Commentary: Redistributive Monetary Policy

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I. Overview

First, I would like to thank the organizers for inviting me to discuss this very interesting work by Markus and Yuliy. As a preface to my discussion, when the organizers asked me to discuss this paper, they said that they believed I had some different perspectives on deleveraging and balance sheet issues, and they wanted me to talk a little bit about my own research in that regard. Because, as we all know, academics need encouragement to promote their own research.

Let me start with what is my main take-away from Markus' and Yuliy's exciting research agenda: heterogeneity is paramount in macroeconomic models. When faced with large aggregate shocks, representative agent based macroeconomic models are insufficient. As Markus and Yuliy put it, "any model that studies financial instability and the role of financial frictions must depart from the representative agent analysis." This important point has been developed in a series of their studies (Brunnermeier and Sannikov 2012a, 2012b, 2012c).

I wholeheartedly agree and I think this is a great push forward in terms of thinking about macroeconomic models. In my view, representative agent models, including the standard New Keynesian framework, are simply insufficient for guiding policy in the face of

large aggregate shocks. I'm certain that we will increasingly appreciate this fact over time. The key question of my discussion is going to be: when we introduce heterogeneity in our models, what heterogeneity matters most? What is critical to model?

Before outlining my main criticism, I should say that I became interested in macroeconomics and finance as a Ph.D. student, in large part, by studying the predecessors to the work that Markus and Yuliy are doing: for example, Bernanke and Gertler (1989), Kiyotaki and Moore (1997), and others. I think they are fascinating models, and I think they are really important in a lot of circumstances. I want to preface this entire discussion by saying that I don't mean to diminish the contribution of the traditional financial accelerator view.

But I think the traditional bank-centric view—the view that intermediation is critical, that credit supply is crucial—which is the intellectual justification behind massive amounts of intervention to support banks both in the United States and Europe, has been overplayed. In contrast, I believe that it is less important than another source of heterogeneity, a heterogeneity that I've emphasized a lot in my own research: heterogeneity within the household sector between levered and unlevered agents, or borrowers and savers. Once we appreciate the heterogeneity between levered and unlevered households in the economy, it may require different policies. In fact, in these models, banks play a secondary role.

Let me talk a little bit about their framework. So, here's the way to think about their model. There are three main players: productive agents, unproductive agents and banks that intermediate. And what happens in the model is that a negative shock reduces the price of capital goods. The shock reduces the price of the capital good, in large part, because there is a fire sale of the asset from the levered, productive agents to the unlevered, unproductive agents. The price reduction comes from the fact that the unlevered agents do not have as productive a use of the asset—that is, they are a second-best user, and so they don't value it as much.

So this leads to an initial decline in the value of the capital good. The really huge contribution of the Brunnermeier and Sannikov

framework is to capture the amplification effect of how the initial price decline leads to a vicious cycle of price declines. It is because of banks. If banks have low net worth, then they cannot successfully intermediate that shock. Or in other words, they cannot get money from the unlevered agents back to the levered productive guys, so this leads to a further drop in the price of the capital good.

But of course, the bank's lending portfolio relies on the price of that capital good, it is part of their asset base, and so, when the capital good price falls even further, you get a further reduction in the net worth of banks. The further reduction in the net worth of banks means they have less lending capacity, which, of course, means the capital good price falls further, and so on. In their model, this vicious cycle introduces real problems.

Further, and to be frank, there is some complexity in the model here that I do not fully understand, but there is a lot of the promise in this research agenda from introducing money. In their ongoing work, they introduce money into this framework and they show that you can even get deflationary spirals.

So what redistribution role does monetary policy play to help mitigate the vicious cycle? They outline a number of items. One of the things monetary policy does that's helpful here is it lowers short-term rates. Markus and Yuliy make the argument that you have higher profit margins for banks when short-term interest rates are low. This is one way in which monetary policy redistributes resources to banks, and the goal is stop the vicious cycle of depressed asset prices described before. Even unconventional monetary policy works in this framework by targeting the assets that both the banks and the productive agents hold. This helps by stopping the diabolical loop pushing asset prices down.

II. An Alternative View Based on Household Leverage

So, what is the empirical relevance of this framework? Let me talk about some facts that I think are inconsistent with this bank-centric view. Perhaps the bank-centric view plays a very important role in the fall of 2008, but now let's focus on the persistence of weakness in the

U.S. economy. We know that cash on corporate balance sheets has been historically high and has been for a long time. Despite these enormous internal resources, we have yet to see the large-scale hiring and investment we would expect in the recovery from a severe recession.

Small business survey evidence from the National Federation of Independent Business has consistently shown that lack of demand has been the key problem facing business, not lack of credit availability. Measures of bank distress have been subdued for a long time now, and yet, we don't see an increase in bank lending. Further, bank reserves have been at historic highs for a long time. Since the middle of 2009, banks have been in pretty good condition, certainly not in a crisis. It's pretty difficult to make the argument that the reason the economy is weak is because banks remain impaired and unable to make profitable loans.

I believe an alternative source of heterogeneity better explains the weakness of the economic recovery, and this alternative view is based on research that my co-author Atif Mian and I have pushed (Mian and Sufi 2010, 2011, 2012; Mian, Rao and Sufi 2012). Our central argument is that heterogeneity related to household debt levels is more important. The argument that we make is that house price declines disproportionately affected levered households because they don't hold financial assets, and they therefore saw a very sharp pullback in spending.

In a macroeconomic model, in order for the decline in spending by levered households to have aggregate implications, there must be some kind of friction preventing unlevered households from picking up the slack. In theoretical models, these frictions are typically related to the zero lower bound on nominal interest rates and other nominal rigidities (Eggertsson and Krugman 2012, Guerrieri and Lorenzoni 2012, Hall 2012, Midrigan and Philippon 2012). So, the alternative view has some Keynesian elements.

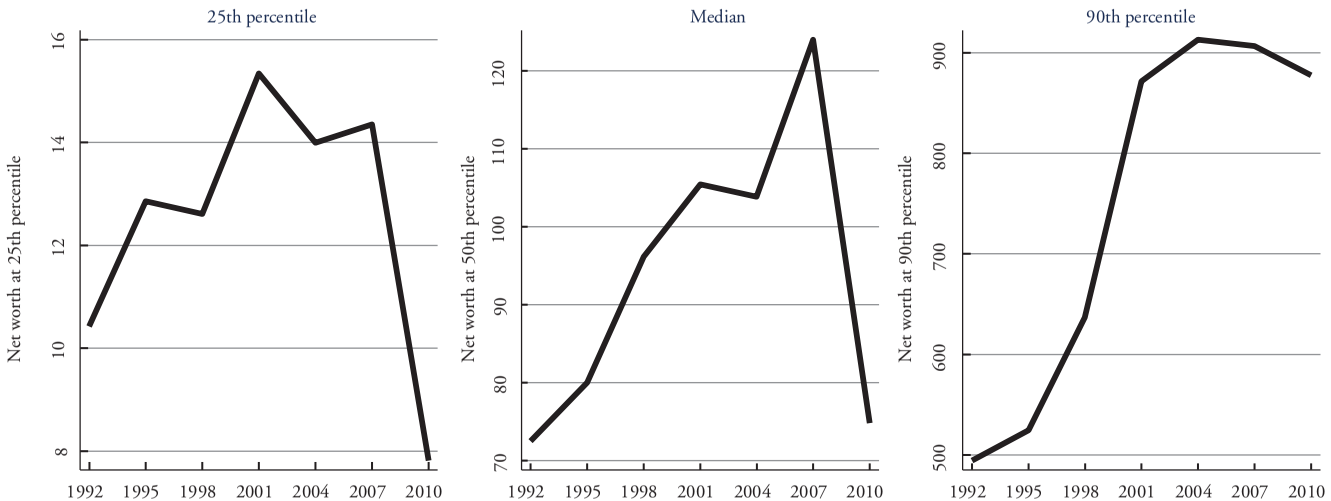
I strongly believe that the evidence overwhelmingly supports this view, both in the United States and in Europe. In the United States, I'm talking about my own research with Atif Mian and Karen

Dynan's research (Dynan 2012), for example. In Europe, we've had research by Reuven Glick and Kevin Lansing (2010) of the Federal Reserve Bank of San Francisco, and Thomas Philippon of NYU, showing that the correlation between recession severity and household debt levels before the recession across countries is incredibly strong. Thomas Philippon shows even the coefficient on the slope is almost the same when you look across U.S. counties and European countries, so it seems like there really is some inherent relationship between elevated levels of household debt and recession severity.

Let me briefly show you two pieces of evidence. First, Chart 1 shows the huge amount of heterogeneity in wealth shocks in the United States during the Great Recession, and I hope everyone in this room appreciates this important fact. If you look at the 90th percentile of the net worth distribution, the decline in net worth from the Survey of Consumer Finances has been very moderate—almost no decline at all. If you look at the median and the 25th percentile of the net worth distribution, you see a dramatic reduction in net worth for these households. This is exactly the effect of debt. Debt concentrates the decline in the asset prices almost entirely on the levered agents, and that's exactly what you're seeing in the graph. Remember that households in the 90th percentile in the U.S. population hold the grand majority of the financial assets in the economy, whereas the median and the 25th percentile, if they have any assets, it's basically exclusively housing assets. Given the strong recovery in financial asset prices but the languishing housing market, we can see why the lower part of the net worth distribution has been hammered in this recession.

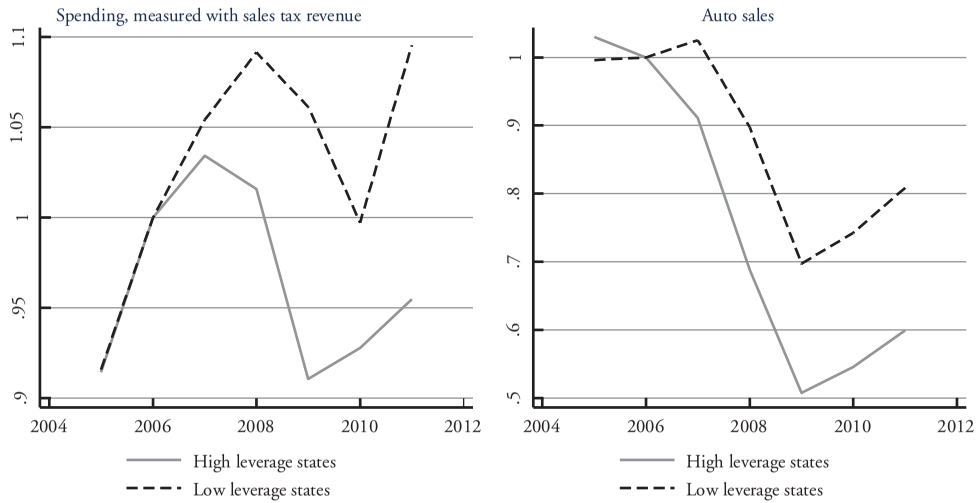
Chart 2 shows the geographic variation that Atif and I have used in our research. If we just split states into high and low categories based on household leverage levels as of 2006, what we see is that the recession has been much more severe and persistent in U.S. states that have high leverage levels, and that's something you see even going through 2011.

Chart 1
Net Worth Declines Across Net Worth Distribution



Note: The y-axis is in thousands of dollars.
Source: Data are from the Survey of Consumer Finances.

Chart 2
Household Spending in High and Low Household Leverage States



Notes: High and low household leverage states are the top and bottom quintile of the 2006 household debt to income ratio distribution. The quintiles are based on population so both groups contain the same number of households. The left panel uses state sales tax information from the Census, and the right panel uses auto sales data from R.L. Polk.

III. Reconciliation of Household Leverage View and Credit Supply View?

Is there a way to reconcile these two views? Are they necessarily in conflict with each other? In Markus' and Yuliy's language, here's what they would say to explain the facts I just described. In their framework, the "productive" agents in their model would be the households that are natural buyers of homes and cars. These would be the levered households, people with excessive leverage coming into the recession. The "unproductive" side of the economy would be the savers; people who have enough money that they don't need a new home, don't need a new car.

The defining feature of Markus' and Yuliy's explanation would be banks: weakness in the banking sector is crucial because it has broken down the ability of savers to channel funds to borrowers. This is the traditional credit supply view. The economy is weak because weakness in the banking sector has limited banks' ability or willingness to lend to levered households despite the fact that such lending would yield a good return.

I am sympathetic to this view, and it's a view that I've pushed in my own research. But there are a number of reasons to be skeptical. First, you don't actually need the bank credit supply view to explain the sharp decline in spending by levered households. You can get all of the dynamics in our research through a pure credit demand deleveraging effect. Let me be specific: It could be that there's a 55-year-old household that had its house price drop by 40 percent, and the owners, therefore, have no net worth available to them. They were planning on drawing down home equity for retirement, and they find themselves underwater, and they cut back on consumption and save like crazy. If this describes the world, policy could support the banks with infinite resources and it's not going to lead to any additional spending by levered households. And although I'm not saying that this credit demand effect exclusively explains the patterns we find in our research, I am saying that you don't need the bank credit supply view to explain this kind of deleveraging phenomenon.

The second criticism is based on a simple intuition. We know coming into this recession that household debt-to-GDP ratios in the United States were at all time highs. Intuitively, do we really think the problem is that very levered households can't get enough access to debt now? It just doesn't sound intuitive, and that's kind of the implication of what's happening in this model.

The third, and I think perhaps the most important point, is that we have seen massive support for the financial sector, both on the fiscal and monetary side, and yet we still haven't seen a lot of willingness of banks to make loans to households. So, either the households don't want more credit, or the banks, even if you support them, are still unwilling to extend credit to levered households. This is a crucial point when thinking about the policy implications.

One way to potentially reconcile these views is a temporal distinction. Perhaps the dynamics that Markus and Yuliy are discussing are most critical in 2008 and early 2009, whereas the dynamics I'm talking about are more important from late 2009 until today.

IV. Implications for Monetary Policy

Let me conclude with implications for monetary policy. My view is that the key problem here is household debt, and the most effective policies for addressing household debt burdens are on the fiscal side, not the monetary side. So my pessimistic view is that monetary policy is destined to be weak in the current state. The kinds of policies I have in mind, which have been pushed by many, including John Geanakoplos, who is sitting right here in the front row, involve facilitating debt restructuring, helping to reduce principal balances on mortgages, anything that will help lower the burden of household debt on the economy (For example, Geanakoplos and Koniak 2009). These policies are, of course, not policies that the monetary authority could implement.

Further, anything that can from an ex-ante perspective lead to better risk sharing should be encouraged. For example, perhaps we should further investigate why we do not see debt claims indexed to aggregate outcomes. Remember that the key problem in the household debt framework is that debt concentrates all of the negative

shock on the debtors. As we all know, debt has horrible risk sharing implications, and one way you can get rid of it is potentially by trying to use indexed mortgages, indexed sovereign bonds, something that at least allows a more equal sharing of the burden when house prices collapse in the aggregate.

Which brings me to my final point, and, perhaps, the one that's most controversial in front of this audience. I've come to the conclusion looking at a lot of evidence, that I'm not so convinced that monetary policy can play a big role. The only way in which monetary policy could potentially play a big role in resolving problems with household debt is inflation and inflationary expectations. As we all know, inflation acts as a transfer from creditors to debtors when claims are in nominal terms, something Markus and Yuliy also point out in their framework. In my view, this is an extremely blunt tool. It seems much more blunt than what we would like, which is targeted restructuring for the household sector. Further, as many in this room will quickly point out, monetary policy should, perhaps, stay out of a redistributive function, and I can appreciate that from a political economy perspective.

Further, even if you lower mortgage rates through monetary policy, which we have seen, it's pretty clear that levered households either do not want more credit, or no matter how much you lower those 30-year fixed rate mortgage rates for people like me, the people that actually need that money can't get credit because they are underwater on their home or their credit score is shot by a previous default. So, in my view, in regard to this specific problem—the household debt problem—I'm much less enthusiastic about using monetary policy. It's too bad on the fiscal side that we can't get anything done, even very sensible noncontroversial proposals like expanding programs that facilitate refinancing for underwater but solvent mortgages. Even that seems to have a hard time getting through the legislative process.

And as a final note, I just want to be clear. I'm not standing up here telling you that I think banks are unimportant. I'm not telling you that I think we should have done nothing in the fall of 2008. I'm just telling you that I think overall the policy bias has been excessively

toward supporting financial institutions, as opposed to targeting what I view as the central problem, and that is the household debt problem.

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