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# The Financial Crisis and Saving in Personal Retirement Accounts

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# Year-End Values of Private Defined Contribution Plan Assets

- 2007: \$3.59 trillion
- 2008: \$2.67 trillion (decline of 25.7%)
- 2009: \$3.31 trillion (still down 7.8%)
- 2010: \$3.75 trillion

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# Estimates of 401(k) Losses

- VanDerhei (2009): Used EBRI/ICI data; > 20% balance decline 2008-9 for long-tenure employees
- Utkus & Young (2011): median Vanguard DC account balance yr-end 2008 31% below 2007; 2009 33% above 2008; 2010 7% above 2007

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# Previous Studies of Post-2008 401(k) Dynamics

- Wray (2012): 15% of employers suspended contributions
- Dushi, Iams, Tamborini (2013): 39% of 2007 contributors reduced contributions by > 10%
- Tamborini, Purcell, Iams (2013): Greater decline in DC contributions for workers in industries with greater employment losses

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# More General Wealth Dynamics Since 2008

- Bricker, Kennickell, Moore, Sabelhaus (2012): Median net worth for 55-64 year olds fell from \$266.2K (2007) to \$179.4 (2010); retirement accounts drop from \$104.8K to \$100
- Gustman, Steinmeyer, and Tabatabai (2012): Equities  $\approx$  15% of wealth for near-retirees
- Munnell & Rutledge (2013): HRS wealth down 2.8% 2006-10, but NRRI up 44 to 53%

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# Channels for the Great Recession to Affect Retirement Balances

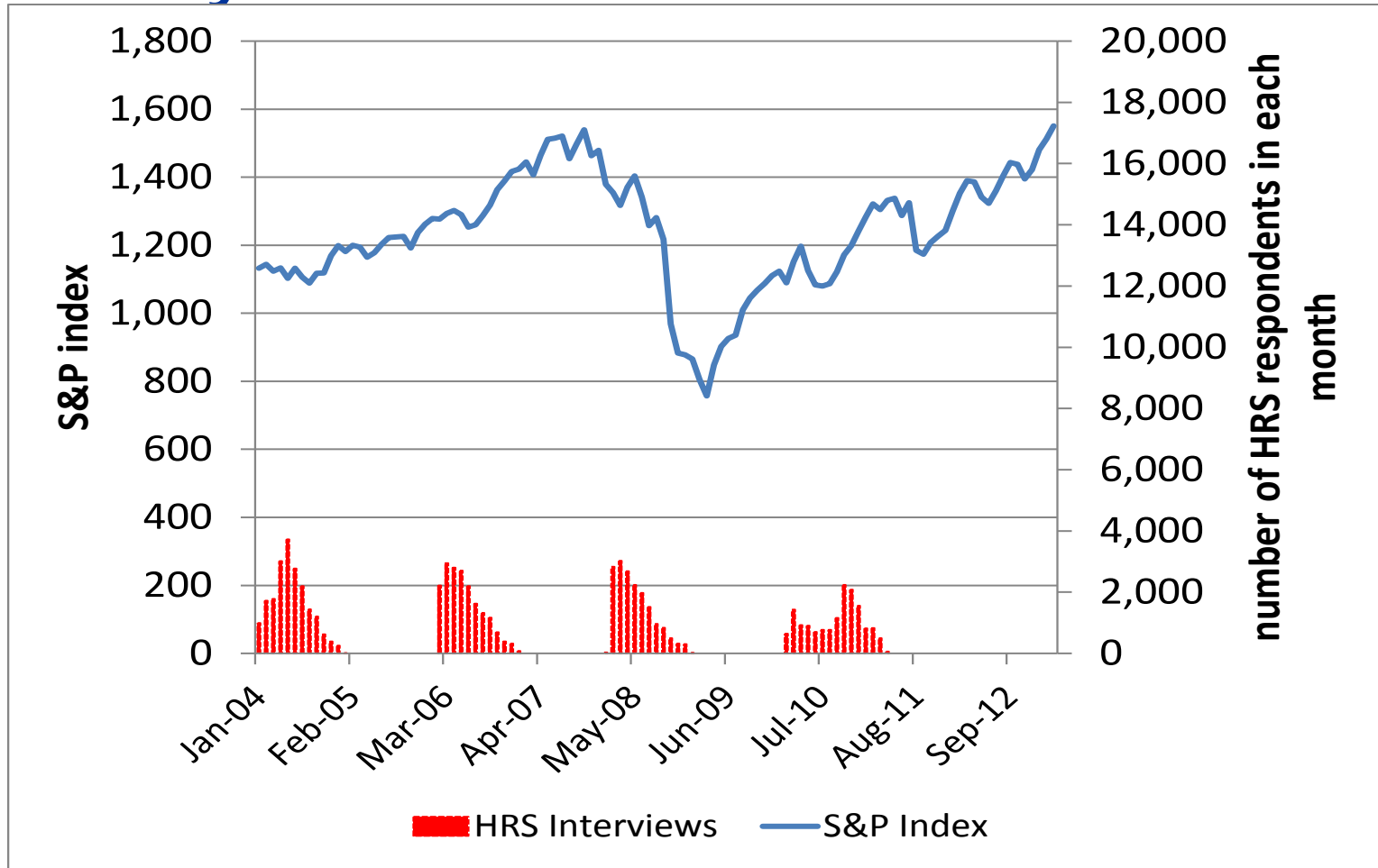
- Asset price effect
- Withdrawal effect
- Declining match effect
- Declining contribution effect (fewer employed workers and lower wages)

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# Data and Methods

- HRS 2004-2010
- Focus on four variables:
  - Employment status
  - Earnings (prior year in 2010 dollars)
  - Indicator for any PRA assets
  - PRA balance
- Challenge: Timing of survey matters in rapidly-moving market

# Stock Price Movements & HRS Survey Dates





# Percent of Men in a Household with a PRA

Age Group	2004	2006	2008	2010
50-54	61.3%	64.9%	66.4%	65.4%
55-59	62.4	62.9	66.4	68.8
60-64	58.7	60.6	61.0	62.2
65-69	56.8	53.5	54.2	55.4

# Median PRA Balance Given Ownership of PRA, Men (\$2010)

Age Group	2004	2006	2008	2010
50-54	\$60.6	\$75.7	\$78.0	\$100.0
55-59	92.4	94.4	101.3	102.0
60-64	76.2	103.9	106.4	100.0
65-69	90.1	104.9	111.4	110.0

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# Reduced Form Equations for Employment and Earnings

- Four covariates: age (linear spline), health status, education (four categories), marital status
- Interact all covariates with indicator for 2008-2010 interval

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# Equations for Presence of PRA & for PRA Balances

- Same covariates as above PLUS earnings and employment
- Again interact all covariates with indicator for 2008-2010
- Specification yields disaggregate information on effects of the crisis

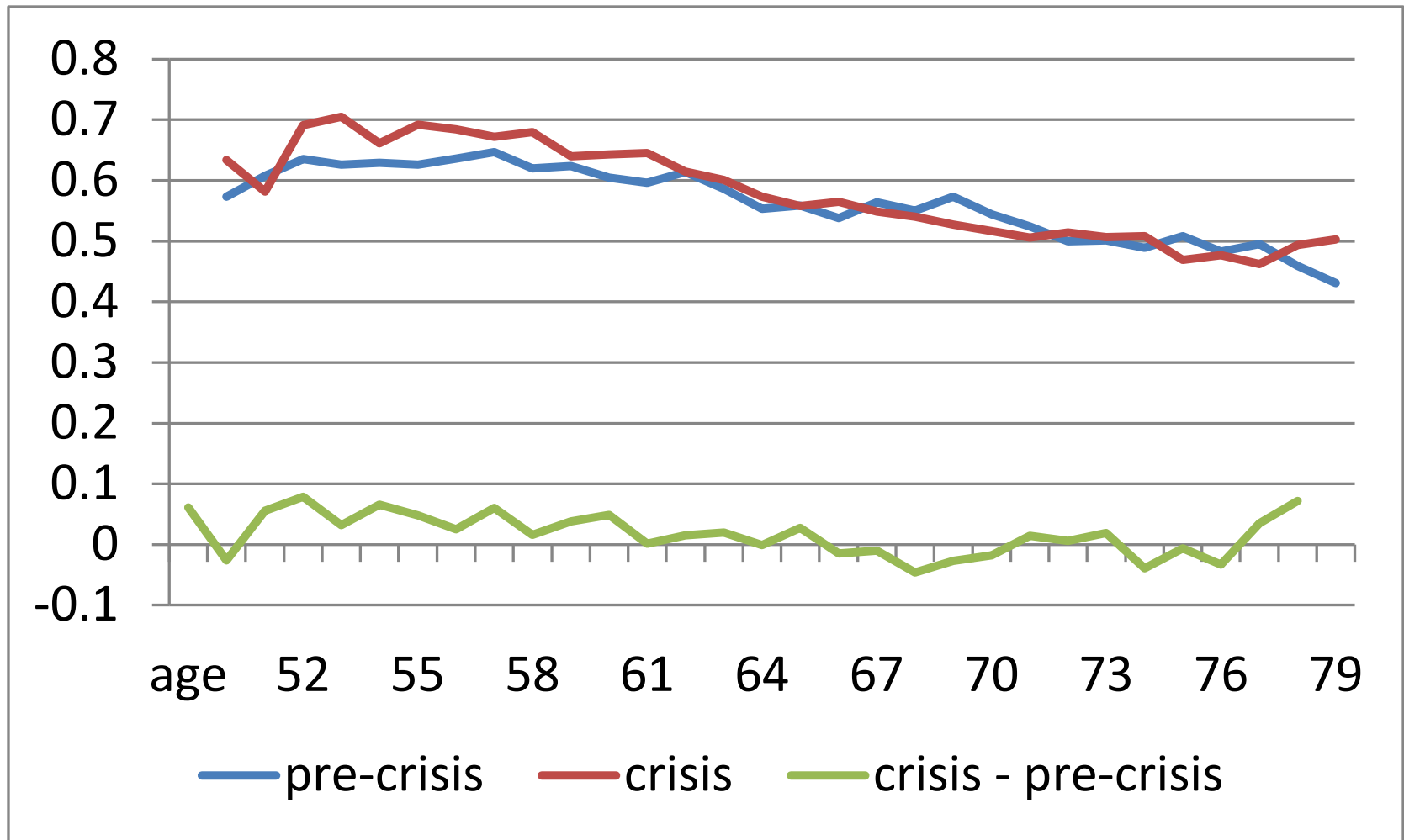
# Probability of Employment

Age Group	Men		Women	
	Main Effect	2008-10 Effect	Main Effect	2008-10 Effect
50-54	-0.011 (1.01)	-0.019 (0.67)	-0.007 (0.78)	-0.012 (0.73)
55-59	-0.011 (1.77)	-0.004 (0.39)	-0.020 (3.80)	0.004 (0.49)
60-64	-0.059 (10.26)	0.023 (2.69)	-0.041 (8.28)	-0.005 (0.62)
65-69	-0.026 (5.13)	-0.011 (1.41)	-0.037 (7.88)	0.003 (0.36)
70-74	-0.023 (4.00)	0.010 (1.11)	-0.029 (5.18)	0.004 (0.49)

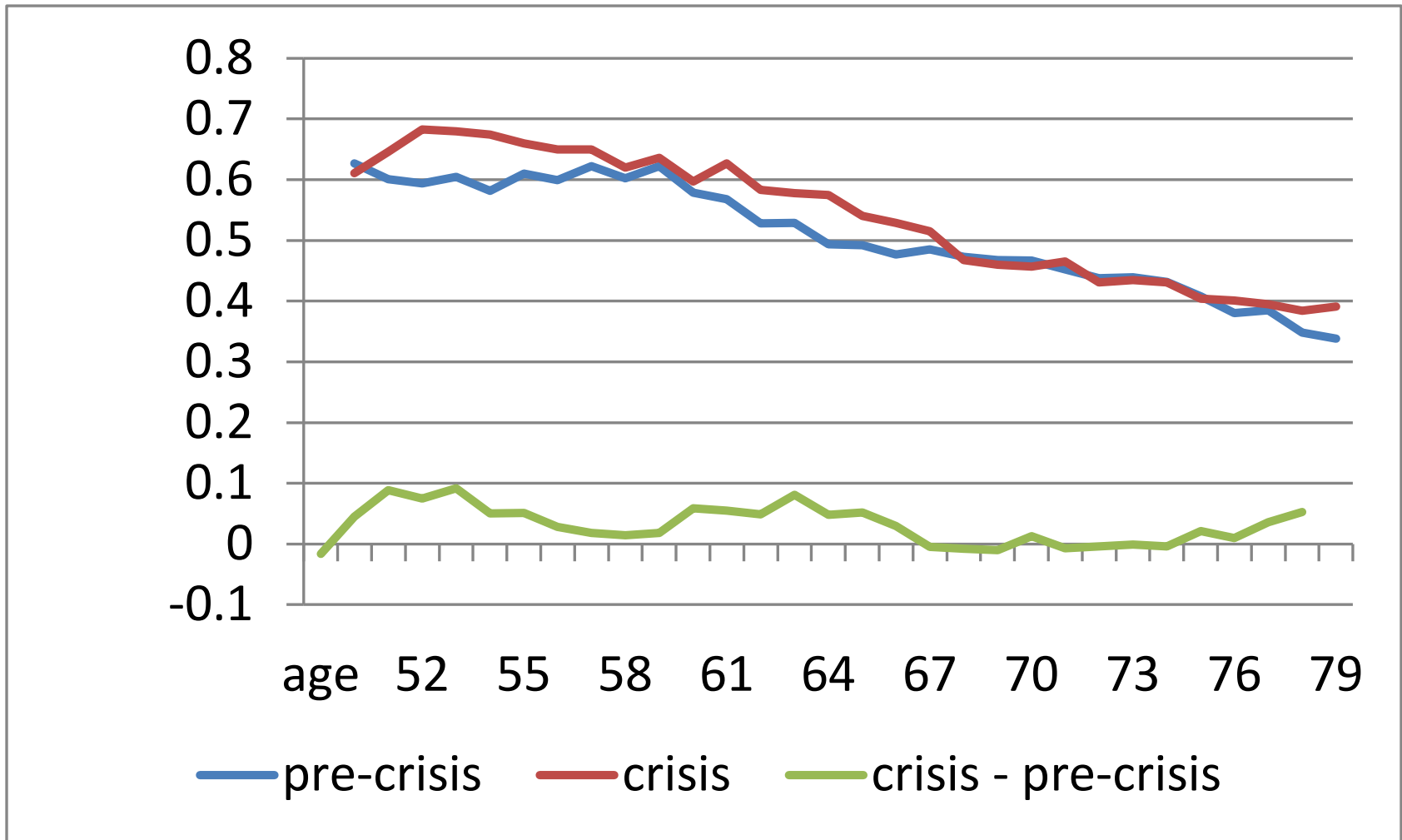
# Probability of PRA Ownership

Education Category	Men		Women	
	Main Effect	2008-10 Effect	Main Effect	2008-10 Effect
High School	0.230 (12.89)	-0.002 (0.12)	0.304 (17.71)	0.019 (1.02)
Some College	0.269 (14.32)	0.012 (0.56)	0.364 (20.30)	0.012 (0.57)
College or More	0.382 (20.73)	0.024 (1.12)	0.424 (23.11)	0.069 (3.08)

# Prob of PRA Ownership, Men

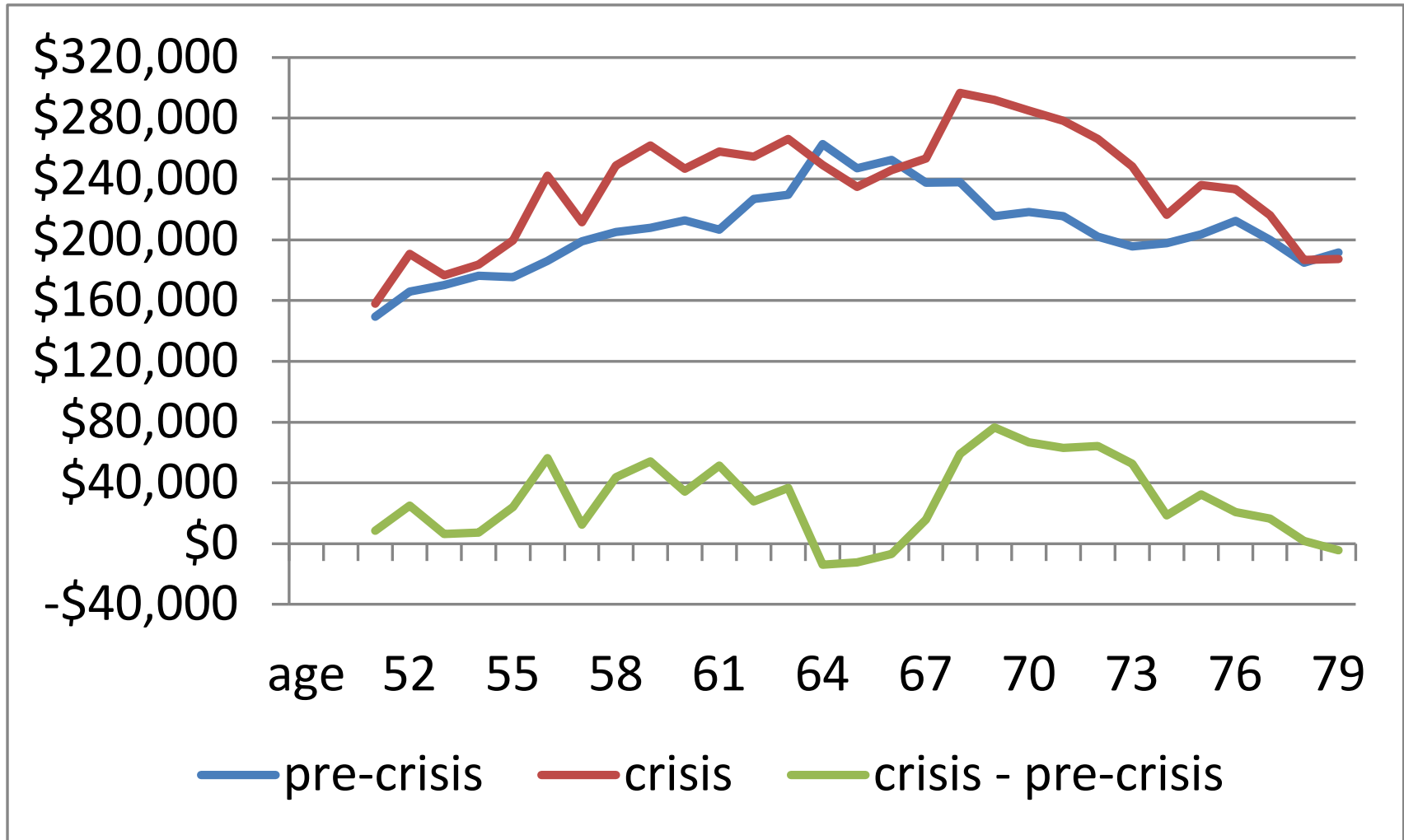


# Prob of PRA Ownership, Women

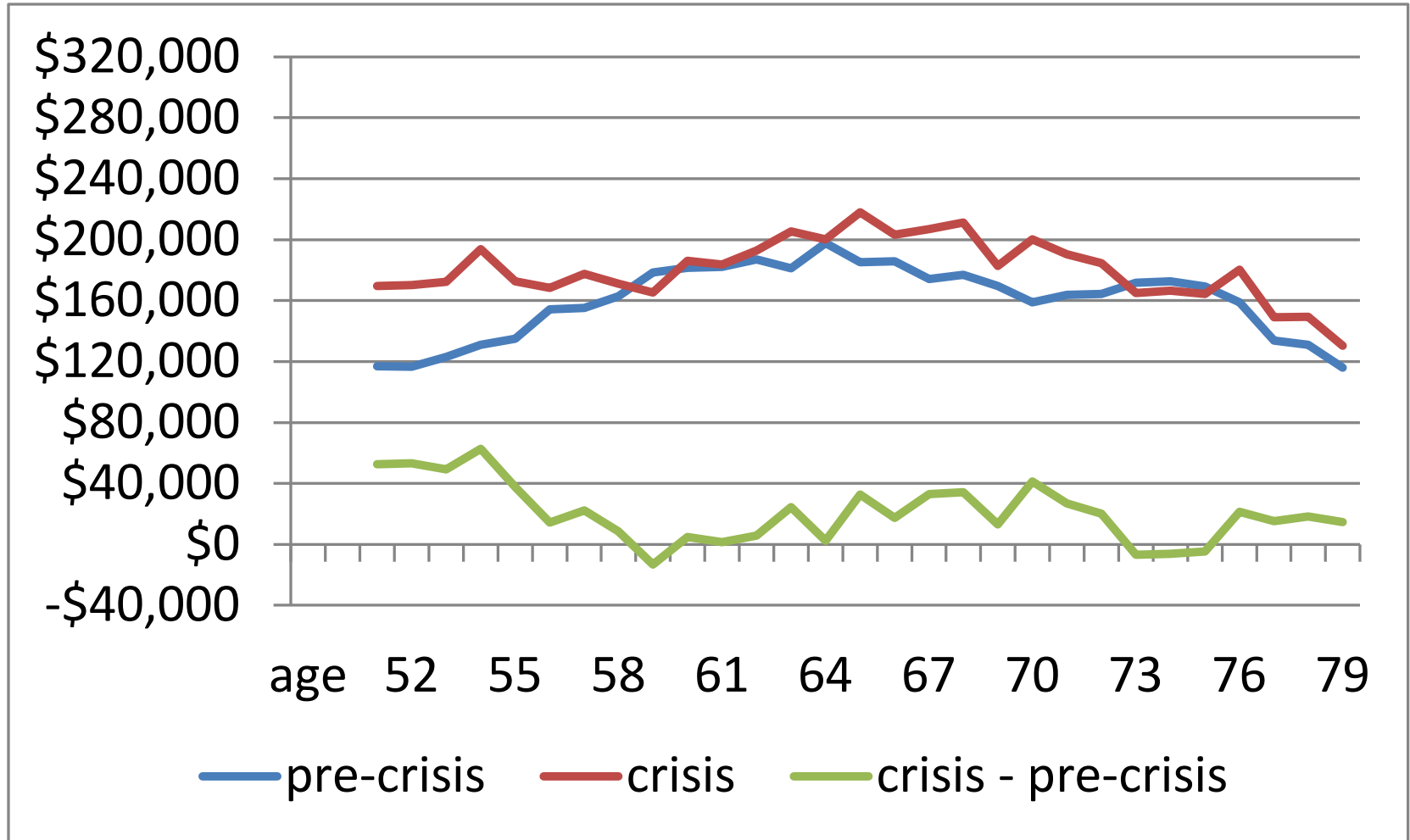




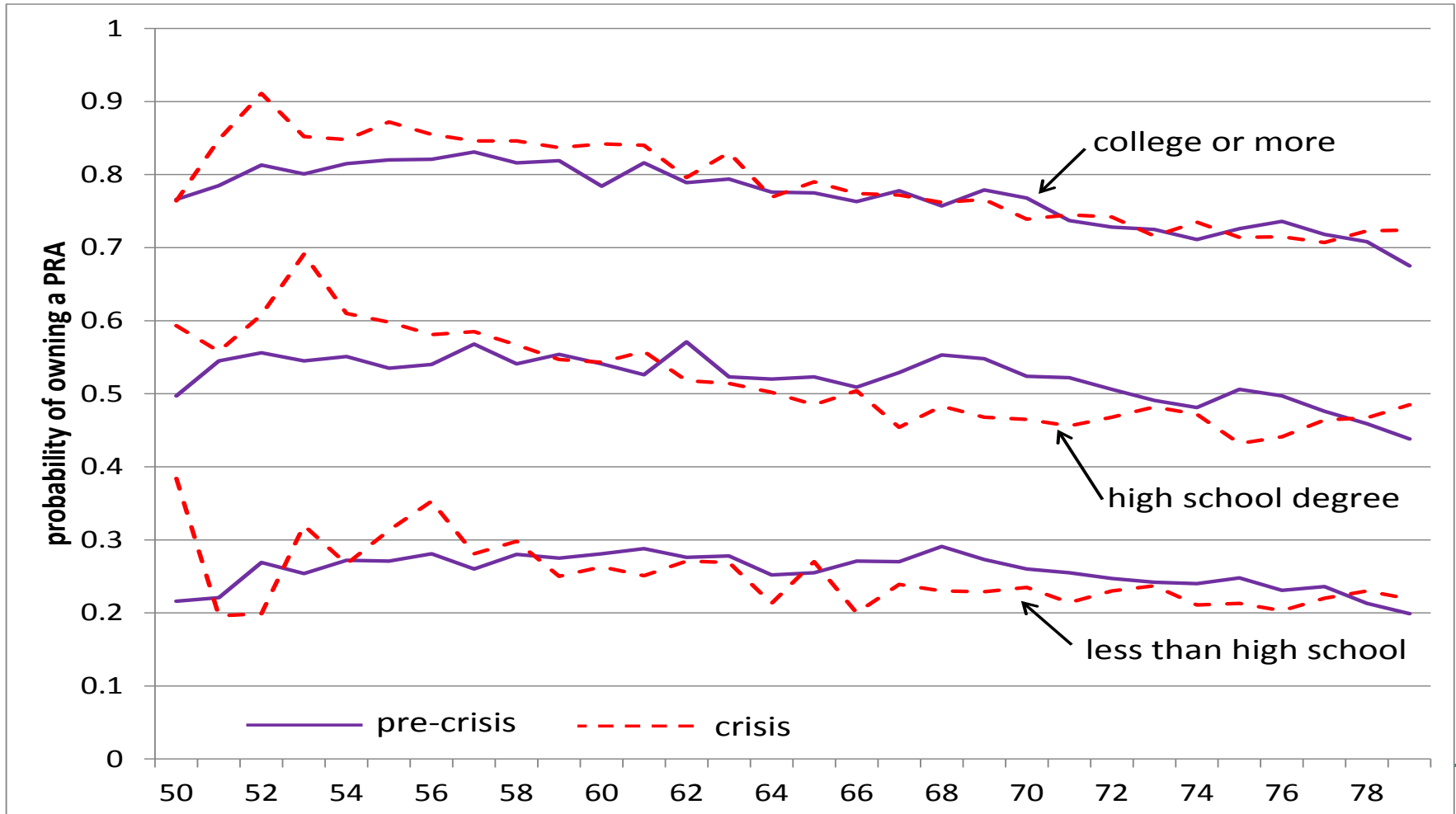
# PRA Balance Given > 0, Men



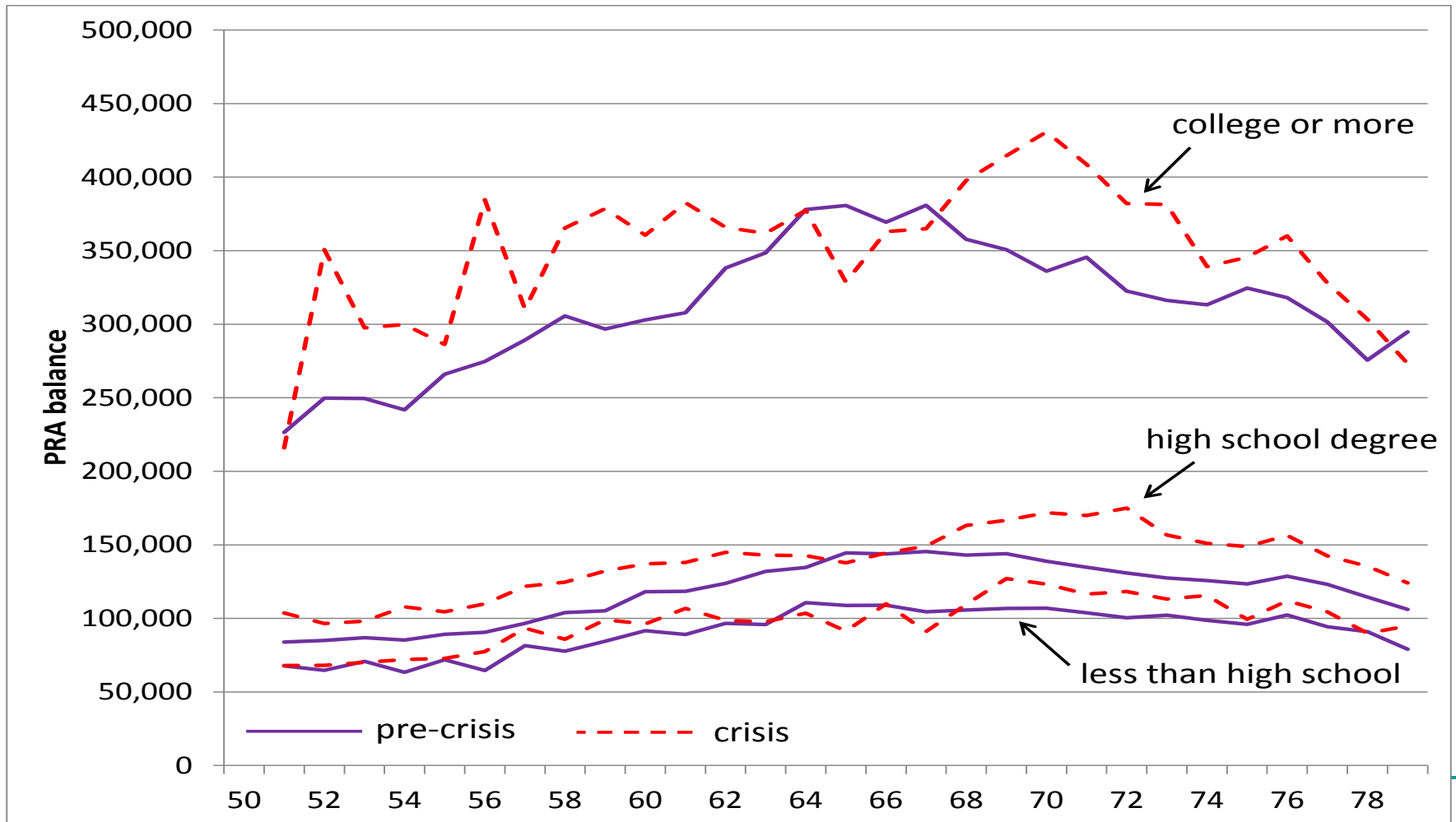
# PRA Balance Given > 0, Women



# PRA Ownership by Age and Education, Men



# PRA Balance Given Ownership by Age and Education, Men



# Education & Median Ratio of Wealth to Lifetime Income

Earnings Decile	< High School	High School	Some College	College or Beyond
2	0.21	0.23	0.54	1.08
4	0.12	0.16	0.23	0.45
6	0.10	0.12	0.20	0.34
8	0.09	0.14	0.15	0.37
10	0.25	0.14	0.30	0.43

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# Conclusions

- Employment rate for men 50-59 dropped, but for 60-69 rose (*ceteris paribus*) during crisis
- Effects of financial crisis on PRA ownership and balances are difficult to observe in HRS data given survey timing
- “Recovery” of balances must be judged against counterfactuals
- Baseline effects, especially of education, are pronounced