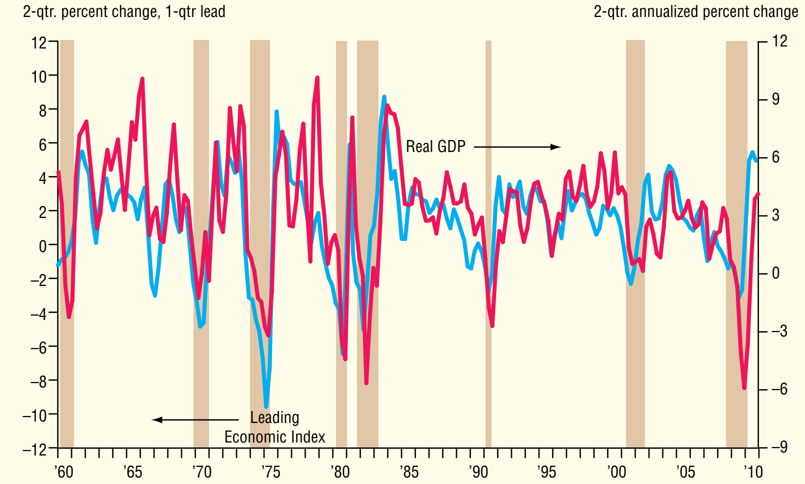
By mid-2009, home construction had bottomed out, wealth had partially recovered and financial markets functioned better. Lenders stopped tightening credit standards on non-real-estate loans by late 2009. GDP began growing in third quarter 2009, owing to three general influences. First, output was reduced less by the four unusual impulses that had pushed the economy into recession. Next, the second-half upturn in GDP partly reflected fiscal and monetary policy actions to stimulate aggregate demand. Third, given a partial recovery of access to some forms of finance and the expectation of economic growth, aggregate demand benefited from a release of

Chart 3
Corporate Interest Spreads Retreat from Crisis Highs



SOURCES: Federal Reserve Board; Moody's; authors' calculations.

Chart 4
Conventional Leading Indicators Point to Recovery



NOTE: Shaded areas indicate recessions.

SOURCES: Conference Board; Bureau of Economic Analysis; authors' calculations.

demand pent up during the recession, when households and firms had postponed purchases of big-ticket items.

The effects of the last two influences are more typical of economic recoveries and are tracked by conventional indicators historically associated with recoveries. For example, the six-month growth rate in the Leading Economic Index rose in spring 2009, correctly presaging positive GDP growth in the second half of 2009 (*Chart 4*).

However, the U.S. recovery still faces downside risks. Further losses on residential and commercial mortgages may delay a return of credit standards to normal. Large budget deficits may force state and local governments to cut spending. Recent declines in the ability of foreign governments to borrow have induced tax increases and spending cuts that will temper worldwide economic growth. Finally, the return to full employment may be delayed by firms' reluctance to hire. These uncertainties appear more likely to slow the pace of—rather than end—the economic recovery given how the four major headwinds from the recent crisis have been abating.

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Notes

[1] "Housing Markets and the Financial Crisis of 2007–09: Lessons for the Future," by John V. Duca, John Muellbauer and Anthony Murphy, *Journal of Financial Stability*, forthcoming.

[2] "The Rise and Fall of Subprime Mortgages," by Danielle DiMartino and John V. Duca, Federal Reserve Bank of Dallas *Economic Letter*, vol. 2, no. 11, 2007.

[3] "Credit, Housing Collateral and Consumption: Evidence from the U.K., U.S. and Japan," by Janine Aron, John V. Duca, John Muellbauer, Keiko Murata and Anthony Murphy, CEPR Discussion Paper 7876, Center for Economic Policy Research, June 2010.

[4] "Global Financial Stability Report," International Monetary Fund, April 2010, p. 13.

[5] Federal Reserve's Senior Loan Officer Opinion Survey, various releases.

[6] "Fed Confronts Financial Crisis by Expanding Its Role as Lender of Last Resort," by John V. Duca, Danielle DiMartino and Jessica J. Renier, Federal Reserve Bank of Dallas *Economic Letter*, vol. 2, no. 2, 2009.

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