

# Will Housing Save the U.S. Economy?<sup>1</sup>

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A growing consensus pins the severe U.S. recession and slow recovery on the tremendous negative wealth shock to households, which resulted from the combination of very high leverage and a sharp decline in house prices.<sup>2</sup> We are now witnessing a recovery in house prices and residential investment. House prices in January 2013 were up 10% year over year according to CoreLogic, and permits for new residential construction were up 17% in March 2013 compared to the previous year. Heightened focus on housing is warranted because it tends to be a great leading indicator of where the economy is going (Leamer (2007)).

Many have pointed to the recovery in housing as major positive for U.S. economic activity going forward. For example, Bill Dudley, the president of the Federal Reserve Bank of New York, said in March that he sees "the recovery in home prices as particularly important" in part because "houses are a significant component of household wealth." Jan Hatzius, the Chief Economist of Goldman Sachs said in January that "the fundamentals for housing activity point to further large gains in the next couple of years." I bring up these two because I have great respect for both--they have been consistently right about many things over the past few years.

Which brings me to the title of this presentation: Will housing save the U.S. economy? I won't leave you in suspense. My bottom line is that we need to temper our optimism on what a

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<sup>1</sup> This essay has been prepared for the 2013 Chicago Booth Economic Outlook events in San Francisco and Los Angeles on April 24th and 25th, 2013, respectively. Contact information: amir.sufi@chicagobooth.edu, 773 702 6148.

<sup>2</sup> See Hall (2011), Mian, Rao, and Sufi (2013), Mian and Sufi (2012) for evidence. MRS (2013) in particular show that the MPC out of housing wealth was much larger for highly leveraged households, and highly levered households received the most negative housing shock. MS (2012) show how the shock in hard hit counties resulted in a *national* jobs crisis through the tradable sector.

housing recovery can do for the U.S. economy. I agree that house prices will continue to rise and new residential construction will steadily increase from its current very low level. This is good news. But we will not be returning to the boom years that preceded the Great Recession. The days when housing was the predominant force driving economic activity are gone, and I view that as a good thing.

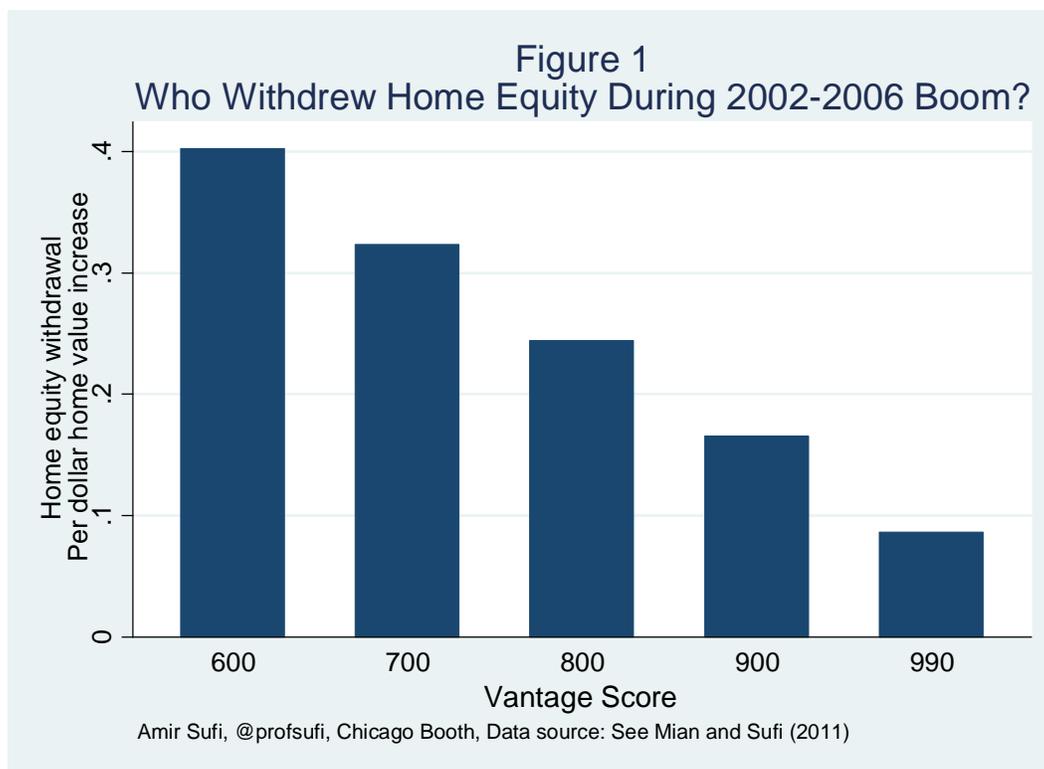
### **Housing and the Broader Economy**

An increase in house prices drives economic activity in two ways. First, an increase in house prices induces investment in new residential construction. Second, an increase in house prices leads some households to spend, either for home improvement or consumption. The latter effect has generally been called a "housing wealth effect," but in my view that is the wrong way of thinking about it. Instead, the positive effect of house prices on household spending relies crucially on the degree to which a given household is constrained from spending as much as they'd like in the short run, either because of borrowing constraints or behavioral biases.

During the housing boom that preceded the recession, both effects were big drivers of economic activity. Single family housing starts hit 2 million in 2004 and 2005, the highest amount in more than 30 years. The home equity withdrawal effects were likely even larger. We don't have precise measures of how much spending was fueled by home equity-based borrowing, but research I've done with Atif Mian suggests that homeowners borrowed \$1.25 trillion out of their homes from 2002 to 2006 (Mian and Sufi (2011)).

The response of spending to an increase in house prices was not uniform, which is a critical point often neglected in the discussion of housing wealth effects. In our study of the housing boom, we found enormous differences in the propensity of a homeowner to extract

equity from their home based on credit scores. Figure 1 shows this evidence. Homeowners with the lowest credit scores were very aggressive, borrowing \$0.40 against every dollar of increased home equity. Homeowners with the highest credit scores were almost completely passive, pulling almost no equity out of their homes when house prices increased. I refer to the low credit score borrowers as "constrained"; changes in wealth lead to big changes in spending, which suggests these households are constrained from spending as much as they'd like in absence of housing collateral.



In research with Kamallesh Rao, we also found the exact same relation during the housing bust. For a given dollar decline in house prices, constrained borrowers cut back on spending much more dramatically than unconstrained households. The marginal propensity to consume out of housing wealth was 3-4 times larger for constrained versus unconstrained households.

The fact that unconstrained, high credit score homeowners do not consume more out of home equity should not be too surprising. Standard economic theory casts suspicion on housing wealth effects, because an increase in house prices is also an increase in implicit rental payments. For an unconstrained household with good access to credit markets, an increase in the value of a home is unlikely to significantly alter spending behavior. But for a constrained homeowner who desperately wants to spend more, a change in home value affects spending. This is exactly what we find in the data for both the housing boom and housing bust. We should not think of the housing wealth effect as a constant parameter in a macroeconomic model. It varies substantially based on which types of homeowners have access to credit.

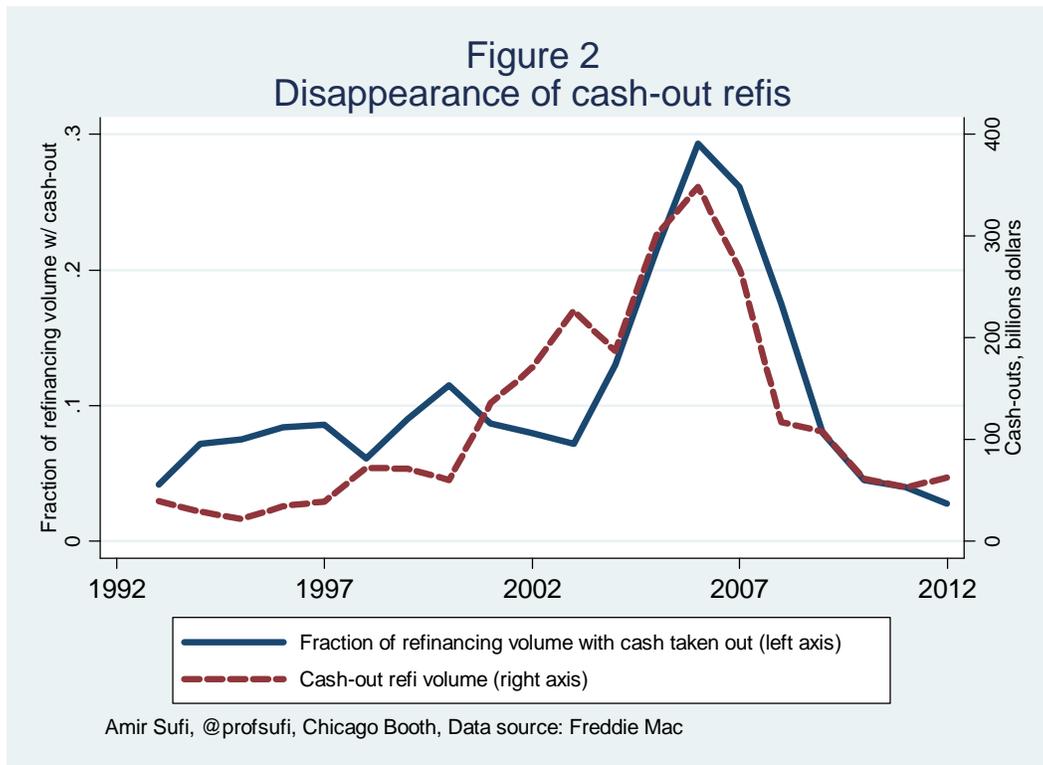
### **Mitigated Housing Wealth Effect**

Only constrained borrowers consume aggressively out of home equity, but today these constrained borrowers have been shut out of housing and mortgage markets. The only households that can buy a home or borrow against one are precisely the households that are least likely to spend out of an increase in housing wealth. If we take the results from our previous research, the housing wealth effect for these households may be close to zero, which would substantially dampen the effect of house prices on spending.

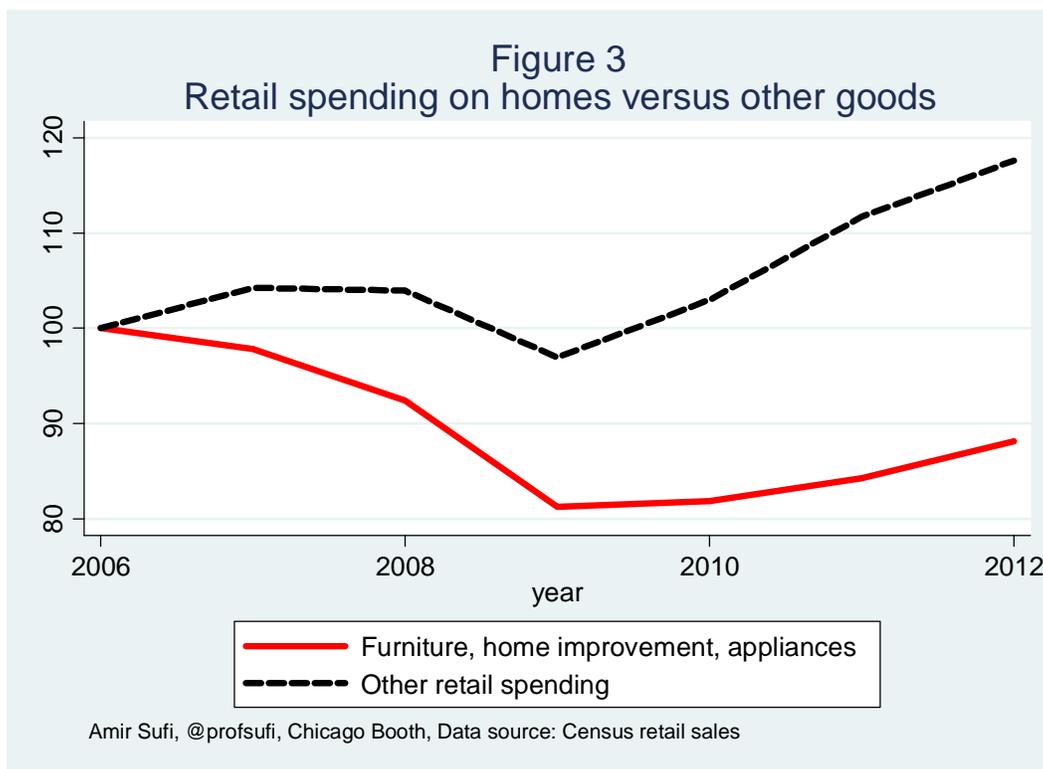
The latest version of Lender Processing Services' Mortgage Monitor illustrates this point. The average credit score for borrowers successfully getting a mortgage (both refinance and purchase) has increased by 40 points from 2006 to 2013 for GSE- and FHA-backed mortgages, and a whopping 80 points for private mortgages. The only people getting mortgages at this point are those with pristine credit histories, which are exactly the group least likely to consume out of their housing wealth.

With only the highest credit score homeowners getting new mortgages, we shouldn't be surprised that few homeowners are aggressively borrowing against their homes. Figure 2 shows evidence on "cash-out" refinancings, or mortgage refinancing where the homeowner takes additional equity out of the home. The fraction of all refinancing volume where borrowers took cash out was at 2.8% in 2012, the lowest it has ever been in the recorded data. The fraction had reached almost 30% in 2006!

The same pattern can be seen in refinancing volumes. Interest rates on mortgages are the lowest they have ever been, but nobody is taking money out of their homes. This partly reflects tighter credit conditions. But it also reflects the fact that there has been a major compositional shift in the homeowners that are able to refinance their mortgages. High credit quality individuals are much less likely to use their home equity to spend.



Another way to see the mitigated housing wealth effect is to look at expenditures on home improvement, appliances, and furniture, which survey evidence from the Federal Reserve suggests are the most likely purchases from home equity withdrawal (Canner, Dynan, and Passmore (2002)). Figure 3 compares retail spending on these goods versus all other goods, and we see a dramatic difference. Spending on home-related purchases in 2012 were still 10% below their 2006 level! This is not just a durable goods issue. If we compare spending on autos versus spending on home improvement, appliances, and furniture, we can see that spending on autos has been much stronger. Evidence from Neal Soss and Henry Mo of Credit Suisse also shows a mitigated housing wealth effect (Soss and Mo (2013)). They find that the effect of house prices on household spending has been much smaller since 2008.



One counter-argument is that lower credit score, constrained buyers will eventually be able to re-enter housing and mortgage markets if house prices continue to rise. This is probably

true at some point, but I am doubtful we are close. The homeownership rate in the United States plummeted from 69% to 65% from 2006 to 2012. Most of this decline was driven by low credit quality individuals defaulting and leaving their homes, and I do not see a strong rebound in homeownership in the cards. The homeownership rate has *declined* even as house prices have started to *recover*. Further, research suggests that only 10% of borrowers that have a serious default on a mortgage regain access to mortgage markets within 10 years (Hedberg and Krainer (2012)). A very large fraction of the population will be forced to sit on the sidelines even as the housing market gains steam.

### **The Rise of the Investor**

Which brings me to my second main point: the nature of the housing recovery is quite different than what we've seen in the past. Up to this point, it appears to be driven in large part by investors and cash-buyers. Data tracking the fraction of homes purchased by investors are not perfect, but they tell a pretty consistent story. Ilyce Glink used DataQuick information on "absentee" purchases, which are transactions where the property tax bill for the purchaser is sent to a different address than the purchased home.<sup>3</sup> Across the country, she found that absentee purchases have skyrocketed. For example, absentee purchases in Los Angeles have risen to 25% compared to only 12% in 2006. In Cincinnati, absentee purchases accounted for 35% of purchases, compared to the previous ten year average of 22%.

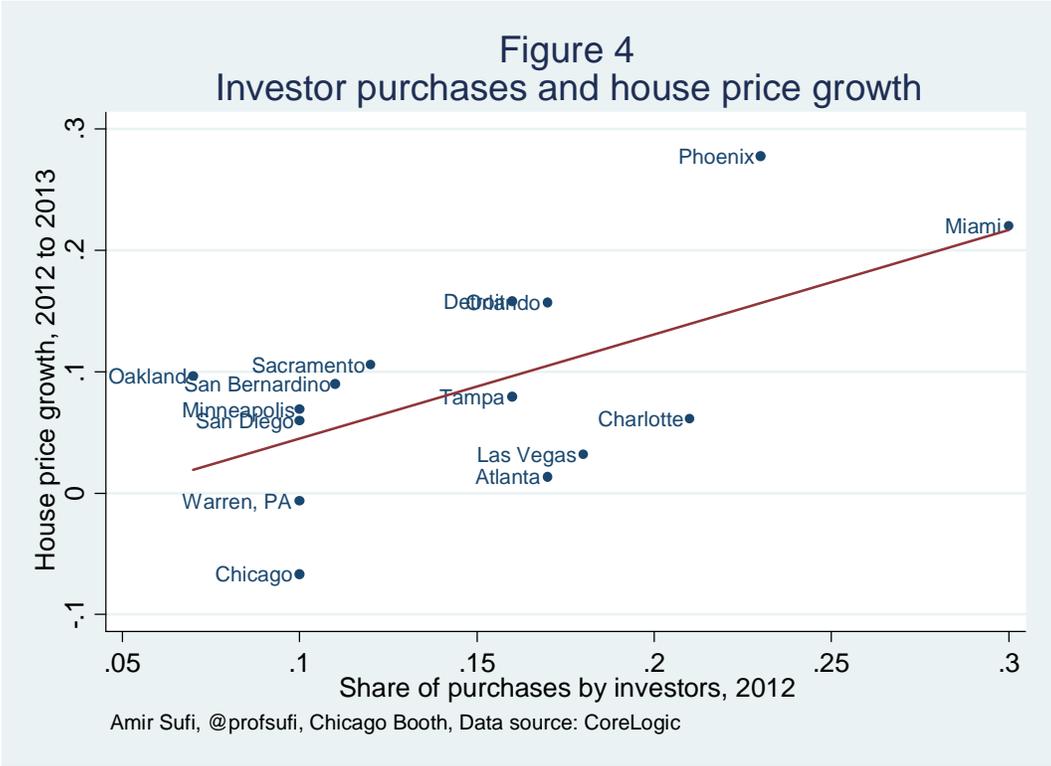
Another measure is all-cash purchases, or purchases made without any mortgage, which have also dramatically increased over the past two years. Housing economist Tom Lawler posted data on Bill McBride's [calculatedriskblog.com](http://calculatedriskblog.com) showing the all-cash share of purchases rose from 9% in 2006 to 46% in 2012 in Phoenix. For Orlando, the fraction has risen from 7% to 53% over

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<sup>3</sup> see: [http://www.cbsnews.com/8301-505145\\_162-57571385/investor-driven-housing-recovery-poses-danger/](http://www.cbsnews.com/8301-505145_162-57571385/investor-driven-housing-recovery-poses-danger/)

the same time period. In every market for which he has data, we see the same pattern. The recent surge in purchasing activity is driven by a very different type of buyer than the 2002 to 2006 housing boom.

The data suggest that strong growth in house prices is related to investor purchases. In Figure 4, I plot the relation between house price growth from January 2012 to January 2013 against the fraction of houses purchased by investors in 2012. The latter data come from CoreLogic's March edition of "The MarketPulse". As Figure 4 shows, there is a pretty strong positive correlation for these 16 markets. The direction of causality is difficult to discern; investors may be responding to house price growth as much as driving house price growth. But recent house price growth should be understood in the context of the boom in investor activity.



What does this mean for the effect of housing on economic activity? If the trend continues, the most direct effect would be a permanent return to homeownership rates in the

United States of 65% or perhaps even lower. I would argue that the marginal 5% of Americans who switched into and out of homeownership over the last decade have high marginal propensities to consume out of wealth and income. During the boom, these households consumed aggressively out of home equity. Now that they are again renters, an increase in house prices represents a *loss* in wealth, given that they must pay higher rents going forward. This will mitigate any positive effects of house prices on household spending.

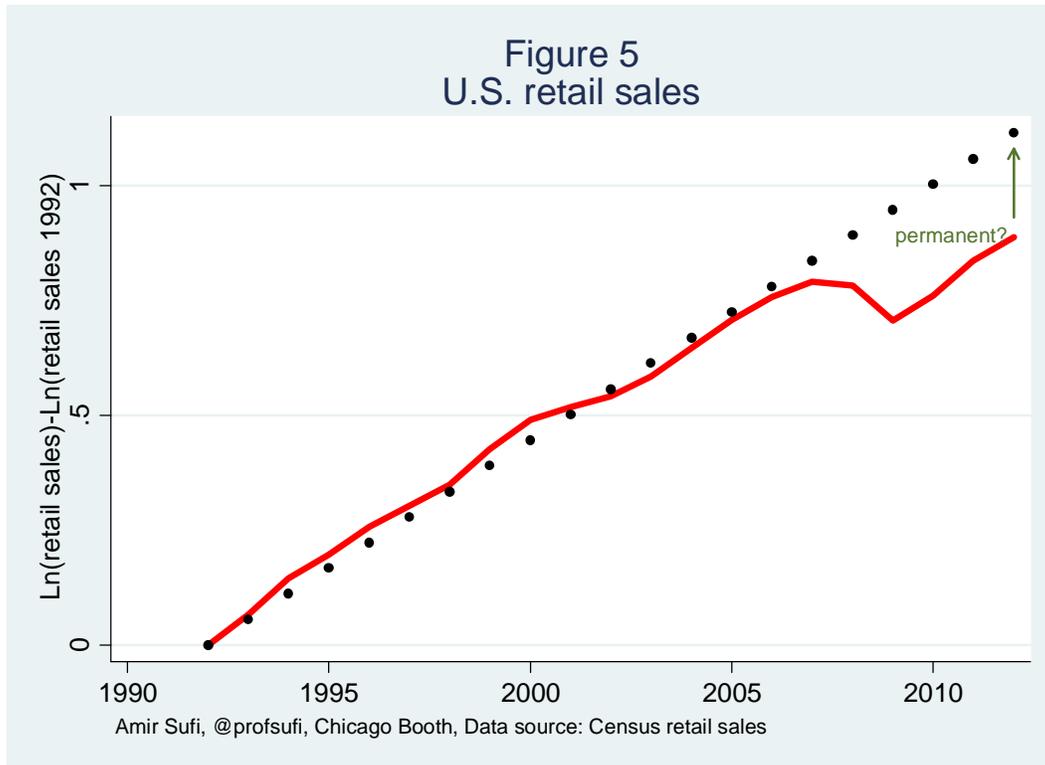
Further, investors renting out apartments and single family homes are likely to invest less in the home than homeowners. We still need good theory and data to back up this argument, but it seems to be accepted wisdom among professionals working in housing and durable goods markets. It does make intuitive sense. Landlords tolerate more depreciated washing machines and kitchen appliances, and more transient renters are less willing to pay the landlord for better equipment. We need further analysis on this question, but the evidence shown in Figure 3 above on the weakness in spending on furniture, appliances, and home improvement is consistent with this argument.

### **Household Spending: Permanent Damage?**

While estimates vary, most agree that the housing boom during the early part of the 2000s was a significant driver of household spending. I have argued here that we are unlikely to see such a large effect of housing on economic activity going forward. I want to close with some evidence that suggests we are unlikely to catch up to the household spending rate we saw before the Great Recession.

In Figure 5, I plot total retail sales for the U.S. economy from 1991 through 2012. The graph is done in logarithm scale with 1991 subtracted. I also plot an estimated linear trend using

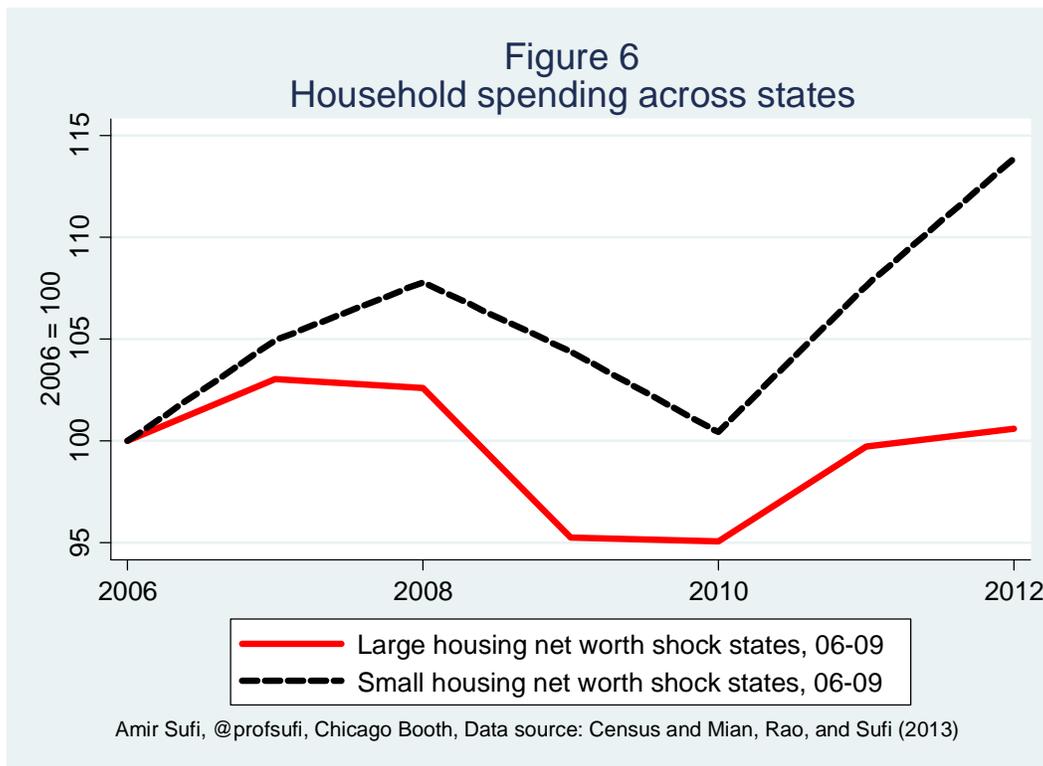
the 1991 to 2006 data. The gap between the trend line and actual retail sales from 2007 to 2009 shows the severity of the Great Recession. Even more interesting to me is the lack of any evidence that the gap is closing through 2012. It does not appear that we will catch up to trend spending growth we saw from 1991 to 2006. Spending is increasing, but not enough to put us back on the trend line.



State-level data help us understand why. In Figure 6, I use state level sales tax receipts as a measure of household spending. It is not perfect given that some states change sales tax rates, but it is the best measure of disaggregated household spending data we can get quickly. Figure 6 split states based on how large a negative housing net worth shock received by households from 2006 to 2009. Small housing net worth shock states are areas that escaped the housing crash relatively unscathed. They include Kansas, Kentucky, and Pennsylvania among others. Large

housing net worth shocks are areas that saw a large decline. They include California, Florida, and Rhode Island among others.<sup>4</sup>

Large housing net worth shock states experienced a much more severe decline in household spending during the recession, something I have documented in previous research (Mian and Sufi (2010), Mian, Rao, and Sufi (2013)). What is novel here is to look at the recovery. States with the largest housing net worth shock from 2006 to 2009 remain the weakest even through 2012! There is no evidence of catching up. The housing crash appears to have inflicted permanent damage to household spending in these areas.



This brings me to my conclusion. I believe we have learned a painful lesson from the 2002 to 2012 experience. We cannot rely on debt-fueled collateral-based consumption for

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<sup>4</sup> More specifically, the two groups represent the top and bottom half of the population-weighted distribution of housing net worth shocks, so both groups contain the same number of households. The housing net worth shock is the percentage decline in total household net worth from 2006 to 2009 coming from the decline in house prices. See Mian, Rao, and Sufi (2013).

economic growth. Easy credit fueled house prices and consumption during the boom, and the collapse in spending was exacerbated by excessive debt burdens and a failure to provide any relief to underwater homeowners. Fueling consumption through easy household credit may help in the short-run, but it inevitably has long-run painful consequences.

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