Housing, Housing Finance, and Monetary Policy—An Introduction to the Bank's 2007 Economic Symposium

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Housing plays an important role in modern economies. Governments around the world consider the provision of adequate and affordable housing a key policy objective. In addition, housing is the principal asset and mortgage debt is the largest liability of most households across many countries. Given the prominence of the housing sector in most economies, changes in housing markets and the systems of housing finance can have significant implications for financial markets, macroeconomic stability, and monetary policy.

Over the last few decades, considerable changes have occurred in the housing markets of many countries around the world. There has been a general trend toward market-based systems of housing finance, replacing more traditional methods that relied on specialized depository intermediaries or government programs. In addition, many countries have experienced rapid home price appreciation and rising levels of household debt. These developments have raised concerns about the affordability of housing and concerns about the broader issues of financial and macroeconomic stability. More recently, rising defaults on subprime mortgages in the United States have affected investors and financial markets around the world.

To better understand the causes and effects of the recent changes in housing and housing finance and their implications for the economy and monetary policy, the Federal Reserve Bank of Kansas City sponsored the symposium "Housing, Housing Finance, and Monetary Policy" in Jackson Hole, Wyo., from Aug. 30 to Sept. 1, 2007. The symposium brought together a distinguished group of central bankers, academic economists, and financial market participants to discuss the historical evolution and recent developments in the markets for housing and housing finance and their broader macroeconomic consequences. This introduction provides some brief background information on the three main themes highlighted at the symposium: changes in the structure of housing finance around the world, the macroeconomic dimensions of housing and housing finance, and the relationship of housing to monetary policy.

Changes in the Structure of Housing Finance

Presentations by Federal Reserve Chairman Ben Bernanke, Richard Green and Susan Wachter, and William White discussed the evolution of housing finance systems around the world. One key development highlighted was a shift from government-based mortgage programs to market-based housing finance over the past few decades in many countries. While housing markets generally remain very local in nature, changes in the structure of housing finance have increased the linkages between the housing sector, financial markets, and the macroeconomy. Despite the increase in external influence, however, differences across countries still suggest that national institutional factors are important in understanding the market for housing finance.

One of the most important structural changes in housing finance is *securitization*, a process by which individual mortgage loans are packaged together and used as collateral or backing for a type of bond called a *mortgage-backed security*. Prior to securitization, most mortgage loans were made by local depository institutions and financed by deposits at these institutions. With securitization, mortgage financing can come from institutional investors, such as pension and mutual funds, who purchase the mortgage-backed securities. One consequence of securitization is that markets for housing finance have become integrated with capital markets. As a result of the globalization of capital markets over the last few decades, financing for housing can now come from investors around the world. Thus, macroeconomic stability and well-developed, long-term capital markets are now necessary conditions for well-functioning mortgage markets.

Another implication of securitization is that the process of mortgage lending has been unbundled into its component functions. Historically, specialized mortgage lenders would originate a loan, service the loan (collect payments), and hold the loan in its portfolio. Now, all three parts of the process may be done by different institutions, each of whom receives payment for performing their more specialized function. In countries where securitization has become widespread, such as the United States, mortgage borrowers have experienced lower costs of mortgage financing. While the process of securitization allows investors to spread risks across many localities and borrowers, it also may decrease the incentive for proper risk assessment by lenders and can contribute to poor underwriting and documentation standards. Much of the recent volatility in the U.S. subprime mortgage market stems from the uncertainty about the risks associated with securities backed by subprime mortgages.

A second key feature of mortgage markets is the nature of the mortgage loan. Important differences across countries exist in the structure of mortgage loans. Some countries, such as the United States, rely heavily on long-term fixed-rate mortgages, while adjustable-rate loans are more prominent in other countries. A key difference in these mortgage types is whether the borrower or lender absorbs the risk of changes in market interest rates. With an adjustable-rate loan, the borrower's payments adjust to changes in interest rates, whereas the lender absorbs the cost of adjustment for fixed-rate loans.

In recent years, there has been a proliferation in types of mortgage loans in U.S. markets, especially in adjustable-rate loans. Mortgages with interest-only introductory periods, low initial "teaser" rates, and negative amortization have become more popular in the low-interest-rate environment of the past few years. These developments are closely related to the development of *subprime* mortgages. The luncheon address, prepared by Edward Gramlich, examined the growth in subprime lending and the policy implications of the recent problems that have emerged in this sector.

In the United States, mortgage loans have not traditionally been available to borrowers with questionable credit histories. However, the rising use of credit scoring in consumer lending, combined with other changes in lending practices in recent years, has allowed many borrowers to get mortgage loans who previously could not qualify. Unfortunately, complicated mortgage products were offered to the least-educated and lowest-income borrowers in many instances. When interest rates on these adjustable-rate loans reset at higher levels, borrowers consequently experienced sizable increases in monthly payments, leading to rising defaults and foreclosures. The overall innovation of subprime borrowing has been promising because it allows low-income and minority borrowers to gain access to credit markets for housing finance. Many symposium participants agreed, however, that the regulation of the subprime mortgage market needs to be expanded to curtail the predatory lending, inadequate documentation, and uncertainty that currently plague the subprime market.

A third important development in mortgage markets is the increased ability of homeowners to access their home equity via cash-out refinancing or home equity lines of credit. Homeowners are now able to better smooth their consumption by extracting equity from their homes. This development is likely to be especially important for borrowers who previously had limited access to credit and could have implications for overall consumer spending and saving behavior, as discussed in more detail in the next section.

Macroeconomic Dimensions of Housing and Housing Finance

These institutional developments in housing finance provided the backdrop for a broader discussion of the role of housing and housing finance in the macroeconomy. Presentations and discussion focused on three key issues: the determinants of house prices and the implication of house price changes for the economy, the role of the housing sector in business cycle developments, and the implications of house price changes and changes in housing finance for consumer behavior.

Over the past few decades, many countries around the world have experienced episodes of house price appreciation. This has occurred in both supply-constrained countries, such as the United Kingdom, and in countries with an increase in demand, such as the United States. Given the institutional and demographic differences across countries, this appreciation could be the result of significant global changes within housing markets, such as the liberalization in housing finance, but could also reflect country-specific factors.

Robert Shiller and Christopher Mayer presented two very different viewpoints on the cause of the recent rapid housing price appreciation. Professor Shiller argued that psychology, rather than fundamentals such as rent or construction costs, has driven the rapid housing price appreciation over the past few years. According to Shiller, speculative bubbles, such as the most recent housing boom, stem from a feedback mechanism where past price appreciation increases the expectation of future price increases. The feedback cycle of past increases on future expectations can repeat successively in the short run, but the bubble eventually bursts when prices finally stop increasing. Professor Shiller believes that large declines in real housing prices, as large as 50 percent in some areas, are entirely possible in the near future.

In contrast, Christopher Mayer suggested that economic fundamentals such as long-term interest rates played a more important role in explaining the recent housing boom. Professor Mayer was not surprised about the emergence of the housing boom, given the global decline in long-term rates and price of risk. He believes psychology may play an important role in certain cities, where house prices are far out of line with their fundamental value, but argued that economic fundamentals such as credit conditions and housing supply constraints matter more.

Turning from housing prices to housing quantities, Edward Leamer examined the role of housing in business cycles. Leamer argued that residential investment plays a relatively minor role in long-run gross domestic product (GDP) growth but contributes heavily to recessions and business cycles. In eight of the last ten recessions in the United States, substantial problems in the housing sector preceded the downturn in overall GDP. Leamer noted that home prices are sticky downward, so the quantity of sales, not prices, must adjust downward during a decline in housing demand. In addition, low-income, first-time homebuyers may experience a disproportionate share of the falling housing cycle, because many of these properties appreciated fastest. Leamer argued that the quantity of housing stock demanded is fairly fixed over a long period of time. Therefore, periods of overconsumption, such as the fast growth of housing consumption in 2003-04, will be repaid as slower growth in 2007-08.

In his commentary on Leamer's paper, Frank Smets took issue with several of Leamer's conclusions. In particular, he emphasized that the ability of housing to predict recessions historically may be due to inappropriate monetary policies that precipitated problems in housing. He noted that both the economy and the housing sector had become less volatile in the recent environment of better monetary policy. He also emphasized Leamer's point that housing is too small a share of GDP to cause a recession by itself; therefore, it is important to understand any significant spillovers from housing to the broader economy.

The third macroeconomic dimension of housing is the linkage between changes in the structure of housing finance and house price changes to consumer behavior. John Muellbauer provided considerable insight on these issues in his presentation at the symposium, and Sydney Ludvigson provided additional perspective in her discussion of Muellbauer's paper. In his paper, Muellbauer provided a detailed discussion of the channels by which housing might affect consumer behavior and new empirical evidence on the magnitude of these channels. Muellbauer argued that the increased access to credit from the liberalization of housing finance and other financial markets has had important implications for consumer behavior in many countries. In particular, he suggested that credit market liberalization has raised consumption/income ratios and reduced consumer savings by increasing the collateral value of housing wealth. Furthermore, these developments have resulted in an increase in the size of housing wealth effects. House price changes now have larger effects on consumer expenditures than changes in stock prices in some countries.

In her commentary, Ludvigson suggested that changes in risk premia can explain much of the recent increase in house prices and are likely to have quantitatively larger effects on consumer spending than credit liberalization. She also noted that empirical work suggests that a future decline in house prices is likely to have only modest effects on aggregate consumption.

Monetary Policy Issues Associated with Housing

The remaining sessions of the symposium focused on the implications of housing for monetary policy. Frederic Mishkin provided a framework for this discussion by examining the transmission of monetary policy through the housing sector and whether changes in the structure of housing finance and housing markets may have altered the transmission mechanism for monetary policy. The wide range of empirical estimates of the various transmission channels makes accurately judging the role of housing in the transmission mechanism difficult. Taking this variation of estimates into account, Mishkin noted that housing could account for up to a quarter of the economy's response to monetary policy changes.

James Hamilton's discussion of Mishkin's paper emphasized some of the regulatory and supervisory issues behind recent housing market developments and suggested that regulatory responses might be more appropriate than monetary policy in responding to the recent housing market crisis in the United States. The Mishkin/Hamilton session was followed by a panel discussion by Stefan Ingves, Kazumasa Iwata, and John Taylor about whether and how central banks should take housing developments into account in designing and implementing monetary policy. Martin Feldstein closed the symposium with an overview of the issues discussed and offered his perspective on the recent housing problems in the United States and their implications for policy.

Much of the monetary policy discussion in these sessions revolved around the following three related issues: whether central banks should act to restrain asset price increases, how central banks should respond to asset price decreases, and whether central bank policy may be a contributing factor to the development of asset price bubbles.

Given the linkages of housing and housing prices to other sectors of the economy, some participants suggested that central banks should react to asset price bubbles in the housing sector. A preemptive monetary policy response to an inflating asset bubble might help limit the effects of falling asset prices when the bubble eventually bursts. Other participants took a contrary view, suggesting that preemptive action requires three necessary conditions: 1) The central bank must be able to identify bubbles; 2) the central bank must know how to deflate the bubble; and 3) monetary policy must have limited ability to offset the drop in asset prices after the bubble bursts. The issue of real-time asset bubble identification was a particular point of discussion among symposium participants. Some suggested that identifying asset bubbles in real time as opposed to identifying historical asset bubbles may be very difficult unless central banks have informational advantages over the financial or housing markets.

More generally, most central bank participants supported the approach outlined in a paper by Ben Bernanke and Mark Gertler presented at the 1997 symposium. In this framework, monetary policy only responds to asset price developments when these changes have implications for output and inflation. This conclusion suggests that asset prices may provide useful information to policymakers but should not be a formal target of policy.

Finally, a number of participants suggested further research into the cause of large asset price movements or the development of asset price bubbles. In particular, there was considerable discussion and debate about the role that low interest rates and easy credit availability in the early part of the decade may have played in the rise in U.S. housing prices and the excesses that subsequently developed in U.S. mortgage markets.