WHAT HAPPENS TO HOUSEHOLD PORTFOLIOS AFTER RETIREMENT?

BY COURTNEY COILE AND KEVIN MILLIGAN*

Introduction

The typical older household in the United States now arrives at retirement with an array of financial resources. These resources usually include home equity, vehicles, and bank accounts and may also include financial assets such as Individual Retirement Accounts (IRAs) and stocks or other property like small businesses and real estate.

These assets are important for the financial security of older households. Households may use them to finance routine consumption in retirement or reserve them to cope with the financial consequences of a negative event like the death of a spouse. Households' ability to manage their assets in retirement is becoming more important over time, as the shift towards defined contribution pension plans means that households are more likely to receive their pension as a stock of assets at retirement rather than as a flow of monthly benefits. Older households hold a sizeable share of total U.S. household net worth, so the spend-down patterns of these households may affect asset markets, particularly as the large baby boom cohort enters retirement.

This *brief* examines what happens to household portfolios after retirement. It analyzes how portfolios evolve with age and how health shocks such as the death of a spouse or a heart attack affect the composition of household portfolios. The data come from the *Health and Retirement Study* (HRS), using data from 1992-2002.[1]

The results show large changes in asset holdings with age. The ownership rates for homes and vehicles fall dramatically, while the share of assets invested in bank accounts and Certificates of Deposit (CDs) rises. Health shocks play a key role in explaining these changes in household portfolios. Experiencing a health shock like widowhood is a strong predictor of selling one's home, vehicle, and business or other real estate and of shifting money into bank accounts and CDs. Poor physical or mental health amplifies these responses. These findings suggest that factors other than standard risk and return considerations weigh heavily in the portfolio decisions of many older households.

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	Percent of HH with asset	Share of total assets	Median assets, if assets >0 (in 2003 $)
Principal residence	82 %	49.3 %	122,700
Vehicles	89	13.0	10,200
Bank accounts	86	9.8	5,100
IRAs	42	9.1	46,200
Stocks	33	6.4	46,000
Real estate	18	4.8	71,600
Business	12	3.4	153,400
Other savings	16	1.8	20,500
CDs	19	1.7	11,300
Bonds	7	0.7	25,600
Total assets		**100**	**169,800**

Source: Authors' calculations from University of Michigan (2003).

Age Patterns in Household Portfolios

As shown in Table 1, the typical household has accumulated an assortment of financial resources by the time it nears retirement age. Assets held in defined contribution accounts are listed according to where they are invested (e.g., in stocks, bonds, etc.). The total does not include the value of Social Security benefits and benefits from defined benefit pension plans.[2]

The vast majority of households with heads aged 60-64 own a principal residence, own one or more vehicles, and have a bank account. Home equity accounts for half of total household assets on average, with the typical home-owning household having equity of about $120,000. While no other assets are as broadly held, a significant share of households has an IRA or owns stocks and a substantial minority owns CDs, small businesses, and other real estate. Among those who hold them, the value of these other assets can be quite significant — for example, the typical business is valued at over $150,000. All together, the typical household in this age range has assets of about $170,000.

As households age, dramatic changes occur in their portfolios. In the case of home and vehicle ownership, these changes are most evident after age 75. For example, as shown in Figure 1, home ownership is essentially flat at about 80 percent of the population until age 75 but falls off rapidly thereafter, with only 40 percent of households owning homes by the time they are in their early 90s. For vehicles, a gradual decline is visible starting at age 60, but the most rapid drop-off again occurs starting at age 75, with only 20 percent of households owning vehicles by their early 90s.

These figures suggest that age has a strong effect on household portfolios, yet it is hard to know whether the observed pattern is entirely due to age. First, wealthier households tend to live longer. Second, people experience different life events depending on when they were born. As a result, differences in the assets of older and younger households at a given point in time may reflect not only the effect of age but also these mortality and cohort effects.[3]

FIGURE 1. TRENDS IN HOME OWNERSHIP BY AGE AND BIRTH COHORT, ALL HRS WAVES, 1992-2002
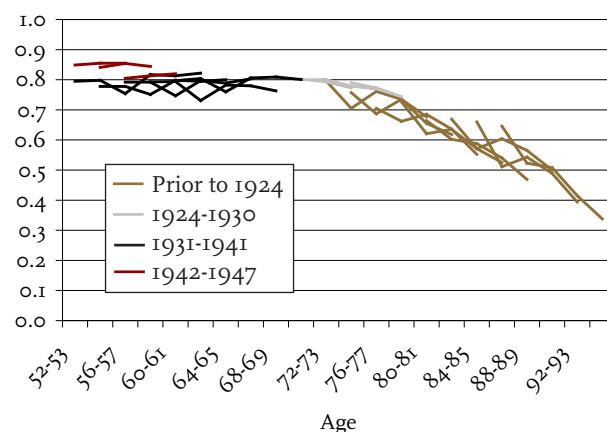
Note: Each line shows the age pattern of asset ownership for a particular two-year birth cohort, such as people born in 1931-1932, over the period that the cohort is observed. The color of the line indicates whether the cohort is part of the original HRS sample (born 1931-1941), the original AHEAD (Assets and Health Dynamics of the Oldest Old) sample (born prior to 1924), the War Babies sample (born 1942-1947), or the Children of the Depression sample (born 1924-1930). Each sample is observed between three and six times in the data. Only households that survive for the full sample period are used in these calculations.

Source: Authors' calculations from University of Michigan (1993-2003).

FIGURE 2. CHANGE IN PROBABILITY OF ASSET
OWNERSHIP AS HOUSEHOLDS AGE A DECADE, ALL HRS
WAVES, 1992-2002

NS = not statistically significant
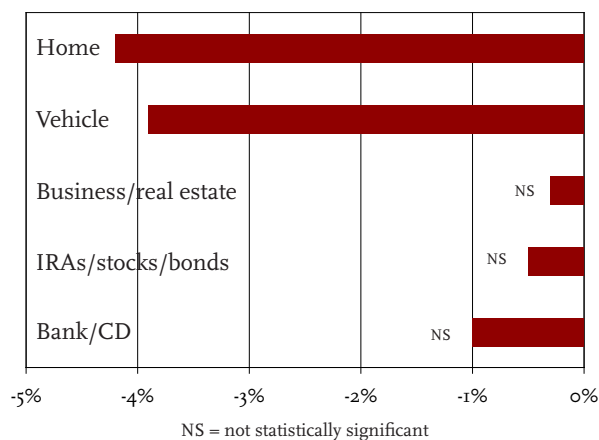
Source: Authors' calculations from University of Michigan (1993-2003).

To more fully address these concerns, we estimate a simple linear relationship between age and asset ownership, then add controls for the household's year of birth to address cohort effects as well as household-level controls to address the issue that wealthier households tend to live longer.[4] The resulting analysis (see Figure 2) relies on changes in portfolios within households over time to identify the effect of age on household portfolios.

Being one decade older is associated with a 4 percentage point drop in the probability of owning a home and a similar drop in the probability of owning a vehicle. While the housing effect is somewhat smaller than implied by Figure 1, it is highly statistically significant. The effect of age on the household's probability of owning other assets — a business or real estate; IRAs, stocks, or bonds; and bank accounts or CDs — is also negative, but small and statistically insignificant.

By contrast, the share of assets held in bank accounts and CDs (not shown in the figure) rises with age, by an estimated 3 percentage points per decade, and the effect is highly significant. Given that households age 60 to 64 hold an average of only 12 percent of their assets in bank accounts and CDs, this is a sizeable increase.

In sum, it appears that the most significant changes to household portfolios during retirement are the sale of homes and vehicles, which most commonly occur after age 75, and an increase in the share of as-

sets held in bank accounts and CDs. But what factors explain these changes? One obvious candidate is that changes in a household's health may prompt the sale of homes and vehicles, either because the household can no longer manage or use them or because the household needs to tap into these resources due to a change in financial need. This question is pursued further in the following section.

The Effect of Health Shocks

Negative health events are unfortunately quite common for older households. For example, over a two-year period, the probability that one or both members of an HRS household will receive a diagnosis of a new chronic illness such as diabetes or high blood pressure varies from 4 to 7 percent, depending on the age of the household members. The probability that the household will experience an acute event including a heart attack, stroke, or new cancer diagnosis varies from 2 to 4 percent. The probability that one member of the household will die rises from 3 percent when members are in their 60s to 6 percent at age 80. Cumulatively, the probability of experiencing at least one such health shock during retirement is very high. For example, fewer than 30 percent of couples survive to age 90 without one member of the couple dying.

All three types of health shocks — widowhood, new chronic illnesses, and acute events — result in significant changes in household portfolios. The

FIGURE 3. CHANGE IN PROBABILITY OF ASSET
OWNERSHIP IN RESPONSE TO WIDOWHOOD, ALL HRS
WAVES, 1992-2002

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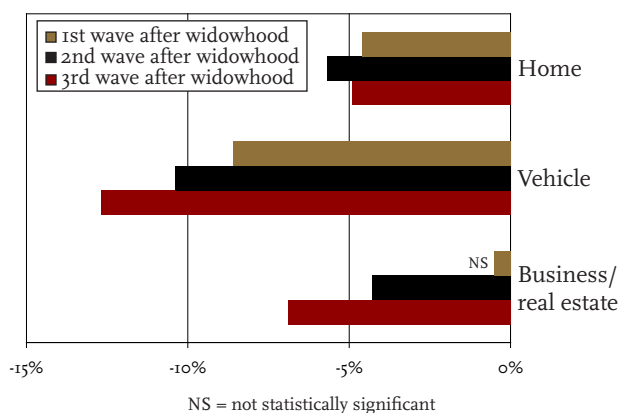
Source: Authors' calculations from University of Michigan (1993-2003).

impact of widowhood is shown in Figure 3 and the impact of acute events in Figure 4. To illustrate how the effects of these shocks unfold over time, each figure shows the effect of the shock at the interview immediately after the shock and at the two following interviews, or up to six years after the shock.

Following the death of one household member, the probability of home ownership drops immediately by 5 percentage points as shown in Figure 3. This effect neither strengthens nor weakens with time — up to six years after the event, widowed households are 5 percentage points less likely to own a home than equivalent households that have not been widowed. The probability of owning a vehicle drops by 9 percentage points at the interview following the shock and the effect strengthens over time, to a 13 percentage-point effect up to six years after the shock. Comparing these results to those from Figure 2, the effect of widowhood on home and vehicle ownership is similar to the effect of being a decade or more older.

The probability of owning a business or other real estate also falls substantially following widowhood. While no effect is discernable at the first interview following the shock, the household is 4 percentage points less likely to own these assets at the second interview and 7 percentage points less likely at the third interview.

Lastly, the share of assets held in bank accounts and CDs (not shown in the figure) rises following widowhood, by about 4 percentage points, and the effect persists three periods after the shock. While one might expect widowed spouses to put the proceeds of home and vehicle sales into such accounts on a temporary basis before reinvesting the funds elsewhere, it appears that this choice may in fact represent a permanent shift into these low-risk, low-return assets.

The effects of chronic and acute health shocks on home and vehicle ownership are similar to the effects of widowhood, though they are often somewhat smaller and slower to emerge. This delayed impact is to be expected, since the diagnosis of a chronic illness does not necessarily lead to an immediate change in the household's ability to function — for example, some conditions can be controlled effectively by medication — and some acute events are not particularly severe. However, these events do seem to foreshadow future health declines that will eventually prompt households to sell their homes and vehicles. Interestingly, in the case of the ownership of businesses and other real estate, the effects of chronic and acute shocks are similar to or even larger than the effect of widowhood.
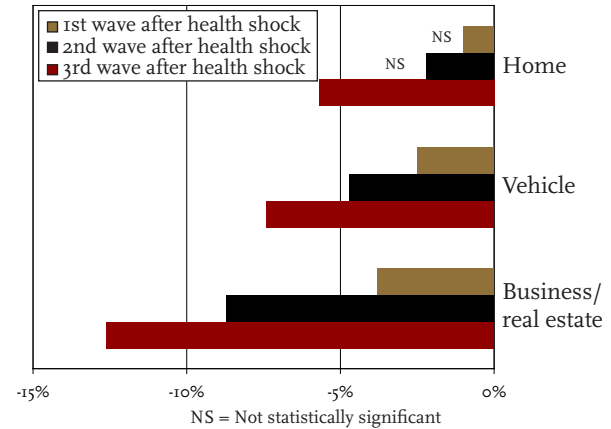
In sum, all three types of health shocks — widowhood, chronic illnesses, and acute events — have significant effects on household portfolios. Health shocks tend to affect household portfolios in the same way that aging does, leading the household to sell homes, vehicles, and businesses or other real estate and to move assets into bank accounts and CDs. The effect of widowhood is generally seen immediately, while the consequences of a chronic or acute shock are slower to emerge, but still quite evident by several periods after the shock.

Why Shocks Affect Household Portfolios

Health shocks clearly affect household portfolios, but why do households respond to shocks in the way that they do? It seems likely that households are selling assets such as homes, vehicles, and businesses or other real estate either because they now lack the ability to manage these assets or because they need to tap into these resources in the face of increasing financial need. Thus it seems likely that the household's physical, mental, and financial capacity following the shock may help to determine its response to the shock.

In fact, the household's response to widowhood is greatly amplified if the surviving spouse reports difficulty with activities of daily living (ADLs) or dif-

NS = not statistically significant
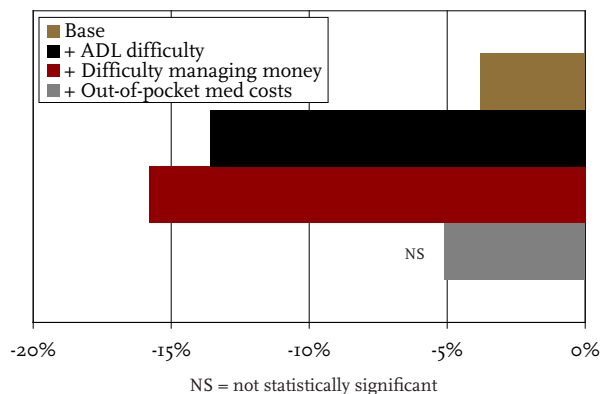
Source: Authors' calculations from University of Michigan
(1993-2003).

ficulty managing money (see Figure 5). For example,
widowhood makes the household 4 percentage points
more likely to sell its home relative to non-widowed
households if there are no difficulties, but this rises
to 14 points if the household has ADL difficulties and
16 points if it has difficulty managing money. For
vehicles, the baseline effect of 13 percentage points
rises to 23 points with ADL difficulties and 35 points
with difficulties managing money.

The same pattern is evident for the share of assets
in bank accounts and CDs (see Figure 6). Widow-

NS = not statistically significant

Source: Authors' calculations from University of Michigan
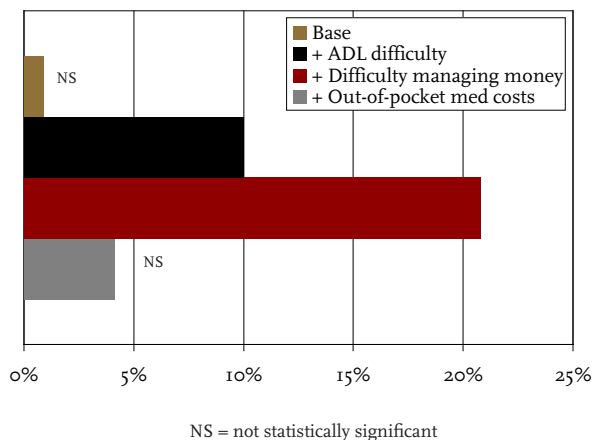(1993-2003).

hood has a negligible effect on this share for someone
with no difficulties, but the bank account and CD
share rises by 10 percentage points when the person
has ADL difficulties and by 21 percentage points
when the person has difficulty managing money.
However, ADL or managing money difficulties have
no apparent effect on sales of business and real estate
assets. Also, widows that have experienced out-of-
pocket medical expenses of over $5,000 — one pos-
sible measure of greater financial need following the
shock — do not have a different response to the shock
than widows who have not incurred such costs.

Conclusion

Households make substantial changes to their port-
folios as they age and experience health shocks. In
response to both aging and health shocks, the most
common and important changes to the household
portfolio are to sell one's home, vehicle, or business
and real estate and to move assets into bank accounts
and CDs.

These results suggest that factors other than stan-
dard risk and return considerations may weigh heav-
ily in many older households' portfolio decisions. For
example, the fact that widowed households put more
assets in bank accounts and CDs when they have
physical or mental difficulties indicates that liquidity
or ease of portfolio management may be more im-
portant to these households than high returns. With
households facing growing responsibilities to man-
age assets during retirement, portfolio decisions like
these may have important implications for the well-
being of vulnerable groups, such as elderly widows.

Endnotes

1 The HRS is a nationally representative survey of older Americans conducted by the University of Michigan for the National Institute on Aging. The survey began with a sample of adults aged 51 to 61 in 1992 and was later expanded to cover all older households. Survey participants are re-interviewed every other year, allowing the same households to be followed over time. See Juster and Suzman (1995) for a detailed overview of the survey.

2 Data have been weighted by HRS household weights. The HRS data used here and throughout the analysis are from the RAND version of the HRS, a user-friendly version of the data with cleaned and consistent variables. Of particular note, this study uses RAND's model-based imputations for any missing wealth data.

3 The analysis shown in Figure 1 only partially addresses these concerns. Each short line on the graph shows the change in asset ownership with age for a specific birth cohort. But since no cohort is observed from ages 60 to 90, we must put these lines together to obtain a sense of how asset ownership changes throughout retirement. The fact that the lines connect fairly seamlessly suggests that cohort effects are small, at least for cohorts born relatively close together. To minimize concerns about differential mortality, each line also includes only households that survive for the whole sample period. However, it remains possible that older cohorts are wealthier on average than younger ones.

4 The model also includes demographic characteristics such as education, race/ethnicity, religion, marital status, and geographic region. The household fixed effects included in this model will control for any unobserved household characteristics, so long as they are not changing over time.

References

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About the Center

The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and forge a strong link between the academic community and decision makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

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