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Retired Household Responses to a Persistent Low Interest Rate Environment

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Pension Research Council &

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Motivation

- » interest rates have been at historic lows since 2008
 - » some benchmark rates have in fact been negative
- » we investigate how retirees are coping with these low rates
 - » we employ HRS panel data, we target a retiree sample
 - » We look for patterns / strategies for coping with low rates
- » broadly, we find:
 - » high wealth households have benefitted from strong equity returns
 - » low wealth households have depleted assets including home equity

HRS Data

- » biannual data targeting households aged 50+ from 1992-2014
- » opportunity to look at self-reported wealth and allocations
 - » conditioning on:
 - » households' placement within the 2014 wealth distribution
 - » controlling for:
 - » risk preference, home ownership & socio-economic factors.
 - » low interest rate period from 2008 – 2014.

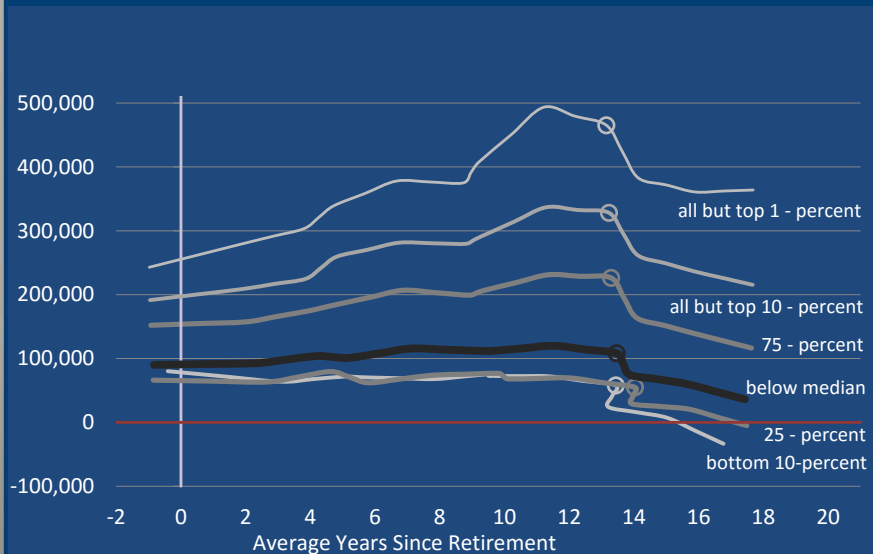
Graphical Analysis of Retirees 1992 – 2014

- » we will next take six looks at retiree assets
 - » note the relative evolution of assets & allocations by group
- » the next six slides will depict the evolution of:
 - » wealth
 - » equity & mutual fund allocations
 - » independent bond & safe asset allocations
 - » liquid assets & LTV for households' primary residence

Wealth Evolution Among the Retired

I of VI

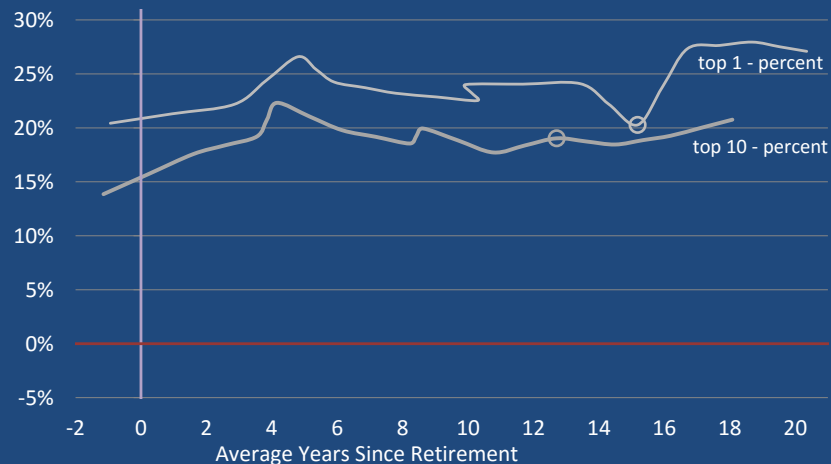
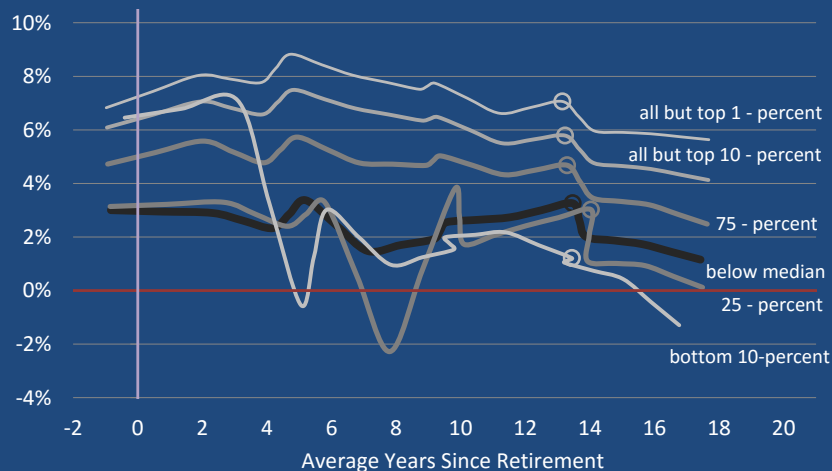
For HRS households with a retired person; 2015 dollars (○ = 2008 wave)



Equity & Mutual Fund Allocations

II of VI

For HRS households with a retired person; percentage of wealth (○ = 2008 wave)

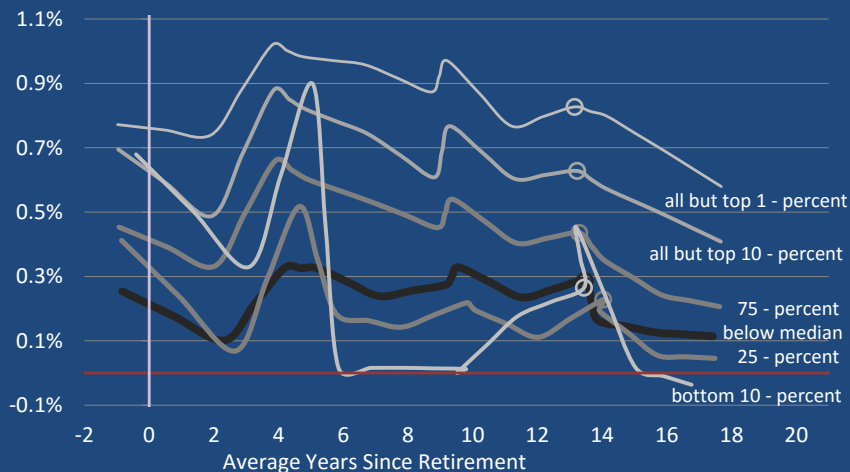


Note: some portion of represented rebalancing could be automatic.

Bond Allocations

III of VI

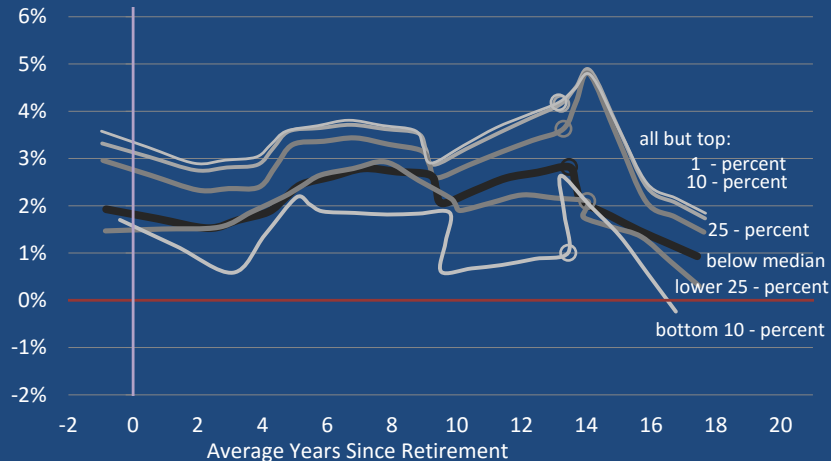
For HRS households with a retired person; percentage of wealth (○ = 2008 wave)



Note: some portion of represented rebalancing could be automatic.

Safe Asset Allocations: CDs, Savings Bonds, T-bills IV of VI

For HRS households with a retired person; percentage of wealth (○ = 2008 wave)



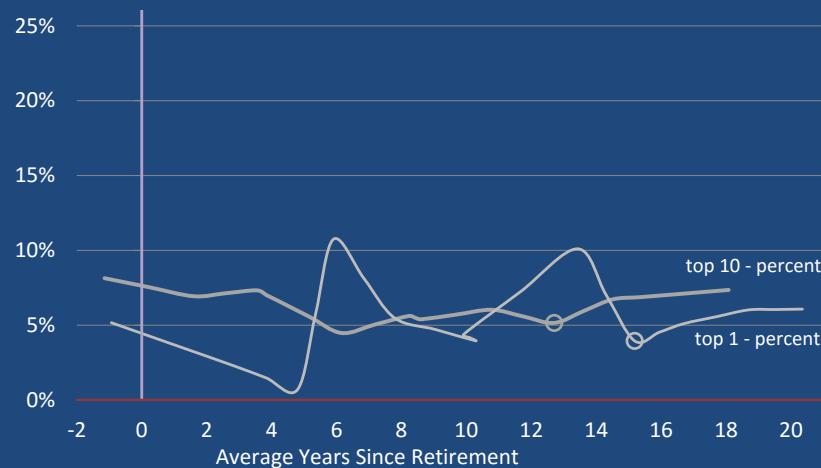
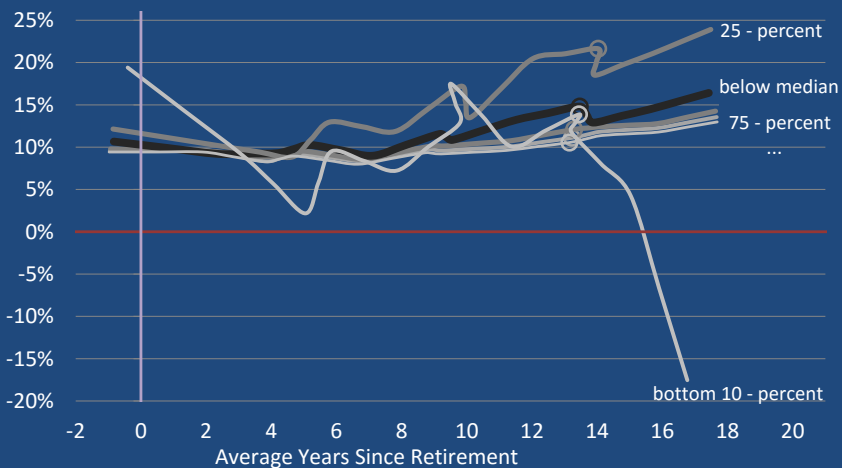
Note: some portion of represented rebalancing could be automatic.

Proportion of Liquid to Total Wealth

V of VI

For HRS households with a retired person; percentage

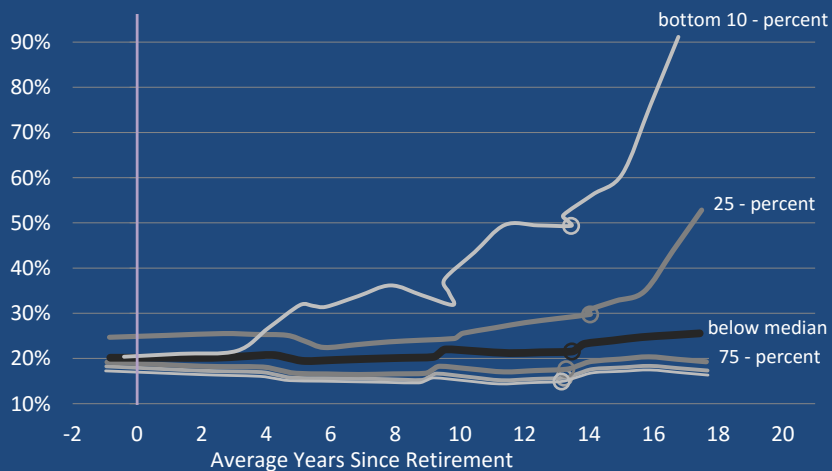
(○ = 2008 wave)



Note: some portion of represented rebalancing could be automatic.

Loan to Value

For HRS households with a retired person; percentage of home's worth (○ = 2008 wave)



Note: it is possible to break out changes in mortgage balances and home values.

→ home values have declined and mortgage values have increased among the bottom 10 percent of the wealth distribution

HRS Panel Data Regression Analyses

- » for wealth we employ a panel spanning: 1992-2014
- » for allocations we employ a panel Tobit method to handle potential censoring at zero
- » the next four slides will offer a highline look at what we see

Regression – Total Wealth

I of IV

<i>Panel Regression - Dependent Variable:</i>	<i>general result</i>	
Total Assets (\$2015)	coefficient	z-stat
low interest rate era {0,1}	-\$84,064	-10.56
2014 wealth in bottom 10 percent {0,1}	-\$104,999	-3.38
2014 wealth in top 10 percent {0,1}	\$1,233,174	60.65

In various specifications results coefficients were within a range of -0.2 to 0.5 percent of the figures above, in all cases.

Controls:

household labor force participation {0, 1}, household reports retirement {0, 1}, number of years retired, household holds a DB pension {0,1}, household holds a DC account {0,1}, household has OASI income {0,1}, household has SSI or DI income {0,1}, home ownership {0,1}, risk {1, ..., 4} least to most risk averse, education {max: respondent, spouse}, education range {max - min: respondent, spouse}, whether household is white {0, 0.5, 1}, whether Hispanic {0, 0.5, 1}, respondent is female, respondent is married, married & female, age {max: respondent, spouse}, age squared, cohort controls, constant.

Equity Allocations

II of IV

<i>Panel Tobit - Dependent Variable:</i>	<i>general result</i>	
Equity and Mutual Fund Allocations	coefficient	z-stat
low interest rate era {0,1}	-1.5%	-5.59
2014 wealth in bottom 10 percent {0,1}	-2.4%	-3.73
2014 wealth in top 10 percent {0,1}	8.8%	21.89

In various specifications results coefficients were within a range of -0.1 to 0.2 percentage point of the figures above, in all cases.

Controls:

household labor force participation {0, 1}, household reports retirement {0, 1}, number of years retired, household holds a DB pension {0,1}, household holds a DC account {0,1}, household has OASI income {0,1}, household has SSI or DI income {0,1}, home ownership {0,1}, risk {1, ..., 4} least to most risk averse, education {max: respondent, spouse}, education range {max - min: respondent, spouse}, whether household is white {0, 0.5, 1}, whether Hispanic {0, 0.5, 1}, respondent is female, respondent is married, married & female, age {max: respondent, spouse}, age squared, cohort controls, constant.

Bond Allocations

III of IV

<i>Panel Tobit - Dependent Variable:</i>	<i>general result</i>	
Bond Allocations	coefficient	z-stat
low interest rate era {0,1}	-0.1%	-4.27
2014 wealth in bottom 10 percent {0,1}	-0.2%	-1.92
2014 wealth in top 10 percent {0,1}	1.6%	23.30

In various specifications results coefficients were within 0.1 percentage point of the figures above, in all cases.

Controls:

household labor force participation {0, 1}, household reports retirement {0, 1}, number of years retired, household holds a DB pension {0,1}, household holds a DC account {0,1}, household has OASI income {0,1}, household has SSI or DI income {0,1}, home ownership {0,1}, risk {1, ..., 4} least to most risk averse, education {max: respondent, spouse}, education range {max - min: respondent, spouse}, whether household is white {0, 0.5, 1}, whether Hispanic {0, 0.5, 1}, respondent is female, respondent is married, married & female, age {max: respondent, spouse}, age squared, cohort controls, constant.

Use of Home Equity

IV of IV

<i>Panel Tobit - Dependent Variable:</i>	<i>general result</i>	
Loan to Value Home Ownership	coefficient	z-stat
low interest rate era {0,1}	2.2%	7.20
2014 wealth in bottom 10 percent {0,1}	85.2%	13.40
2014 wealth in top 10 percent {0,1}	0.0%	0.00

In various specifications results coefficients were within 1.5 percentage points of the figures above, in all cases.

Controls:

household labor force participation {0, 1}, household reports retirement {0, 1}, number of years retired, household holds a DB pension {0,1}, household holds a DC account {0,1}, household has OASI income {0,1}, household has SSI or DI income {0,1}, home ownership {0,1}, risk {1, ..., 4} least to most risk averse, education {max: respondent, spouse}, education range {max - min: respondent, spouse}, whether household is white {0, 0.5, 1}, whether Hispanic {0, 0.5, 1}, respondent is female, respondent is married, married & female, age {max: respondent, spouse}, age squared, cohort controls, constant.

Summary of Findings

- » households report declined shifts into bonds and safe assets.
- » instead, we find negative wealth impacts in general
 - » - and that:
 - » high wealth households have benefitted from strong equity returns
 - » low wealth households have depleted assets – including home equity
- » on average, we observe wealth being near depletion 16 – 18 years following retirement for the bottom quarter of our sample.

Policy Implications

» given observed asset declines social insurance is acutely valuable for financing retirement

Policies should educate, encourage and facilitate claiming Social Security retirement benefits in order to maximize the utility gained from the inflation-protected annuity value offered.

Thank You

» comments welcome

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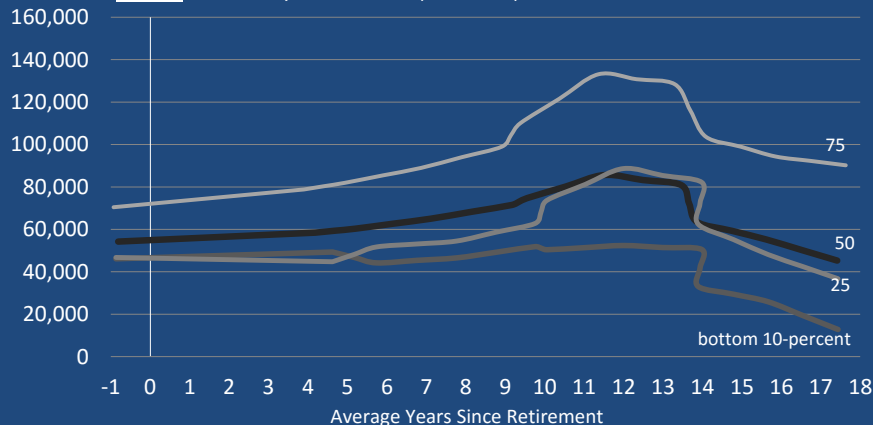
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Home & Mortgage Values, decoupled

Notice difference in scales

Primary House Value

For retired HRS Data; by 2014 wealth quantile, expressed in 2015 dollars



Value of all Mortgages and Contracts (Primary Residence)

For retired HRS Data; by 2014 wealth quantile, expressed in 2015 dollars

