

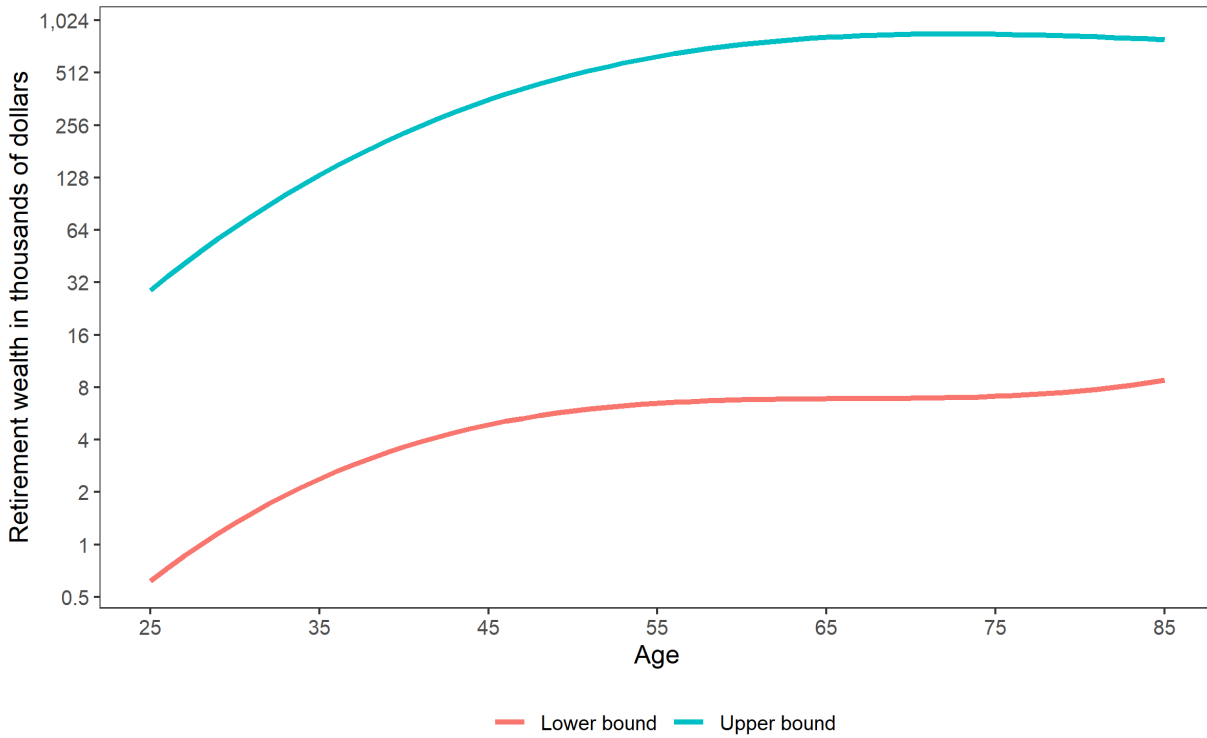
Unpublished Appendix for  
Household Portfolios and Retirement Saving over  
the Life Cycle

by

Jonathan A. Parker    Antoinette Schoar    Allison Cole  
Duncan Simester

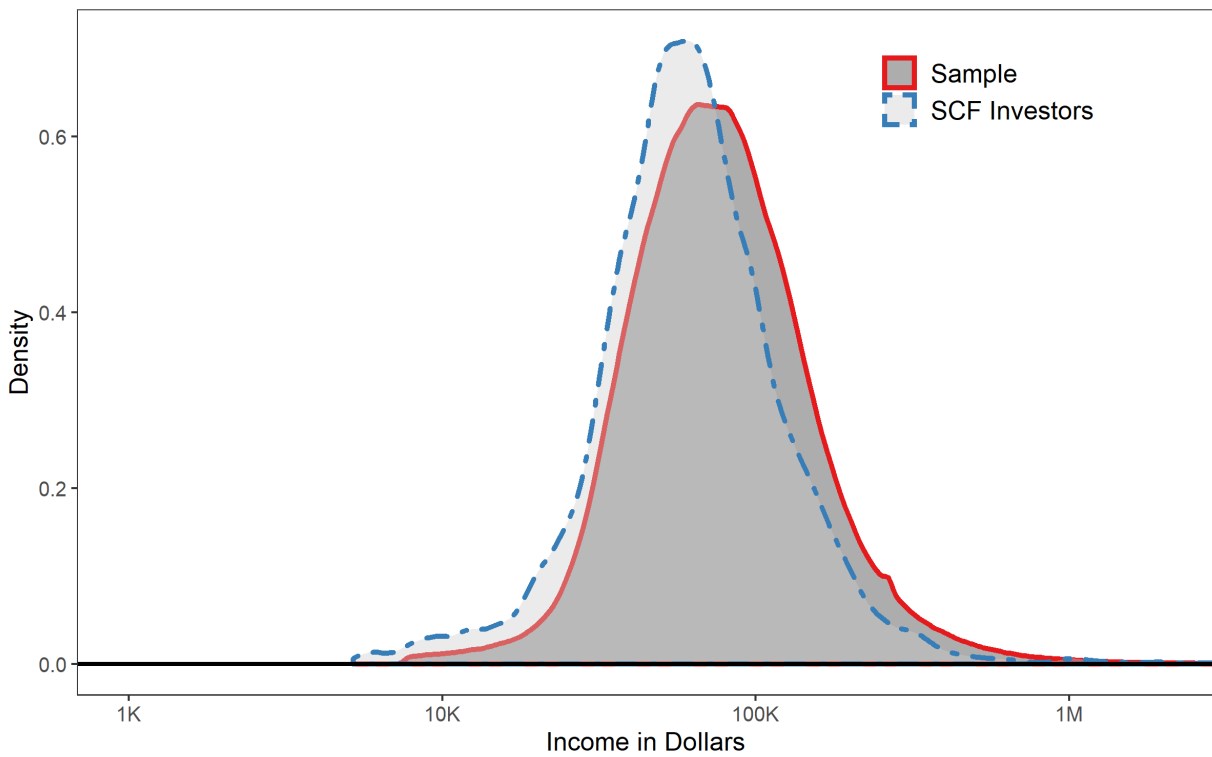
March 2022

**Figure A.1:** Retirement Wealth Cutoffs



*Notes:* This figure shows the cutoffs on retirement wealth that are used to determine our retirement investor (RI) sample, described in Section 1.2. The cutoffs are determined by running quantile regressions of log of individual's retirement wealth on a third order polynomial in age in the 2016 Survey of Consumer Finance. We then drop individuals with retirement wealth below the estimated 10th percentile or above the 90th by age.

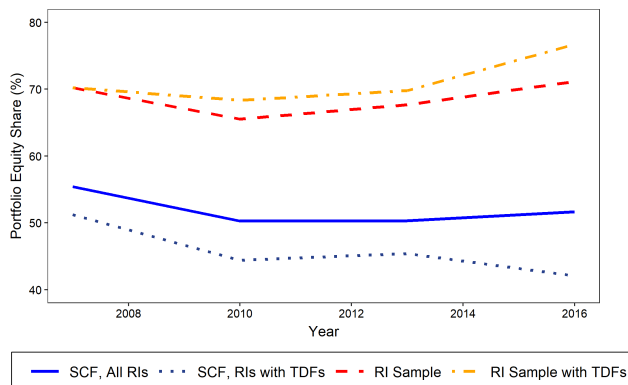
**Figure A.2:** Individual Labor Income Distribution in Firm Data and the SCF in 2016



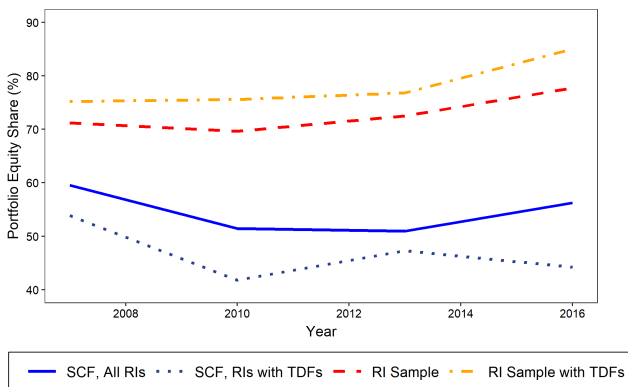
*Notes:* This figure plots the distribution of labor income in the sample of retirement investors (RIs) versus the distribution of labor income for RIs in the SCF in 2016.

**Figure A.3: Equity share of retirement wealth**

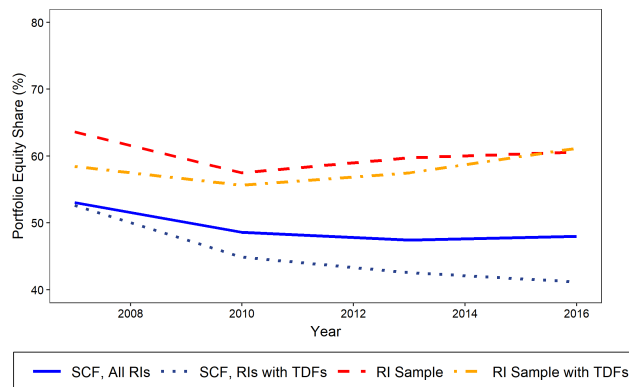
**(a) All ages**



**(b) Age 25-34**



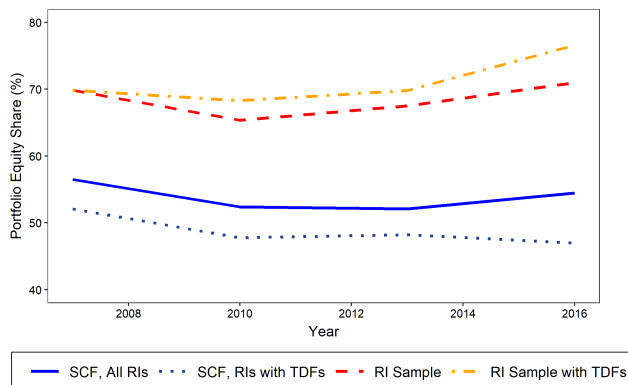
**(c) Age 55-65**



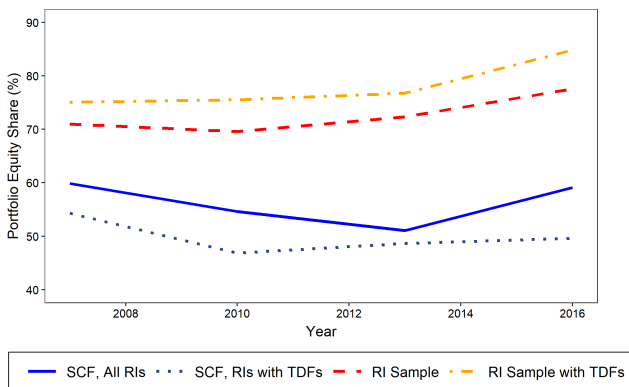
*Notes:* These figures show the portfolio equity share of retirement wealth over time. The SCF data is every three years, in 2007, 2010, 2013, and 2016. We show the same years in our sample. We also show the equity share for all RIs and for RIs who hold some assets in a TDF separately. Panel a shows all RIs, aged 25-65. Panel b shows RIs aged 25-34. Panel c shows RIs aged 55-65.

**Figure A.4: Equity share of investable wealth**

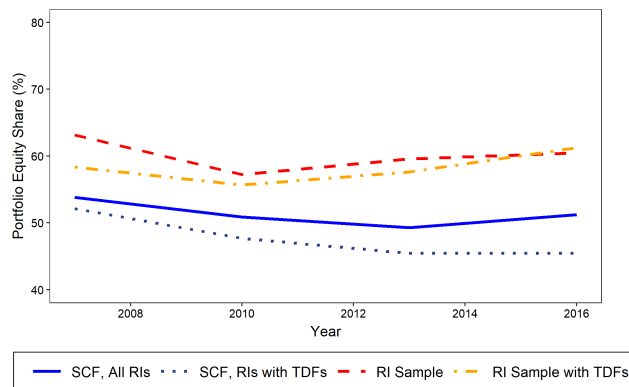
**(a) All ages**



**(b) Age 25-34**

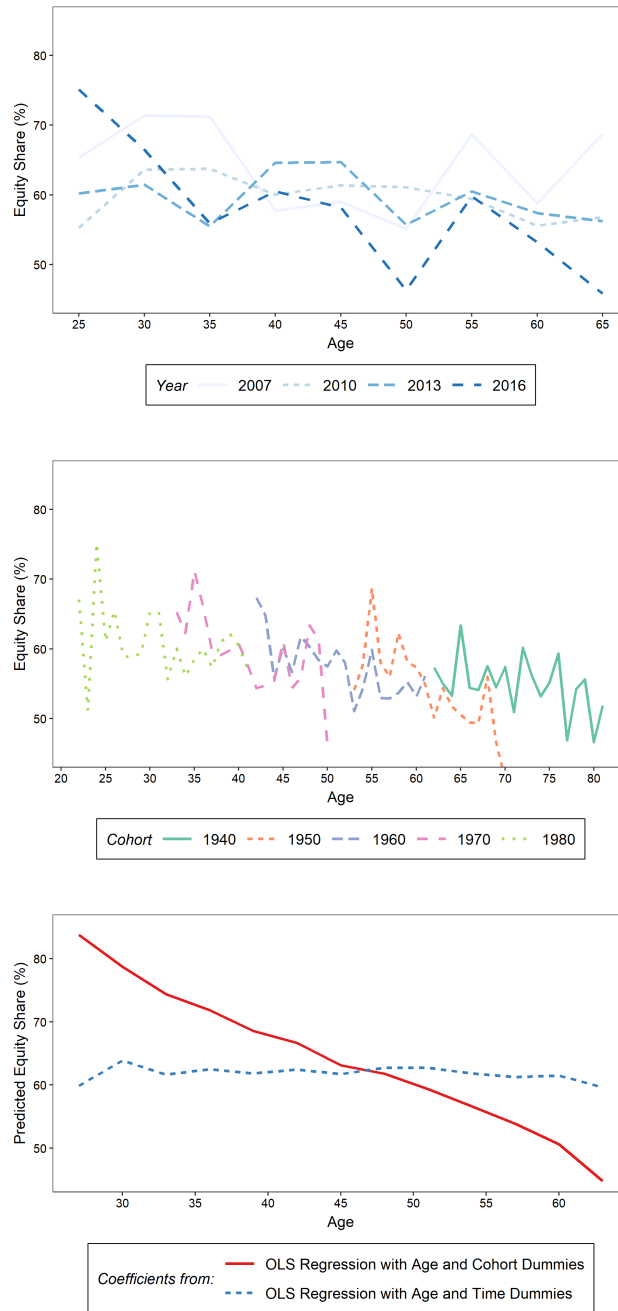


**(c) Age 55-65**



*Notes:* These figures show the portfolio equity share of investable wealth over time. The SCF data is every three years, in 2007, 2010, 2013, and 2016. We show the same years in our sample. We also show the equity share for all RIs and for RIs who hold some assets in a TDF separately. Panel a shows all RIs, aged 25-65. Panel b shows RIs aged 25-34. Panel c shows RIs aged 55-65.

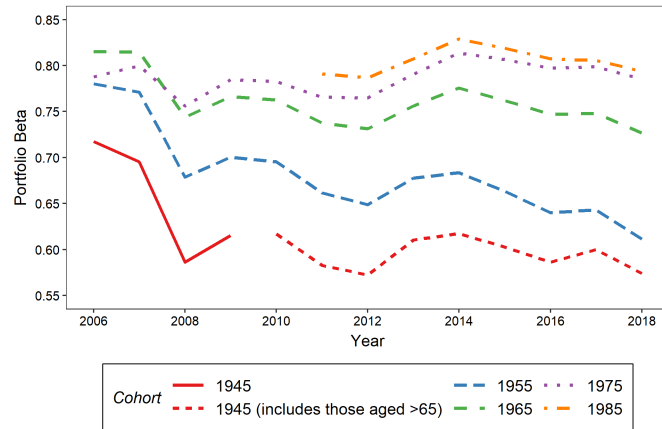
**Figure A.5: Equity Share Among Equity Owners (SCF)**



*Notes:* This figure replicates the results shown in Figure 9 of [Ameriks and Zeldes \(2004\)](#) using the SCF from 2007, 2010, 2013, and 2016. The top figure shows the observed equity share by age in each year. The middle figure shows the observed equity share by age in each cohort in our sample. A cohort is defined as having been born in the ten-year period beginning with the year indicated. The bottom figure shows the predicted values from a regression of equity share on indicator variables for age and either cohort or time. We obtain the predicted values by adding the median cohort or year coefficient, respectively, to each age coefficient. The portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets. The sample is SCF retirement investors (RI) who own at least some equity.

**Figure A.6: Portfolio Beta by Birth Cohort**

**(a) Portfolio Beta by Birth Cohort and Year**

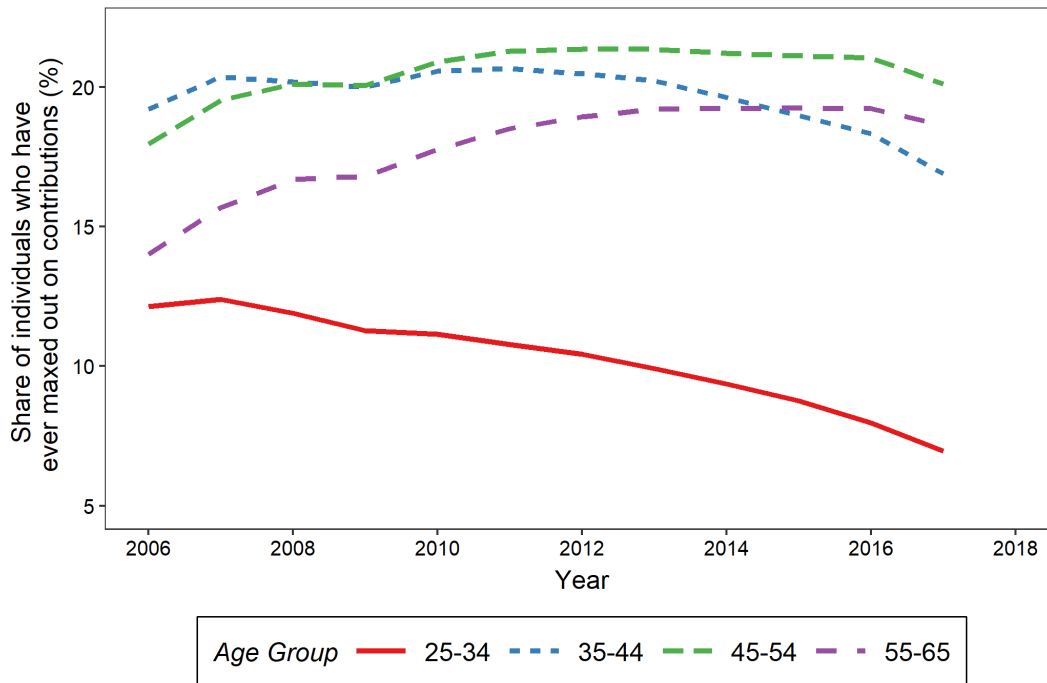


**(b) Portfolio Beta by Birth Cohort and Age**



*Notes:* These figures show the portfolios betas averaged by birth year cohorts. The top panel shows the averages by year over our sample period. We include only years during which each member of the cohort is aged 25-65, unless otherwise indicated. The bottom panel shows the averages by age, where age is the median age of the cohort. Portfolio betas are CAPM market betas calculated from all available return data from 2006-2018. A cohort is defined as having been born in the three-year period centered around the year indicated. The sample is our full set of retirement investors (RI).

**Figure A.7:** Incidence of Maxing Out on Contribution Limits, by Age Group



*Notes:* This figure shows the percentage of households that have ever hit their contribution limit in a given year, split by age groups. Maxing out is defined as when an individual exceeds the dollar amount that is allowed for 401(k) contributions in a year, set by the IRS. The sample is our full set of retirement investors (RI) which have income data available.



**Table A.1:** Characteristics of Sample of Retirement Investors

Retirement Investors				
	Summary Statistics			Percentage of RI Sample with Observed Data
	Mean	Median	SD	
Age (Years)	45.38	46	11.01	100.0%
Share Female (%)	45.0	0	49.7	93.4%
Share Married (%)	73.8	100	44.0	88.6%
Labor Income (\$)	94,044	69,506	214,798	44.5%
Employment Tenure (Years)	10.77	8.09	9.12	58.2%
Investable Wealth (\$)	100,365	36,114	318,490	100%
Retirement Wealth (\$)	81,349	32,922	131,540	100%
Retirement Share of Wealth (%)	96.1	100	14.5	100%
Portfolio Beta	0.75	0.84	0.34	85.7%
TDF Share of Invest. Wealth (%)	38.4	15.3	42.9	99.3%
Reported Contribution Rate (%)	8.0	6.0	7.2	49.1%
Realized Contribution Rate (%)	6.3	5.3	6.4	44.9%

*Notes:* This table presents summary statistics on demographics, wealth, and portfolio allocations for our Retirement Investor (RI) sample from 2006-2018. Detailed definitions for retirement wealth and investable wealth are provided in Table I. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. The realized contribution rate is the percentage of an individual's annual income that has been invested into a retirement account over the previous year, calculated at the end of each calendar year. Market betas are obtained by regressing monthly fund or security excess returns on the value-weighted CRSP market excess return over the period 2007–2017 with at least 24 observations. Income is the labor income of the head of household in 2015. The sample is not representative of the assets under management of our financial service firm, since by design we drop the highest and lowest income groups.

**Table A.2:** Characteristics of Sample of Retirement Investors - Married Subsample

Retirement Investors				
Summary Statistics				
	Mean	Median	SD	Percentage of Married RI Sample with Observed Data
Age (Years)	49.48	51	10.30	100%
Share Female (%)	48.2	0	50	94.9%
Share Married (%)	100	100	0	100%
Labor Income (\$)	113, 105	83, 213	202, 430	34.5%
Employment Tenure (Years)	12.56	10.18	9.95	49.2%
Investable Wealth (Individual, \$)	188, 503	75, 410	492, 778	100%
Investable Wealth (Household, \$)	285, 085	126, 205	669, 449	100%
Retirement Wealth (\$)	143, 681	66, 425	200, 599	100%
Retirement Share of Wealth (%)	96.7	100	12.9	100%
Portfolio Beta	0.73	0.81	0.33	88.0%
TDF Share of Invest. Wealth (%)	36.4	11.9	42.1	99.7%
Reported Contribution Rate (%)	9.8	8	8.7	43.5%
Realized Contribution Rate (%)	7.7	6	6.4	37.7%

Retirement Investors - Survey of Consumer Finance				
Summary Statistics				
	Mean	Median	SD	Number of Observations
Age	46.87	47.00	10.48	2556
Female (%)	46.20	0.00	49.99	2556
Married (%)	100.00	100.00	0.00	2556
Labor Income (Individual, \$)	68,380	51,000	1,203,245	2556
Labor Income (Household, \$)	101,349	77,000	1,445,913	2556
Investable Wealth (Household, \$)	273,282	72,000	17,019,097	2556
Retirement Wealth (Household, \$)	225,166	94,000	718,051	2556
Retirement Wealth (Individual, \$)	100,805	45,000	154,875	2556
Retirement Share of Investable Wealth (Individual, %)	58.35	56.60	37.23	2556
Retirement Share of Investable Wealth (Household, %)	86.55	100.00	34.04	2556

*Notes:* This table presents summary statistics on demographics, wealth, and portfolio allocations for a subsample of our Retirement Investors (RI) sample who are married and for whom we observe both partners in our data set. We use 2016 data to compare with the 2016 Survey of Consumer Finance (SCF), in which we include only married investors here. Detailed definitions for retirement wealth and investable wealth are provided in Table I. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. The realized contribution rate is the percentage of an individual's annual income that has been invested into a retirement account over the previous year, calculated at the end of each calendar year. Market betas are obtained by regressing monthly fund or security excess returns on the value-weighted CRSP market excess return over the period 2007–2017 with at least 24 observations. Income is the labor income of the respondent in 2015. The sample is not representative of the assets under management of our financial service firm, since by design we drop the highest and lowest income groups.

**Table A.3:** Characteristics of Sample of Retirement Investors - Single Subsample

Retirement Investors				
	Summary Statistics			Percentage of Single RI Sample with Observed Data
	Mean	Median	SD	
Age (Years)	42.43	41	11.56	100%
Share Female (%)	49.6	0	50.0	98.1%
Share Married (%)	0	0	0	100%
Labor Income (\$)	83,344	63,346	129,726	42.2%
Employment Tenure (Years)	9.58	6.74	8.56	61.9%
Investable Wealth (\$)	83,535	25,156	284,098	100%
Retirement Wealth (\$)	69,227	23,547	122,048	100%
Retirement Share of Wealth (%)	93.6	100	18.0	100%
Portfolio Beta	0.76	0.85	0.32	89.7%
TDF Share of Invest. Wealth (%)	53.2	60.3	45.2	99.7%
Reported Contribution Rate (%)	7.3	6.0	6.5	56.0%
Realized Contribution Rate (%)	5.9	5.0	4.8	50.0%

Retirement Investors - Survey of Consumer Finance				
	Summary Statistics			Number of Observations
	Mean	Median	SD	
Age (Respondent)	46.43	47.00	11.12	574
Share Female (%)	61.9	100	48.9	574
Share Married (%)	0	0	0	574
Labor Income (Respondent, \$)	59,725	50,000	710,967	574
Investable Wealth (Household, \$)	133,613	42,900	6,409,202	574
Retirement Wealth (Respondent, \$)	82,806	35,000	124,628	574
Retirement Share of Wealth (%)	89.7	100	26.5	574

*Notes:* This table presents summary statistics on demographics, wealth, and portfolio allocations for a subsample of our Retirement Investors (RI) sample who are not married and for whom we observe only one member in the household. We use 2016 data to compare with the 2016 Survey of Consumer Finance (SCF), in which we include only unmarried investors here. Detailed definitions for retirement wealth and investable wealth are provided in Table I. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. The realized contribution rate is the percentage of an individual's annual income that has been invested into a retirement account over the previous year, calculated at the end of each calendar year. Market betas are obtained by regressing monthly fund or security excess returns on the value-weighted CRSP market excess return over the period 2007–2017 with at least 24 observations. Income is the labor income of the respondent in 2015. The sample is not representative of the assets under management of our financial service firm, since by design we drop the highest and lowest income groups.

**Table A.4:** Average Share of Equity in Portfolios Among Retirement Investors - Full Sample versus 2016 SCF

Panel A: All Investable Wealth	All Retirement Investors		Retirement Investors with Hybrid Fund (e.g. TDF) in Retirement Account	
	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All RIs	68.6	54.5	73.0	46.9
Age 25-34	73.9	59.1	80.7	49.6
Age 35-44	73.2	55.9	77.7	47.9
Age 45-54	68.6	53.8	70.5	45.5
Age 55-65	59.6	51.2	59.2	45.4
Panel B: Retirement Wealth	Main Sample (Individuals)	SCF (Individuals)	Main Sample (Individuals)	SCF (Individuals)
All RIs	68.9	51.7	73.1	42.1
Age 25-34	74.1	56.2	80.8	44.2
Age 35-44	73.4	54.1	77.9	43.5
Age 45-54	68.9	50.5	70.6	40.2
Age 55-65	59.8	48.0	59.1	41.2
Panel C: Non-Retirement Wealth	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All RIs	54.1	73.4	54.3	73.2
Age 25-34	53.6	87.5	53.9	86.9
Age 35-44	55.5	68.9	56.5	68.3
Age 45-54	53.9	74.5	54.5	73.6
Age 55-65	50.1	69.6	51.5	69.6

*Notes:* This table presents the share of equity in the portfolio allocations for various samples of our Retirement Investors (RI) sample and the comparable RI sample of the 2016 Survey of Consumer Finance (SCF). Panel A shows equity shares of total investable wealth at the individual level in our sample and the household level in the SCF. Panel B shows equity shares of retirement wealth, at the individual level in both datasets. Panel C shows equity shares of non-retirement wealth at the individual level in our sample and the household level in the SCF. The figures in Panel C are conditional on owning some non-retirement wealth, which is approximately 43% of the SCF RI sample and 16% of our RI sample. The first two columns show the means for the full sample of RIs in each dataset. The last two columns show the means for the subsample of the RI sample that has some of their retirement assets in a target date fund (TDF). Investable wealth is defined as money market funds, non-money market funds, individual stocks and bonds, Retirement wealth is defined as any wealth in retirement saving accounts of all types (excluding defined benefit plans and Social Security). certificates of deposit, quasi-liquid retirement wealth, and other managed accounts. The equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets.

**Table A.5: Average Share of Equity in Portfolios Among Retirement Investors - Married Subsample**

Panel A: All Investable Wealth	All Retirement Investors		Retirement Investors with Hybrid Fund (e.g. TDF) in Retirement Account	
	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All Ris	69.0	55.2	73.9	47.3
Age 25-34	77.0	59.3	84.4	50.0
Age 35-44	76.1	56.0	81.7	48.0
Age 45-54	71.0	54.6	74.3	46.5
Age 55-65	61.5	52.8	61.9	45.7
Respondents		55.5	0.0	47.7
Partners		54.8	0.0	46.9
 Panel B: Retirement Wealth	 Main Sample (Individuals)	 SCF (Individuals)	 Main Sample (Individuals)	 SCF (Individuals)
All Ris	69.4	52.1	74.1	41.9
Age 25-34	77.2	56.4	84.6	44.4
Age 35-44	76.4	54.0	82.0	42.8
Age 45-54	71.5	50.8	74.6	40.3
Age 55-65	61.7	49.2	61.9	40.9
Respondents		53.2	0.0	43.7
Partners		50.8	0.0	39.8
 Panel C: Non-Retirement Wealth	 Main Sample (Individuals)	 SCF (Households)	 Main Sample (Individuals)	 SCF (Households)
All Ris	52.0	73.3	54.0	72.1
Age 25-34	53.1	89.9	53.5	86.2
Age 35-44	55.3	68.5	57.3	66.5
Age 45-54	52.7	75.0	54.3	74.2
Age 55-65	49.9	69.5	51.5	68.8
Respondents		74.0	0.0	72.7
Partners		72.7	0.0	71.2

*Notes:* This table presents the share of equity in the portfolio allocations for various samples of our Retirement Investors (RI) sample in 2016 and the comparable RI sample of the 2016 Survey of Consumer Finance (SCF). From our sample, this table shows summary statistics for the subset of investors who are married and for whom we observe both partners in our data set. In the SCF, this table shows only summary statistics of married investors. Panel A shows equity shares of total investable wealth at the individual level in our sample and the household level in the SCF. Panel B shows equity shares of retirement wealth, at the individual level in both datasets. Panel C shows equity shares of non-retirement wealth at the individual level in our sample and the household level in the SCF. The figures in Panel C are conditional on owning some non-retirement wealth, which is approximately 48% of the SCF married RI sample and 18% of our married RI sample. The first two columns show the means for the full sample of RIs in each dataset. The last two columns show the means for the subsample of the RI sample that has some of their retirement assets in a target date fund (TDF). Investable wealth is defined as money market funds, non-money market funds, individual stocks and bonds, Retirement wealth is defined as any wealth in retirement saving accounts of all types (excluding defined benefit plans and Social Security). certificate of deposits, quasi-liquid retirement wealth, and other managed accounts. The equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets.

**Table A.6:** Average Share of Equity in Portfolios Among Retirement Investors - Single Subsample

	All Retirement Investors		Retirement Investors with Hybrid Fund (e.g. TDF) in Retirement Account	
Panel A: All Investable Wealth	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All RIs	71.6	51.9	78.3	45.6
Age 25-34	77.4	58.4	85.0	48.5
Age 35-44	74.9	55.4	82.2	47.8
Age 45-54	70.4	51.3	74.5	43.0
Age 55-65	59.5	45.6	60.5	44.5
Panel B: Retirement Wealth	Main Sample (Individuals)	SCF (Individuals)	Main Sample (Individuals)	SCF (Individuals)
All RIs	71.8	50.2	78.4	42.5
Age 25-34	77.6	55.7	85.2	43.5
Age 35-44	75.1	54.5	82.4	45.8
Age 45-54	70.5	49.7	74.6	40.0
Age 55-65	59.6	43.7	60.5	42.1
Panel C: Non-Retirement Wealth	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Household)
All RIs	51.2	73.6	53.5	78.4
Age 25-34	52.3	81.2	54.0	88.3
Age 35-44	53.8	71.9	56.1	81.4
Age 45-54	50.6	71.6	52.3	71.0
Age 55-65	48.0	70.6	49.4	74.8

*Notes:* This table presents the share of equity in the portfolio allocations for various samples of our Retirement Investors (RI) sample in 2016 and the comparable RI sample of the 2016 Survey of Consumer Finance (SCF). From our sample, this table shows summary statistics for the subset of investors who are single and for whom we observe only one member of the household. In the SCF, this table shows only summary statistics of non-married investors. Panel A shows equity shares of total investable wealth at the individual level in our sample and the household level in the SCF. Panel B shows equity shares of retirement wealth, at the individual level in both datasets. Panel C shows equity shares of non-retirement wealth at the individual level in our sample and the household level in the SCF. These figures are conditional on owning some non-retirement wealth, which is approximately 33% of the SCF RI single sample and 15% of our RI single sample. The first two columns show the means for the full sample of RIs in each dataset. The last two columns show the means for the subsample of the RI sample that has some of their retirement assets in a target date fund (TDF). Investable wealth is defined as money market funds, non-money market funds, individual stocks and bonds, Retirement wealth is defined as any wealth in retirement saving accounts of all types (excluding defined benefit plans and Social Security). certificate of deposits, quasi-liquid retirement wealth, and other managed accounts. The equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets.

**Table A.7: Average Residual Share of Equity in Portfolios Among Retirement Investors**

	All Retirement Investors		Retirement Investors with Hybrid Fund (e.g. TDF) in Retirement Account	
Panel A: All Investable Wealth	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All RIs	0.0011	-0.0082	0.0497	-0.0861
Age 25-34	0.0050	0.0032	0.0790	-0.0916
Age 35-44	0.0027	-0.0057	0.0653	-0.0886
Age 45-54	0.0024	-0.0047	0.0393	-0.0867
Age 55-65	-0.0051	-0.0199	0.0051	-0.0781
Panel B: Retirement Wealth	Main Sample (Individuals)	SCF (Individuals)	Main Sample (Individuals)	SCF (Individuals)
All RIs	0.0011	-0.0110	0.0494	-0.1102
Age 25-34	0.0052	-0.0039	0.0796	-0.1242
Age 35-44	0.0027	-0.0007	0.0656	-0.1101
Age 45-54	0.0025	-0.0123	0.0386	-0.1156
Age 55-65	-0.0051	-0.0216	0.0034	-0.0911
Panel C: Non-Retirement Wealth	Main Sample (Individuals)	SCF (Households)	Main Sample (Individuals)	SCF (Households)
All RIs	0.0004	-0.0049	0.0195	-0.0075
Age 25-34	0.0032	0.0269	0.0141	0.0249
Age 35-44	0.0009	-0.0390	0.0219	-0.0449
Age 45-54	-0.0002	0.0200	0.0186	0.0141
Age 55-65	-0.0007	-0.0169	0.0221	-0.0170

*Notes:* This table presents the residuals from a regression of the equity share on gender, investable wealth, and birth year cohort. We use the share of equity in the portfolio allocations for various samples of our Retirement Investors (RI) sample in 2016 and the comparable RI sample of the 2016 Survey of Consumer Finance (SCF). Panel A shows residuals of equity shares of total investable wealth at the individual level in our sample and the household level in the SCF. Panel B shows residuals of equity shares of retirement wealth, at the individual level in both datasets. Panel C shows residuals of equity shares of non-retirement wealth at the individual level in our sample and the household level in the SCF. The figures in Panel C are conditional on owning some non-retirement wealth, which is approximately 43% of the SCF RI sample and 16% of our RI sample. The first two columns show the means for the full sample of RIs in each dataset. The last two columns show the means for the subsample of the RI sample that has some of their retirement assets in a target date fund (TDF). Investable wealth is defined as money market funds, non-money market funds, individual stocks and bonds, Retirement wealth is defined as any wealth in retirement saving accounts of all types (excluding defined benefit plans and Social Security), certificate of deposits, quasi-liquid retirement wealth, and other managed accounts. The equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets.

**Table A.8:** Cross-Sectional Regressions of Price Constant Equity Share, Full Sample and by Income Terciles

	Price constant portfolio equity share				
	(1) All Observations	(2) All Observations	(3) First Tercile of Initial Income	(4) Second Tercile of Initial Income	(5) Third Tercile of Initial Income
Age 25-27	0.7357 (0.0002)	0.8061 (0.0002)	0.7433 (0.0003)	0.7941 (0.0003)	0.8012 (0.0006)
Age 28-30	0.7317 (0.0002)	0.7984 (0.0002)	0.7296 (0.0003)	0.7811 (0.0003)	0.7894 (0.0004)
Age 31-33	0.7313 (0.0001)	0.7894 (0.0002)	0.7244 (0.0003)	0.7722 (0.0003)	0.7794 (0.0003)
Age 34-36	0.7327 (0.0001)	0.7813 (0.0002)	0.7229 (0.0003)	0.7666 (0.0003)	0.7716 (0.0003)
Age 37-39	0.7327 (0.0001)	0.7725 (0.0002)	0.7193 (0.0003)	0.7607 (0.0003)	0.7660 (0.0003)
Age 40-42	0.7281 (0.0001)	0.7606 (0.0002)	0.7108 (0.0003)	0.7509 (0.0003)	0.7584 (0.0003)
Age 43-45	0.7203 (0.0001)	0.7473 (0.0002)	0.6992 (0.0004)	0.7384 (0.0003)	0.7489 (0.0003)
Age 46-48	0.7054 (0.0001)	0.7278 (0.0002)	0.6795 (0.0004)	0.7179 (0.0003)	0.7331 (0.0003)
Age 49-51	0.6844 (0.0001)	0.7016 (0.0002)	0.6549 (0.0004)	0.6906 (0.0003)	0.7091 (0.0003)
Age 52-54	0.6595 (0.0001)	0.6726 (0.0002)	0.6264 (0.0004)	0.6596 (0.0003)	0.6802 (0.0003)
Age 55-57	0.6297 (0.0001)	0.6383 (0.0002)	0.5919 (0.0004)	0.6228 (0.0003)	0.6458 (0.0003)
Age 58-60	0.5988 (0.0001)	0.6038 (0.0002)	0.5585 (0.0004)	0.5845 (0.0004)	0.6087 (0.0003)
Age 61-63	0.5690 (0.0002)	0.5705 (0.0003)	0.5240 (0.0004)	0.5459 (0.0004)	0.5731 (0.0004)
Age 64-65	0.5477 (0.0002)	0.5454 (0.0003)	0.4956 (0.0006)	0.5144 (0.0005)	0.5444 (0.0005)
Log income		0.0743 (0.0003)			
Person fixed effect?	N	N	N	N	N
% of RI Sample	80.0	34.0	13.3	14.2	13.8
R-squared	0.0386	0.0781	0.0544	0.0769	0.0629

*Notes:* This table presents regression coefficients of annual individual price-constant portfolio equity shares on a set of demographic controls. The price-constant portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets, ignoring any changes in the price of these assets. These hypothetical portfolio shares track the inflows and outflows into these assets and are insensitive to passive appreciation. The baseline specification in column (1) shows the coefficients for the regression of equity share on age group dummies. In the second column, we add a control for the log of income in the current year, measured as the individual's log deviation from the average income in the RI sample. Columns (3)-(5) show the results of the baseline specification for the first (lowest) through the the third tercile of initial income, respectively. Initial income is based upon the income observed in the first (or second, if first is not available) year that we observe the individual. The sample is our full set of retirement investors (RI) from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.



**Table A.9:** Cross-Sectional Regressions of Equity Share on Age Groups by Cohort and TDF Share

	Portfolio equity share							
	(1) 1943 Cohort	(2) 1953 Cohort	(3) 1963 Cohort	(4) 1973 Cohort	(5) 1983 Cohort	(6) Initial TDF Share 75-100 %	(7) Initial TDF Share 25-75 %	(8) Initial TDF Share 0-25 %
Age 25-27				0.7376 (0.0005)	0.8110 (0.0002)	0.6868 (0.0006)	0.7321 (0.0007)	0.7963 (0.0002)
Age 28-30				0.7404 (0.0003)	0.8234 (0.0002)	0.6958 (0.0004)	0.7347 (0.0005)	0.7857 (0.0002)
Age 31-33				0.7533 (0.0002)	0.8401 (0.0002)	0.7094 (0.0003)	0.7326 (0.0004)	0.7758 (0.0002)
Age 34-36			0.7545 (0.0005)	0.7766 (0.0002)	0.8406 (0.0003)	0.7244 (0.0003)	0.7321 (0.0004)	0.7669 (0.0002)
Age 37-39			0.7379 (0.0003)	0.7890 (0.0002)		0.7336 (0.0002)	0.7284 (0.0003)	0.7532 (0.0002)
Age 40-42			0.7283 (0.0002)	0.8047 (0.0002)		0.7357 (0.0002)	0.7204 (0.0003)	0.7330 (0.0002)
Age 43-45		0.7470 (0.0006)	0.7359 (0.0002)	0.8038 (0.0003)		0.7320 (0.0002)	0.7103 (0.0003)	0.7089 (0.0003)
Age 46-48		0.7020 (0.0003)	0.7379 (0.0002)			0.7205 (0.0002)	0.6947 (0.0003)	0.6763 (0.0003)
Age 49-51		0.6694 (0.0003)	0.7365 (0.0002)			0.7025 (0.0002)	0.6766 (0.0003)	0.6411 (0.0003)
Age 52-54	0.6948 (0.0010)	0.6572 (0.0002)	0.7226 (0.0003)			0.6800 (0.0002)	0.6566 (0.0003)	0.6070 (0.0003)
Age 55-57	0.6363 (0.0005)	0.6408 (0.0002)				0.6531 (0.0002)	0.6319 (0.0003)	0.5687 (0.0003)
Age 58-60	0.5809 (0.0004)	0.6226 (0.0002)				0.6230 (0.0002)	0.6056 (0.0004)	0.5346 (0.0003)
Age 61-63	0.5558 (0.0004)	0.6005 (0.0003)				0.5928 (0.0002)	0.5773 (0.0004)	0.5035 (0.0004)
Age 65-65	0.5430 (0.0004)	0.5733 (0.0006)				0.5720 (0.0003)	0.5564 (0.0005)	0.4796 (0.0005)
Log income	0.1017 (0.0010)	0.0959 (0.0005)	0.0724 (0.0005)	0.0572 (0.0005)	0.0526 (0.0005)			
Person fixed effect?	N	N	N	N	N	N	N	N
% of RI Sample	3.1	10.9	11.5	10.3	5.0	39.5	7.9	10.1
R-squared	0.0220	0.0226	0.0291	0.0154	0.0095	0.0228	0.0523	0.2024

*Notes:* This table presents regression coefficients of annual individual portfolio equity shares on a set of demographic controls. The portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets. Columns (1)-(5) show the results including age-group controls and a control for log income, broken out by birth cohort groups. Log income is measured as the log deviation of the individual's income from the average income of the RI sample. A cohort is defined as having been born in the ten-year period beginning with the year indicated. Columns (6)-(8) show the results for different groups based on the initial share of their portfolio that is invested in target date funds (TDFs). The sample is our full RI sample from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.10:** Regressions of Equity Share on Automated Investment Allocation: Long-run Effect, Treated in 2007 Only

	Portfolio equity share						
	(1) Full Sample	(2) Bottom Income Tercile	(3) Top Income Tercile	(4) Age Enrolled 25-34	(5) Age Enrolled 35-44	(6) Age Enrolled 45-54	(7) Age Enrolled 55-65
Year of x Treatment	0.0406 (0.0031)	0.0515 (0.0052)	0.0467 (0.0065)	0.0235 (0.0029)	-0.0003 (0.0106)	-0.0267 (0.0120)	0.0003 (0.0253)
1 Year After x Treatment	0.0245 (0.0014)	0.0377 (0.0018)	-0.0137 (0.0041)	-0.0019 (0.0015)	-0.0330 (0.0059)	-0.0864 (0.0104)	-0.1182 (0.0152)
2 Years After x Treatment	0.0929 (0.0012)	0.1067 (0.0017)	0.0554 (0.0037)	0.0478 (0.0014)	0.0514 (0.0046)	0.0115 (0.0077)	-0.0207 (0.0176)
3 Years After x Treatment	0.0614 (0.0012)	0.0626 (0.0016)	0.0427 (0.0033)	0.0071 (0.0015)	0.0106 (0.0037)	0.0041 (0.0070)	-0.0087 (0.0134)
4 Years After x Treatment	-0.0210 (0.0012)	-0.0154 (0.0020)	-0.0212 (0.0022)	-0.0068 (0.0017)	-0.0121 (0.0017)	-0.0123 (0.0025)	-0.0205 (0.0047)
5 Years After x Treatment	0.0107 (0.0012)	0.0015 (0.0019)	0.0064 (0.0027)	0.0369 (0.0017)	0.0146 (0.0019)	-0.0168 (0.0026)	-0.0175 (0.0052)
1 Year After	0.0090 (0.0009)	0.0210 (0.0018)	0.0121 (0.0013)	0.0135 (0.0012)	0.0130 (0.0014)	0.0092 (0.0016)	0.0080 (0.0026)
2 Years After	-0.0192 (0.0010)	0.0024 (0.0019)	-0.0207 (0.0014)	0.0067 (0.0012)	-0.0210 (0.0015)	-0.0451 (0.0017)	-0.0575 (0.0029)
3 Years After	-0.0272 (0.0010)	0.0048 (0.0019)	-0.0388 (0.0015)	0.0141 (0.0013)	-0.0285 (0.0016)	-0.0680 (0.0018)	-0.0886 (0.0030)
4 Years After	-0.0221 (0.0010)	0.0077 (0.0019)	-0.0340 (0.0015)	0.0242 (0.0013)	-0.0211 (0.0016)	-0.0634 (0.0018)	-0.0820 (0.0031)
5 Years After	-0.0382 (0.0010)	-0.0092 (0.0019)	-0.0501 (0.0015)	0.0132 (0.0013)	-0.0375 (0.0016)	-0.0855 (0.0018)	-0.1016 (0.0032)
Log income	0.0559 (0.0013)						
Constant	0.7279 0.0010	0.6751 0.0020	0.7473 0.0014	0.7255 0.0013	0.7432 0.0015	0.7059 0.0017	0.6374 0.0028
% of RI Sample	1.5	0.5	0.5	0.8	0.6	0.4	0.1
% of Sample Enrolled 2005-2008	21.6	7.4	7.0	11.3	8.0	5.7	1.9
R-squared	0.0991	0.1753	0.0715	0.1583	0.1023	0.0925	0.1155

*Notes:* This table presents regression coefficients of annual household portfolio equity shares on being treated with the Pension Protection Act (PPA) of 2006. "Year of" means the year the individual enrolled in their retirement plan and "x years after" is x years after they enrolled in the plan. Each column includes year dummies for each year after enrollment, and interactions of these dummies with the treatment dummy. The treatment dummy is equal to one if the individual enrolled in 2007 to a plan that switched to having a target date fund as the default following the PPA and zero if they enrolled in 2005 or 2006. The full sample is those enrolled from 2005-2008 who otherwise meet the RI sample criteria. The bottom (top) income tercile includes those whose initial income is in the lowest (highest) tercile. Columns (4)-(7) break out the result for all individuals enrolled from 2005-2008 by age at enrollment. The portfolio equity share is defined as the sum of equity securities, pure equity funds, and the equity portion of hybrid funds, relative to total portfolios assets. Log income, when included, is the log deviation of the individual's current income from the average income of the RI sample. Standard errors, in parentheses, are clustered at the household level.

**Table A.11:** Cross-Sectional Regressions of Realized Contribution Rate on Age Groups by Cohort and TDF Share

	Realized contribution rate							
	(1) 1943 Cohort	(2) 1953 Cohort	(3) 1963 Cohort	(4) 1973 Cohort	(5) 1983 Cohort	(6) Initial TDF Share 75-100 %	(7) Initial TDF Share 25-75 %	(8) Initial TDF Share 0-25 %
Age 25-27				0.0496 (0.0001)	0.0565 (0.0000)	0.0492 (0.0001)	0.0474 (0.0001)	0.0418 (0.0000)
Age 28-30				0.0517 (0.0000)	0.0598 (0.0000)	0.0533 (0.0001)	0.0535 (0.0001)	0.0480 (0.0000)
Age 31-33				0.0544 (0.0000)	0.0625 (0.0000)	0.0561 (0.0001)	0.0566 (0.0001)	0.0513 (0.0001)
Age 34-36			0.0569 (0.0001)	0.0568 (0.0000)	0.0651 (0.0001)	0.0580 (0.0000)	0.0583 (0.0001)	0.0529 (0.0001)
Age 37-39			0.0568 (0.0000)	0.0586 (0.0000)		0.0595 (0.0000)	0.0594 (0.0001)	0.0539 (0.0001)
Age 40-42			0.0578 (0.0000)	0.0606 (0.0000)		0.0611 (0.0000)	0.0606 (0.0001)	0.0549 (0.0001)
Age 43-45		0.0646 (0.0001)	0.0597 (0.0000)	0.0632 (0.0001)		0.0630 (0.0000)	0.0622 (0.0001)	0.0565 (0.0001)
Age 46-48		0.0645 (0.0001)	0.0619 (0.0000)			0.0650 (0.0000)	0.0643 (0.0001)	0.0582 (0.0001)
Age 49-51		0.0673 (0.0000)	0.0670 (0.0000)			0.0697 (0.0000)	0.0689 (0.0001)	0.0621 (0.0001)
Age 52-54	0.0772 (0.0002)	0.0719 (0.0000)	0.0738 (0.0001)			0.0753 (0.0001)	0.0747 (0.0001)	0.0673 (0.0001)
Age 55-57	0.0790 (0.0001)	0.0759 (0.0000)				0.0793 (0.0001)	0.0793 (0.0001)	0.0716 (0.0001)
Age 58-60	0.0810 (0.0001)	0.0807 (0.0001)				0.0834 (0.0001)	0.0838 (0.0001)	0.0762 (0.0001)
Age 61-63	0.0844 (0.0001)	0.0859 (0.0001)				0.0876 (0.0001)	0.0881 (0.0002)	0.0809 (0.0002)
Age 65-65	0.0859 (0.0001)	0.0894 (0.0002)				0.0894 (0.0001)	0.0894 (0.0002)	0.0826 (0.0002)
Log income	0.0145 (0.0002)	0.0156 (0.0001)	0.0132 (0.0001)	0.0241 (0.0001)	0.0336 (0.0001)			
Person fixed effect?	N	N	N	N	N	N	N	N
% of RI Sample	3.2	11.0	11.5	10.4	5.0	15.4	3.5	5.2
R-squared	0.0058	0.0182	0.0363	0.0358	0.0572	0.0390	0.0474	0.0486

*Notes:* This table presents regression coefficients of annual individual realized contribution rates on a set of demographic controls. The realized contribution rate is the percentage of an individual's annual income that has been invested into a retirement account over the previous year, calculated at the end of each calendar year. Columns (1)-(5) show the results including age-group controls and a control for log income, broken out by birth cohort groups. Log income is measured as the log deviation of the individual's income from the average income of the RI sample. A cohort is defined as having been born in the ten year period beginning with the year indicated. Columns (6)-(8) show the results for different groups based on the initial share of their portfolio that is invested in target date funds (TDFs). The sample is our full RI sample from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.12:** Cross-Sectional Regressions of Reported Contribution Rate, Full Sample and by Income Terciles

	Reported contribution rate				
	(1) All Observations	(2) All Observations	(3) First Tercile of Initial Income	(4) Second Tercile of Initial Income	(5) Third Tercile of Initial Income
Age 25-27	0.0573 (0.0000)	0.0715 (0.0000)	0.0497 (0.0000)	0.0632 (0.0001)	0.0752 (0.0001)
Age 28-30	0.0611 (0.0000)	0.0720 (0.0000)	0.0519 (0.0000)	0.0654 (0.0000)	0.0797 (0.0001)
Age 31-33	0.0643 (0.0000)	0.0725 (0.0000)	0.0535 (0.0000)	0.0664 (0.0001)	0.0815 (0.0001)
Age 34-36	0.0668 (0.0000)	0.0729 (0.0000)	0.0549 (0.0000)	0.0666 (0.0001)	0.0825 (0.0001)
Age 37-39	0.0691 (0.0000)	0.0736 (0.0000)	0.0562 (0.0001)	0.0670 (0.0001)	0.0834 (0.0001)
Age 40-42	0.0716 (0.0000)	0.0751 (0.0000)	0.0580 (0.0001)	0.0681 (0.0001)	0.0847 (0.0001)
Age 43-45	0.0742 (0.0000)	0.0773 (0.0000)	0.0606 (0.0001)	0.0702 (0.0001)	0.0863 (0.0001)
Age 46-48	0.0770 (0.0000)	0.0798 (0.0000)	0.0634 (0.0001)	0.0730 (0.0001)	0.0882 (0.0001)
Age 49-51	0.0822 (0.0000)	0.0853 (0.0000)	0.0667 (0.0001)	0.0775 (0.0001)	0.0950 (0.0001)
Age 52-54	0.0876 (0.0000)	0.0912 (0.0000)	0.0703 (0.0001)	0.0826 (0.0001)	0.1019 (0.0001)
Age 55-57	0.0920 (0.0000)	0.0960 (0.0000)	0.0738 (0.0001)	0.0875 (0.0001)	0.1067 (0.0001)
Age 58-60	0.0962 (0.0000)	0.1010 (0.0001)	0.0774 (0.0001)	0.0928 (0.0001)	0.1113 (0.0001)
Age 61-63	0.1000 (0.0001)	0.1055 (0.0001)	0.0815 (0.0001)	0.0975 (0.0001)	0.1152 (0.0001)
Age 64-65	0.0997 (0.0001)	0.0927 (0.0001)	0.0880 (0.0001)	0.1052 (0.0002)	0.1276 (0.0001)
Log income		0.0492 (0.0001)			
Person fixed effect?	N	N	N	N	N
% of RI Sample	45.6	33.7	10.5	12.0	11.6
R-squared	0.0507	0.1040	0.0447	0.0376	0.0372

*Notes:* This table presents regression coefficients of reported contribution rate on a set of demographic controls. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. The baseline specification in column (1) shows the coefficients for the regression of reported contribution rate on age group dummies. In the second column, we add a control for the log of income in the current year, measured as the individual's log deviation from the average income in the RI sample. Columns (3)-(5) show the results of the baseline specification for the first (lowest) through the third tercile of initial income, respectively. Initial income is based upon the income observed in the first (or second, if first is not available) year that we observe the individual. The sample is our full set of retirement investors (RI) from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.13:** Cross-Sectional Regressions of Reported Contribution Rate on Age Groups by Cohort and TDF Share

	Reported contribution rate							
	(1) 1943 Cohort	(2) 1953 Cohort	(3) 1963 Cohort	(4) 1973 Cohort	(5) 1983 Cohort	(6) Initial TDF Share 75-100 %	(7) Initial TDF Share 25-75 %	(8) Initial TDF Share 0-25 %
Age 25-27				0.0699 (0.0001)	0.0728 (0.0001)	0.0637 (0.0001)	0.0604 (0.0001)	0.0536 (0.0001)
Age 28-30				0.0684 (0.0001)	0.0749 (0.0001)	0.0657 (0.0001)	0.0644 (0.0001)	0.0585 (0.0000)
Age 31-33				0.0700 (0.0000)	0.0776 (0.0001)	0.0687 (0.0001)	0.0676 (0.0001)	0.0622 (0.0001)
Age 34-36			0.0752 (0.0001)	0.0719 (0.0000)	0.0808 (0.0001)	0.0714 (0.0001)	0.0699 (0.0001)	0.0645 (0.0001)
Age 37-39			0.0728 (0.0001)	0.0740 (0.0000)		0.0741 (0.0001)	0.0718 (0.0001)	0.0665 (0.0001)
Age 40-42			0.0737 (0.0000)	0.0768 (0.0001)		0.0767 (0.0001)	0.0739 (0.0001)	0.0684 (0.0001)
Age 43-45		0.0846 (0.0001)	0.0757 (0.0000)	0.0807 (0.0001)		0.0795 (0.0001)	0.0763 (0.0001)	0.0705 (0.0001)
Age 46-48		0.0821 (0.0001)	0.0788 (0.0000)			0.0823 (0.0000)	0.0788 (0.0001)	0.0726 (0.0001)
Age 49-51		0.0854 (0.0001)	0.0850 (0.0001)			0.0882 (0.0001)	0.0843 (0.0001)	0.0771 (0.0001)
Age 52-54	0.0994 (0.0002)	0.0904 (0.0001)	0.0928 (0.0001)			0.0941 (0.0001)	0.0903 (0.0001)	0.0823 (0.0001)
Age 55-57	0.1005 (0.0001)	0.0952 (0.0001)				0.0988 (0.0001)	0.0954 (0.0001)	0.0871 (0.0001)
Age 58-60	0.1016 (0.0001)	0.1009 (0.0001)				0.1032 (0.0001)	0.1000 (0.0001)	0.0918 (0.0002)
Age 61-63	0.1049 (0.0001)	0.1064 (0.0001)				0.1072 (0.0001)	0.1037 (0.0002)	0.0961 (0.0002)
Age 65-65	0.1065 (0.0001)	0.1100 (0.0002)				0.1088 (0.0001)	0.1050 (0.0002)	0.0976 (0.0003)
Log income	0.0496 (0.0003)	0.0510 (0.0001)	0.0450 (0.0001)	0.0507 (0.0001)	0.0520 (0.0001)			
Person fixed effect?	N	N	N	N	N	N	N	N
% of RI Sample	2.4	9.0	9.6	8.6	4.2	16.9	4.0	5.9
R-squared	0.0410	0.0597	0.0358	0.0834	0.0873	0.0440	0.0482	0.0515

*Notes:* This table presents regression coefficients of annual individual reported contribution rates on a set of demographic controls. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. Columns (1)-(5) show the results including age-group controls and a control for log income, broken out by birth cohort groups. Log income is measured as the log deviation of the individual's income from the average income of the RI sample. A cohort is defined as having been born in the ten-year period beginning with the year indicated. Columns (6)-(8) show the results for different groups based on the initial share of their portfolio that is invested in target date funds (TDFs). The sample is our full RI sample from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.14:** Within-Person Regressions of Reported Contribution Rate, Full Sample and by Income Terciles

	Reported contribution rate				
	(1) All Observations	(2) All Observations	(3) First Tercile of Initial Income	(4) Second Tercile of Initial Income	(5) Third Tercile of Initial Income
Age 25-27	0.0345 (0.0001)	0.0306 (0.0001)	0.0373 (0.0002)	0.0380 (0.0002)	0.0547 (0.0003)
Age 28-30	0.0407 (0.0001)	0.0359 (0.0001)	0.0422 (0.0002)	0.0453 (0.0002)	0.0645 (0.0002)
Age 31-33	0.0463 (0.0001)	0.0406 (0.0001)	0.0467 (0.0002)	0.0515 (0.0002)	0.0714 (0.0002)
Age 34-36	0.0507 (0.0001)	0.0444 (0.0001)	0.0505 (0.0002)	0.0562 (0.0002)	0.0763 (0.0002)
Age 37-39	0.0545 (0.0001)	0.0476 (0.0001)	0.0538 (0.0002)	0.0602 (0.0002)	0.0799 (0.0002)
Age 40-42	0.0582 (0.0001)	0.0507 (0.0001)	0.0568 (0.0002)	0.0640 (0.0002)	0.0832 (0.0002)
Age 43-45	0.0616 (0.0001)	0.0538 (0.0001)	0.0597 (0.0002)	0.0677 (0.0002)	0.0862 (0.0002)
Age 46-48	0.0653 (0.0001)	0.0571 (0.0001)	0.0628 (0.0002)	0.0716 (0.0002)	0.0893 (0.0002)
Age 49-51	0.0714 (0.0001)	0.0631 (0.0001)	0.0664 (0.0002)	0.0768 (0.0002)	0.0970 (0.0002)
Age 52-54	0.0778 (0.0001)	0.0696 (0.0001)	0.0707 (0.0001)	0.0825 (0.0002)	0.1048 (0.0001)
Age 55-57	0.0837 (0.0001)	0.0756 (0.0001)	0.0750 (0.0001)	0.0885 (0.0001)	0.1111 (0.0001)
Age 58-60	0.0899 (0.0001)	0.0819 (0.0001)	0.0797 (0.0001)	0.0949 (0.0001)	0.1174 (0.0001)
Age 61-63	0.0959 (0.0000)	0.0884 (0.0001)	0.0848 (0.0001)	0.1013 (0.0001)	0.1236 (0.0001)
Age 64-65	0.0997 (0.0000)	0.0927 (0.0000)	0.0880 (0.0000)	0.1052 (0.0000)	0.1276 (0.0000)
Log income		0.0212 (0.0001)			
Person fixed effect?	Y	Y	Y	Y	Y
% of RI Sample	45.6	33.7	10.5	12.0	11.6
R-squared	0.7764	0.7870	0.7809	0.7649	0.7438

*Notes:* This table presents regression coefficients of reported contribution rate on a set of demographic controls. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. The baseline specification in column (1) shows the coefficients for the regression of reported contribution rate on age group dummies. In the second column, we add a control for the log of income in the current year, measured as the individual's log deviation from the average income in the RI sample. Columns (3)-(5) show the results of the baseline specification for the first (lowest) through the third tercile of initial income, respectively. Initial income is based upon the income observed in the first (or second, if first is not available) year that we observe the individual. All regressions include a person fixed effect. The age group coefficients are normalized by adding the average fixed effect back to the estimated coefficients. The excluded age group is those aged 64-65. The sample is our full set of retirement investors (RI) from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.15: Within-Person Regressions of Reported Contribution Rate on Age Groups by Cohort and TDF Share**

	Reported contribution rate							
	(1) 1943 Cohort	(2) 1953 Cohort	(3) 1963 Cohort	(4) 1973 Cohort	(5) 1983 Cohort	(6) Initial TDF Share 75-100 %	(7) Initial TDF Share 25-75 %	(8) Initial TDF Share 0-25 %
Age 25-27				0.0577 (0.0001)	0.0791 (0.0001)	0.0598 (0.0002)	0.1062 (0.0003)	0.0632 (0.0003)
Age 28-30				0.0586 (0.0001)	0.0856 (0.0001)	0.0633 (0.0002)	0.1121 (0.0003)	0.0707 (0.0003)
Age 31-33				0.0617 (0.0001)	0.0927 (0.0001)	0.0670 (0.0002)	0.1172 (0.0003)	0.0774 (0.0003)
Age 34-36			0.0641 (0.0001)	0.0650 (0.0001)	0.0986 (0.0000)	0.0703 (0.0001)	0.1214 (0.0003)	0.0827 (0.0003)
Age 37-39			0.0618 (0.0001)	0.0693 (0.0001)		0.0733 (0.0001)	0.1248 (0.0003)	0.0873 (0.0003)
Age 40-42			0.0631 (0.0001)	0.0743 (0.0001)		0.0762 (0.0001)	0.1283 (0.0003)	0.0916 (0.0003)
Age 43-45		0.0877 (0.0002)	0.0656 (0.0001)	0.0817 (0.0000)		0.0790 (0.0001)	0.1315 (0.0003)	0.0956 (0.0003)
Age 46-48		0.0855 (0.0002)	0.0695 (0.0001)			0.0820 (0.0001)	0.1347 (0.0003)	0.0995 (0.0003)
Age 49-51		0.0888 (0.0001)	0.0768 (0.0001)			0.0881 (0.0001)	0.1407 (0.0002)	0.1053 (0.0003)
Age 52-54	0.1206 (0.0002)	0.0944 (0.0001)	0.0802 (0.0001)			0.0943 (0.0001)	0.1471 (0.0002)	0.1116 (0.0003)
Age 55-57	0.1209 (0.0001)	0.1005 (0.0001)				0.0997 (0.0001)	0.1531 (0.0002)	0.1176 (0.0002)
Age 58-60	0.1215 (0.0001)	0.1081 (0.0001)				0.1053 (0.0001)	0.1591 (0.0002)	0.1240 (0.0002)
Age 61-63	0.1260 (0.0001)	0.1166 (0.0001)				0.1104 (0.0001)	0.1643 (0.0001)	0.1303 (0.0002)
Age 64-65	0.1316 (0.0000)	0.1194 (0.0000)				0.1133 (0.0000)	0.1674 (0.0000)	0.1342 (0.0000)
Log income	0.0231 (0.0004)	0.0237 (0.0002)	0.0180 (0.0002)	0.0182 (0.0002)	0.0241 (0.0002)			
Person fixed effect?	Y	Y	Y	Y	Y	Y	Y	Y
% of RI Sample	2.4	9.0	9.6	8.6	4.2	16.9	4.0	5.9
R-squared	0.8488	0.7977	0.7666	0.7325	0.7472	0.7599	0.7601	0.7497

*Notes:* This table presents regression coefficients of annual individual reported contribution rates on a set of demographic controls. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. Columns (1)-(5) show the results including age-group controls and a control for log income, broken out by birth cohort groups. Log income is measured as the log deviation of the individual's income from the average income of the RI sample. A cohort is defined as having been born in the ten year period beginning with the year indicated. Columns (6)-(8) show the results for different groups based on the initial share of their portfolio that is invested in target date funds (TDFs). All regressions include a person fixed effect. The age group coefficients are normalized by adding the average fixed effect back to the estimated coefficients. The excluded age group is those aged 64-65. The sample is our full RI sample from 2006-2018. Standard errors, in parentheses, are clustered at the individual level.

**Table A.16:** Regressions of Reported Contribution Rate on the Pension Protection Act: Long-run Effect, Treated in 2007 Only

	Reported contribution rate						
	(1) Full Sample	(2) Bottom Income Tercile	(3) Top Income Tercile	(4) Age Enrolled 25-34	(5) Age Enrolled 35-44	(6) Age Enrolled 45-54	(7) Age Enrolled 55-65
Year of x Treatment	-0.0049 (0.0003)	-0.0059 (0.0004)	-0.0047 (0.0005)	-0.0034 (0.0003)	-0.0059 (0.0005)	-0.0067 (0.0006)	-0.0095 (0.0010)
1 Year After x Treatment	-0.0104 (0.0001)	-0.0084 (0.0002)	-0.0120 (0.0003)	-0.0078 (0.0001)	-0.0105 (0.0002)	-0.0121 (0.0003)	-0.0140 (0.0007)
2 Years After x Treatment	-0.0074 (0.0001)	-0.0070 (0.0002)	-0.0086 (0.0003)	-0.0055 (0.0001)	-0.0069 (0.0002)	-0.0098 (0.0003)	-0.0117 (0.0006)
3 Years After x Treatment	-0.0026 (0.0001)	-0.0030 (0.0002)	-0.0032 (0.0003)	-0.0015 (0.0002)	-0.0025 (0.0002)	-0.0046 (0.0003)	-0.0058 (0.0006)
4 Years After x Treatment	-0.0016 (0.0001)	-0.0016 (0.0002)	-0.0027 (0.0003)	-0.0010 (0.0002)	-0.0027 (0.0002)	-0.0055 (0.0003)	-0.0070 (0.0007)
5 Years After x Treatment	-0.0008 (0.0001)	0.0001 (0.0002)	-0.0032 (0.0004)	-0.0012 (0.0002)	-0.0025 (0.0002)	-0.0041 (0.0004)	-0.0045 (0.0008)
1 Year After	-0.0039 (0.0002)	-0.0064 (0.0003)	-0.0036 (0.0003)	-0.0062 (0.0002)	-0.0034 (0.0003)	0.0029 (0.0004)	0.0017 (0.0006)
2 Years After	-0.0091 (0.0002)	-0.0093 (0.0003)	-0.0093 (0.0003)	-0.0094 (0.0002)	-0.0115 (0.0003)	-0.0051 (0.0004)	-0.0075 (0.0007)
3 Years After	-0.0126 (0.0002)	-0.0125 (0.0003)	-0.0123 (0.0003)	-0.0117 (0.0002)	-0.0157 (0.0003)	-0.0105 (0.0004)	-0.0142 (0.0007)
4 Years After	-0.0129 (0.0002)	-0.0135 (0.0003)	-0.0117 (0.0004)	-0.0113 (0.0002)	-0.0163 (0.0003)	-0.0114 (0.0004)	-0.0148 (0.0007)
5 Years After	-0.0131 (0.0002)	-0.0144 (0.0003)	-0.0110 (0.0004)	-0.0114 (0.0002)	-0.0170 (0.0003)	-0.0127 (0.0004)	-0.0170 (0.0008)
Log income	0.0429 (0.0002)						
Constant	0.0806 (0.0002)	0.0698 (0.0003)	0.0982 (0.0003)	0.0706 (0.0002)	0.0826 (0.0003)	0.0891 (0.0004)	0.1047 (0.0003)
Firm Fixed Effect?	Y	Y	Y	Y	Y	Y	Y
% of RI Sample	1.9	0.7	0.6	1.0	0.7	0.5	0.2
% of Sample Enrolled 2005-2008	27.7	9.7	8.9	14.4	10.0	7.0	2.3
R-squared	0.1512	0.1213	0.0840	0.1355	0.1232	0.1120	0.1476

*Notes:* This table presents regression coefficients of reported contribution rate on being treated with the Pension Protection Act (PPA) of 2006. "Year of" means the year the individual enrolled in their retirement plan and "x years after" is x years after they enrolled in the plan. Each column includes year dummies for each year after enrollment, and interactions of these dummies with the treatment dummy. The treatment dummy is equal to one if the individual enrolled in 2007 immediately after the PPA, and zero if they enrolled in 2005 or 2006. The full sample is those enrolled from 2005-2007 who otherwise meet the RI sample criteria. The bottom (top) income tercile includes those whose initial income is in the lowest (highest) tercile. Columns (4)-(7) break out the result for all individuals enrolled from 2005-2007 by age at enrollment. The reported contribution rate is the percentage of their income that an individual designates to be allocated into their retirement accounts at the beginning of each calendar year. Log income, when included, is the log deviation of the individual's current income from the average income of the RI sample. Standard errors, in parentheses, are clustered at the household level.