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Christopher Mayer

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# COMMENTARY

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While many people take our current banking system for granted, the system looked very different twenty-five years ago. At that time, interest checking (NOW) accounts did not exist and banks faced caps on the rate of interest that they could offer on savings accounts. Instead, when interest rates rose above the cap, banks offered free toasters or savings bonds to encourage the public to open an account. On the lending side, securitization had not yet taken hold. Most mortgages were made by savings and loans or thrifts that existed as very simple institutions. The thrifts financed their (long-term) mortgages, often thirty-year fixed-rate loans, with (short-term) deposits. When interest rates rose, banks faced liquidity problems and often reduced the amount of money available for loans, effectively leading to credit rationing. While this system performed adequately in a low-inflation world, its shortcomings were made clear with the inflation of the late 1970s, leading to regulatory reforms that effectively deregulated the industry.

As Jonathan McCarthy and Richard Peach convincingly document, deregulation of the banking industry had a profound impact on mortgage finance in this country. Today, most mortgages are originated by mortgage brokers and held by mortgage pools, often supported by Fannie Mae and Freddie Mac, whereas savings and loans originated most loans in the previous regime. While it is not surprising that such changes in the banking sector might have a strong impact on the housing market, given its strong reliance on high levels of credit, the McCarthy/Peach paper is the first to comprehensively link the behavior of the housing market to deregulation in the banking sector.

The paper presents two important and policy-relevant findings. First, monetary policy has a slower initial impact on housing investment than it did in the past. Second, demand for housing today is much more dependent on basic demand factors such as user costs and the amount of fees charged to originate mortgages. The authors argue that both results are due to the fact that shocks to supply and demand are more immediately reflected in prices and mortgage rates, while in the past, credit rationing in the banking sector limited the extent to which the housing market responded to demand factors. For the same reasons, they also argue that monetary policy had more immediate force to affect the housing market in the more regulated environment of the 1970s.

McCarthy and Peach arrive at these findings using two approaches: a reduced-form vector autoregression (VAR) model of monetary policy and a structural model of supply and demand in the housing market. To make comparisons over different policy regimes, they split the sample into two periods: 1975-85 and 1986-2000. With twenty-six years of quarterly data, this is a relatively short period over which to split a sample, especially with the VAR methodology, but the authors are limited by the amount of available data. In this case, the best quality measure of house prices available, a price index of the Office of Federal Housing Enterprise Oversight (OFHEO), only begins in 1975. The short sample period makes it difficult to determine long-run impulse responses using a VAR, especially in the first sample period of eleven years from 1975 to 1985. However, the authors' principal finding involves the short-term response of housing investment to monetary

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Christopher Mayer is an associate professor of real estate at the University of Pennsylvania's Wharton School and a visiting scholar at the Federal Reserve Bank of Philadelphia.

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policy, which may be more plausibly estimated with existing data. This sample split is also a bit problematic when there are multiple events that separate the policy regimes in question. Nonetheless, the differences across periods are quite striking.

The first section of the paper presents evidence of the changes in the mortgage market. In part, initial fees have fallen substantially and consumers have moved toward adjustable-rate mortgages (ARMs). Both are signs of increasing competition, as issuers have made it easier for homeowners to buy houses with smaller initial payments and less cash required at closing.<sup>1</sup> Given that the ratio of ARMs has varied substantially after 1985, from between 15 and 65 percent of new originations, and points and fees have fallen as well, it is hard to choose a single type of mortgage rate to measure the cost of loans to consumers, who were clearly offered a wider menu of options after 1985.

These structural changes have several implications for the authors' analysis. First, the VAR results that include the mortgage interest rate in the simulations of a monetary policy shock may be hard to interpret. It seems surprising that mortgage rates appear to require five quarters to adjust fully to a 50-basis-point increase in the federal funds rate in today's competitive environment, in which mortgages are priced off of the bond market and adjusted frequently within the day.

Second, it is difficult to interpret the coefficient on a variable representing points and fees or even the loan-to-price ratio in a structural demand model without allowing for the fact that these variables are determined in part by supply and demand conditions in the housing market. Presumably lower fees or higher loan-to-value loans arise when prices are high and some consumers are facing additional hurdles to obtaining a loan. The good news is that the main results of the paper hold even when these variables are excluded.

Finally, it is always possible that the structural changes found in the article could potentially lead to biases in the data that are self-fulfilling. The house price indexes are obtained from OFHEO, which gets its micro data from transactions of properties with loans that were purchased by Fannie Mae and Freddie Mac. In the early part of the sample, these two government-sponsored entities (GSEs) had a small market share and thus fewer transactions. Later in the sample, the market share of GSEs goes up with securitization, potentially smoothing out measurement error in the house price index. Despite the potential seriousness of this problem, such biases probably do not create a major problem here. While such biases might plausibly impact the house price index, they do not explain why the residential investment series is equally volatile in the earlier years, a finding that is consistent with an impact of deregulation. In addition, this analysis uses the national house price index, which is still based on a relatively

large number of transactions. This problem might be more of an issue with studies that focus on metropolitan areas, where samples are smaller. Of course, any changes in the geographic concentration of mortgages purchased by the GSEs over time might also impact the analysis, but there is no reason to believe that this issue would lead to a systematic bias.

The structural supply and demand estimates share many similarities with previous studies, but nonetheless there are a number of important things to be learned from these estimates. Earlier studies have treated the whole time period as a single unit, rather than recognizing that the stark changes that have taken place in the mortgage market may have an impact on structural supply and demand estimates in the housing market. The authors should be credited with pointing out the differences in the housing market that take place after 1985 and are plausibly related to changes in the mortgage market.

Previous research on housing supply has found that the number of month's supply of units on the market is strongly correlated with starts or investment, even after controlling for all other theoretical factors. These studies usually conclude that the importance of month's supply is an indication of the inefficiency of the housing market and the slow adjustment of prices. McCarthy and Peach point out that month's supply is correlated only in the early period, but not after 1985, suggesting that much of the inefficiency in the production of housing units may be related to inefficiencies in the mortgage market, rather than the price adjustment process. However, even in the later period of the model, prices make up only about 27 percent of the difference between actual and equilibrium prices within a year. These estimates still suggest a very inefficient housing market.

The results also indicate some of the same problems that other research has faced. For example, the coefficients on construction costs are often of the wrong sign and are never statistically different from zero. Problems with supply estimates using the cost index are likely caused by endogeneity between the cost of production and demand, that is, costs are high at times when demand for housing is high because of increased demand for scarce materials. Changes in user costs have a consistently small impact on demand, even in the later period, and are smaller than they are in some other studies.

Overall, the authors have done a creditable and very serious job of estimating the impact of monetary policy on the housing market. The paper makes the most of the available data, and for the most part, the results make intuitive sense and are convincingly argued. The fact that monetary policy now has less of a short-term impact on the housing market shows the sometimes perverse result of deregulation. As the mortgage market has become more competitive, regulatory intervention has less sway over the behavior of markets.

## ENDNOTES

1. Adjustable-rate mortgages typically have a lower initial interest rate, making it easier for consumers to qualify for a loan when lenders apply fixed loan-to-income ratios to loan qualifications.

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