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Wealth shocks, unemployment shocks and consumption in the wake of the Great Recession ☆

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ABSTRACT

Data from the 2009 Internet Survey of the Health and Retirement Study show that many US households experienced large capital losses in housing and financial wealth, and that 5% of respondents lost their job during the Great Recession. For every loss of 10% in housing and financial wealth, the estimated drop in household expenditure was about 0.56% and 0.9%, respectively. Those who became unemployed reduced spending by 10%. In line with predictions of standard inter-temporal choice models, households who perceived the stock market shock to be permanent adjusted spending much more than those who perceived the shock to be temporary.

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1. Introduction

In 2008, American households experienced a loss of 13.6 trillion in wealth, compared to a disposable income of 11 trillion. Between October 2007 and October 2008 the stock market declined by almost 40%, and house prices by almost 20%. The unemployment rate, which throughout 2007 averaged 4.8%, doubled in less than two years, from 5% in January 2008 to 10.1% in 2009. Many analysts link this large, unexpected and unprecedented fall in the market value of household wealth and the dramatic increase in unemployment to the drop in consumption that took place in the second half of 2008 and 2009. Indeed, real consumption expenditures dropped from 10.078 trillion dollars (in constant 2009 prices, seasonally adjusted at an annual rate) in the second quarter of 2008 to 9.806 trillion dollars in the second quarter of 2009, i.e., a decline

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of about 2.7%. All these figures suggest that a special feature of the Great Recession is that households were hit by three different shocks: a large drop in house prices, a strong decline in the stock market, and a dramatic worsening of the labor market conditions.

This paper attempts to estimate the separate impact of these three shocks on households' expenditures, using recently available microdata. In particular, the paper makes three contributions. First, it takes advantage of the first (to the best of our knowledge) household dataset that provides at the same time information on consumption, capital gains on financial assets and housing, and labor force status, and use it in order to assess the impact of wealth losses and unemployment on consumption. The use of directly elicited information on stock capital gains/losses in particular is an important breakthrough in the literature on wealth effects. This is the case because typically in microdata surveys one has information on the level of stock holdings in two or more waves, and thus a change in the value of such holdings can be due not only to changes in stock prices but also to purchases or sales of stocks, mutual funds, etc. As a result, measures of stock capital gains/losses typically found in the literature are contaminated by the effect of transactions, while the measure used in the paper is not. Having in the dataset information on housing capital gains/losses is also fundamental, given that the house is the main component of most households' wealth.

Second, the paper takes into account household heterogeneity in exposure to each of the three shocks in order to show the fundamental role that capital losses on stocks and housing, as well as unemployment shocks played for the reduced consumption of older Americans during the Great Recession, which is the most serious economic crisis affecting the US economy since the 1930s.

Third, the paper uses available information on household expectations on the persistence of stock losses in order to show how these expectations affect households' consumption response to such losses. After documenting the considerable heterogeneity in these expectations, the paper shows that households that perceive wealth losses to be more long-lasting reduce their consumption by a greater percentage than their counterparts that expect a rebound in the stock market. This finding is in line with predictions from standard economic theory, and points to the importance of household expectations for consumption adjustments during the Great Recession.

The microdata used in this paper come from the 2009 Internet Survey of the Health and Retirement Study (HRS), and refer to the population aged 50 or older. Hence, they are particularly well suited to analyze the impact of wealth shocks on consumption. Indeed, older households have accumulated significant amounts of wealth over the lifecycle and therefore control a large fraction of society's resources;[1] thus their decisions have pronounced aggregate implications. Those aged fifty and above typically have higher stock market participation rates than the rest of the population, and a higher fraction of their wealth is invested in risky financial assets. Furthermore, over 90% of households in the sample own their home. Hence, the analyses are less likely to suffer from the endogeneity bias that arises when one examines consumption responses to housing wealth losses over homeowners, and the heterogeneity of responses with respect to wealth losses experienced by owners and renters. Finally, recent studies (e.g., Attanasio et al., 2009) emphasize that co-movements in consumption and house prices may be driven by a common factor such as income expectations. Given that the elderly typically face a relatively flat future income profile, this problem may be less severe in the sample.[2] On the other hand, the unemployment rate and the probability of job loss tend to be lower among older households.

We find that capital losses on housing and financial assets, as well as the income loss from becoming unemployed, do indeed lead households to reduce their spending, and these effects are net of the influence of a number of important socio-economic characteristics including family size, health deterioration, and change in working and retirement status. Furthermore, an analysis using disaggregated financial assets shows that the effects of financial losses come primarily through losses experienced from directly held stocks and individual retirement accounts (IRAs).

More specifically, the elasticity of consumption to financial wealth losses experienced in 2008–2009 is about 0.09, implying a marginal propensity to consume with respect to financial wealth equal to 3.3 percentage points. In addition, households in which at least one of the two partners in the main couple (or the single head) became unemployed in 2008 and early 2009 reduced consumption by 10% in 2009. Finally, the fall in house prices between the summer of 2006 and the first half of 2009 also has an important impact on consumption (the estimated elasticity is about 0.06 and the associated marginal propensity to consume reaches 1 percentage point). Furthermore, we generate artificial data from both a buffer stock and a permanent income model, and use them to calculate the implied elasticities of consumption to wealth. The empirical estimates of the elasticities are in line with those generated by these two standard intertemporal consumption models.

It should be noted that, while the paper studies the consumption response to capital losses using data from 2008 to 2009, the economic relevance of this issue is more general, given that large asset price movements have by now become the norm in the US economy. Fig. 1 plots capital gains and active saving accruing to the US household sector (both are measured as a share of personal disposable income) from 1990 to 2010. As the graph makes it clear, during this period capital gains and losses form a much larger part of households' year-to-year asset accumulation than active saving; in fact, the median yearly absolute ratio of capital gains to active saving is equal to 5.43. Furthermore, the accumulated real (in 2009 prices) capital gains, after subtracting real losses, are equal to about 35.99 trillion dollars during this period, while the accumulated

[1] Information from the 2007 and 2010 waves of the US Survey of Consumer Finances indicates that households in which the head is aged 50 and above have about 62% of total gross housing wealth, 78% of all equity wealth, and 75% of total net worth.

[2] Indeed, Attanasio et al. (2009) find that younger households (most of which are renters) have higher wealth-consumption correlations than older households, and take this as evidence that the co-movement between consumption and house prices is driven by income expectations, rather than a genuine wealth effect.

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