Panel 6: Retirement Finances

Retirement and Disability Research Consortium
22nd Annual Meeting
August 6, 2020

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The Evolution of Late-Life Income and Assets: Measurement in IRS Tax Data and Three Household Surveys

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Standard disclaimer

The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, the U.S. Department of the Treasury, the Office of Tax Analysis, the Federal Reserve Bank of Chicago, the Federal Reserve System, or any agency of the federal government, Harvard, Yale, or the authors’ RDRC affiliation.
Motivation

• How well do widely used household surveys (HRS, SIPP, and CPS) capture late-life income and assets?

• This paper: Benchmark these surveys against 5% random sample of IRS tax data
Definition of income

- Wage income
- Pension income
  - Sum of distributions from DB and DC plans
- Social Security income, including OASI and DI
- Capital income
  - Taxable + tax-exempt interest, taxable dividends, realized capital gains
  - Exclude realized capital gains for comparisons to surveys
- Other income
  - Rent, royalties, partnerships and S-corporations, estates, trusts, sole-proprietorships, unemployment insurance, net alimony
Excluded income categories

Missing from tax data:
• Supplemental Security Income (SSI)
• Private insurance payouts
• SNAP, WIC, TANF, VA benefits
Asset balance information

• IRA balances
  – Both traditional and Roth

• Presence of capital income
  – Used for test of whether tax unit has near-zero financial assets
Household size adjustment

In tax data
- Link sampled individual with spouse through joint tax filings

In survey data
- Group two survey respondents if identify as being married

Divide income and balances by square root of tax unit size
Targeted population

Civilian non-institutionalized population living in 50 U.S. states or Washington DC

Requires adjustment of tax data population
  – Details in paper

Drop from HRS institutionalized individuals and those who move abroad
Pre-tax income deviations from IRS at median

1943-1949 birth cohorts

1933-1939 birth cohorts

Age 58  Age 63  Age 68
HRS  SIPP  CPS

Age 68  Age 73  Age 78
HRS  SIPP  CPS
Pre-tax income deviations from IRS at 25th percentile

1943-1949 birth cohorts

- Age 58
- Age 63
- Age 68

1933-1939 birth cohorts

- Age 68
- Age 73
- Age 78
Pre-tax income deviations from IRS at 75th percentile

1943-1949 birth cohorts

1933-1939 birth cohorts

<table>
<thead>
<tr>
<th>Age 58</th>
<th>Age 63</th>
<th>Age 68</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRS</td>
<td>SIPP</td>
<td>CPS</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Age 68</th>
<th>Age 73</th>
<th>Age 78</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRS</td>
<td>SIPP</td>
<td>CPS</td>
</tr>
</tbody>
</table>
Pre-tax income changes from 1944 to 1950 birth cohorts, ages 58-67
Pre-tax income changes from 1933 to 1943 birth cohorts, ages 68-74
Having positive IRA balance: deviations from IRS data

1943-1949 birth cohorts

1933-1939 birth cohorts
IRA balance deviations from IRS data, 75th percentile

1943-1949 birth cohorts

- Age 58
- Age 63
- Age 68

1933-1939 birth cohorts

- Age 68
- Age 73
- Age 78

HRS, SIPP
IRA balance deviations from IRS data, 90th percentile

1943-1949 birth cohorts

Age 58: HRS, SIPP
Age 63: HRS, SIPP
Age 68: HRS, SIPP

1933-1939 birth cohorts

Age 68: HRS, SIPP
Age 73: HRS, SIPP
Age 78: HRS, SIPP
Households with no non-Social Security income and no IRA balances, tax data
Growth in complete Social Security dependence

- 1937 to 1952 birth cohorts, age 64: +1.1 pp (+7.9%)
- 1933 to 1949 birth cohorts, age 68: +1.1 pp (+7.1%)
- 1933 to 1945 birth cohorts, age 72: +1.6 pp (+8.5%)
- 1933 to 1941 birth cohorts, age 76: +1.5 pp (+7.5%)
- 1933 to 1937 birth cohorts, age 80: +0.8 pp (+3.4%)
Complete dependence on Social Security at age 72
Complete dependence on Social Security by state at age 72, 1943 cohort
% with debt in collections, 2015

Summary

- Survey data tends to understate late-life income levels
  - HRS is most accurate, CPS is least accurate

- Survey data accurately captures changes across 1944-1950 cohorts in age 58-67 income, overstates changes across 1933-1943 cohorts in age 68-74 income

- IRA balances reasonably well captured by HRS, greatly underreported by SIPP

- HRS and SIPP accurately capture prevalence of complete dependence on Social Security at age 72, CPS overstates
How Much Taxes Will Retirees Owe on Their Retirement Income?

Anqi Chen and Alicia H. Munnell
Center for Retirement Research at Boston College

22nd Annual Meeting of the Retirement and Disability Research Consortium
Online Event
August 6, 2020
When households evaluate their retirement resources, they may forget that a portion will be taxed.
Social Security is the largest source of retirement income and roughly half of households pay taxes on benefits.

**Calculation of Taxable Social Security Benefits**

<table>
<thead>
<tr>
<th>Modified AGI thresholds</th>
<th>Taxable portion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual</strong></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Less than $25,000 None</td>
</tr>
</tbody>
</table>
| B                       | $25,000-$34,000  Lesser of:  
|                         | (1) 50% of benefits or  
|                         | (2) 50% of modified income above $25,000 (maximum of $4,500) |
| C                       | Above $34,000    Lesser of:  
|                         | (1) 85% of benefits or  
|                         | (2) 85% of modified income above $34,000 plus amount from line B |
| **Married filing jointly** |               |
| D                       | Less than $32,000 None |
| E                       | $32,000-$44,000  Lesser of:  
|                         | (1) 50% of benefits or  
|                         | (2) 50% of modified income above $32,000 (maximum of $6,000) |
| F                       | Above $44,000    Lesser of:  
|                         | (1) 85% of benefits or  
|                         | (2) 85% of modified income above $44,000 plus amount from line E |

And up to two-thirds may be taxed on their defined benefit income or withdrawals from 401(k)s/IRAs.

<table>
<thead>
<tr>
<th>Income Quintile</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>22%</td>
</tr>
<tr>
<td>Second</td>
<td>57%</td>
</tr>
<tr>
<td>Third</td>
<td>78%</td>
</tr>
<tr>
<td>Fourth</td>
<td>83%</td>
</tr>
<tr>
<td>Highest</td>
<td>82%</td>
</tr>
<tr>
<td>Total</td>
<td>69%</td>
</tr>
</tbody>
</table>

Determining withdrawals requires some assumptions.

- All households with defined contribution assets are required to take the RMD, which starts at age 70½ (or 72 in 2020).

- Assumptions have to be made about their withdrawals before the RMD kicks in.

- And if any withdrawals are made beyond the RMD.
Higher-income households may also have financial assets, where taxes depend on withdrawal pattern.

- Unlike assets in retirement plans, these financial assets are not subject to any IRS distribution.
- They all have to pay taxes on dividends and interest.
- And if they sell their stocks/bonds to support consumption, they may also have to pay capital gains tax.
While not included in current results, retirees pay state taxes equal to about 25 percent of federal and are progressive.

<table>
<thead>
<tr>
<th>Income quintile</th>
<th>Average state effective tax rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>1.0%</td>
</tr>
<tr>
<td>Second</td>
<td>2.3</td>
</tr>
<tr>
<td>Middle</td>
<td>2.8</td>
</tr>
<tr>
<td>Fourth</td>
<td>3.5</td>
</tr>
<tr>
<td>Highest</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>2.7%</td>
</tr>
</tbody>
</table>

Many retirees will likely face taxes, but it is unclear how large the tax burden is for the typical household.

• This project aims to shed light on the tax burden that retirees face by estimating lifetime taxes for recently retired households across income groups.

• The data is from the *Health and Retirement Study* (HRS) and will eventually be linked to administrative earnings and restricted state of residence.

• Federal and state taxes on reported and projected income are estimated using NBER’s TAXSIM model.
A note on TAXSIM for other researchers.

- TAXSIM, even the Stata add-on, requires an internet/FTP connection, which is not available on restricted data computers.

- There is a solution: TAXSIM can be installed on restricted data computers but it requires approval, help from Dan Feinberg at NBER, and the IT staff in charge of the restricted computer.

- For public datasets, adjustments to your system or code may be needed to run TAXSIM efficiently.

- The CRR has written up documents and is happy to share them.
Data

• Our sample includes households where at least one earner has claimed Social Security benefits from 2010 to 2018 in the Health and Retirement Study.

• The results presented in this version use self-reported earnings and do not include state tax burdens.
Methodology

• Step 1: Project income streams from Social Security, employer-sponsored retirement plans, and financial assets to get lifetime income in retirement.

• Step 2: Adjust income streams to reflect AIME-specific life expectancy.

• Step 3: Run income streams through TAXSIM to estimate lifetime tax liability in retirement.

• Step 4: Discount tax liabilities and income in retirement back to claiming year.
Based on self-reported data, taxes in retirement are only consequential for the top quintile of households.

Retirement Taxes as a Percentage of Retirement Income, Households Follow RMD and Consume Only Interest and Dividends from Financial Assets, by AIME Quintile and Marital Status

<table>
<thead>
<tr>
<th>AIME quintile</th>
<th>All</th>
<th>Single</th>
<th>Married</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Second</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Middle</td>
<td>0.3</td>
<td>1.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Fourth</td>
<td>1.5</td>
<td>5.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Highest</td>
<td>10.5</td>
<td>13.6</td>
<td>9.8</td>
</tr>
<tr>
<td>Top 5%</td>
<td>15.4</td>
<td>18.8</td>
<td>15.0</td>
</tr>
<tr>
<td>Top 1%</td>
<td>20.9</td>
<td>20.7</td>
<td>21.0</td>
</tr>
<tr>
<td>All</td>
<td>5.7%</td>
<td>6.5%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

*Source: Authors’ calculations.*
However, the highest quintile are not the extremely wealthy.

Marital Status and Average Retirement Resources in Year of Retirement in 2018 Dollars, by AIME Quintile

<table>
<thead>
<tr>
<th>AIME quintile</th>
<th>Percentage married</th>
<th>Social Security</th>
<th>DB pensions</th>
<th>DC balances</th>
<th>Financial wealth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowest</td>
<td>35.5%</td>
<td>$10,606</td>
<td>$2,919</td>
<td>$7,670</td>
<td>$29,078</td>
</tr>
<tr>
<td>Second</td>
<td>60.3</td>
<td>19,948</td>
<td>3,769</td>
<td>16,222</td>
<td>58,196</td>
</tr>
<tr>
<td>Middle</td>
<td>75.7</td>
<td>32,289</td>
<td>4,444</td>
<td>49,666</td>
<td>82,601</td>
</tr>
<tr>
<td>Fourth</td>
<td>82.7</td>
<td>32,289</td>
<td>6,887</td>
<td>132,548</td>
<td>113,446</td>
</tr>
<tr>
<td>Highest</td>
<td>82.2</td>
<td>33,130</td>
<td>21,325</td>
<td>423,710</td>
<td>511,112</td>
</tr>
<tr>
<td>Top 5%</td>
<td>81.8</td>
<td>36,183</td>
<td>35,996</td>
<td>839,023</td>
<td>803,133</td>
</tr>
<tr>
<td>Top 1%</td>
<td>86.2</td>
<td>36,498</td>
<td>38,563</td>
<td>2,119,252</td>
<td>1,842,177</td>
</tr>
</tbody>
</table>

And different drawdown strategies do not matter for tax liability.

Source: Authors’ calculations.
Conclusion

• The results, based on self-reported data, show the tax burden on retirement income is negligible for the vast majority of households and only relevant for top quintile.

• However this is not just about the really wealthy, average 401(k)/IRA balances for these households are $400,000 and financial assets are $500,000, yet face tax liabilities of about 11 percent.

• Moreover, these results are preliminary and partial. They are based on self-reported Social Security benefits and do not include the impact of state taxes.
Broad Framing in Retirement Income Decision Making

Hal E. Hershfield (UCLA), Suzanne B. Shu (Cornell and NBER), Stephen A. Spiller (UCLA), and David Zimmerman (UCLA)

The research reported herein was pursuant to a grant from the U.S. Social Security Administration (SSA), funded as part of the Retirement and Disability Research Consortium. The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, any agency of the Federal Government, UCLA, Cornell University, or the NBER Retirement Research Center.
Study Goals

• Do pre-retirees make different retirement income decisions when seeing the outcomes aggregated versus separated?
  – Decisions about SSA claiming, annuities, and wealth decumulation are often completed independently
  – Narrow framing leads to less risk taking, lower value choices (Read, Loewenstein, and Rabin 1999; Benartzi and Thaler 1999)

• We propose that a decision aid showing aggregated impact of these decisions may make it easier for individuals to reason through tradeoffs and may change retirement income choices
Study Design and Methods

- Sample of 399 (ages 40-63) drawn from Amazon Mechanical Turk
  - Experimental effects on AMT are similar to those with representative samples (Coppock 2018; Mullinix et al. 2015; Snowberg & Yariv 2018)
- Interact with custom retirement income and wealth decision tool
- Conditions: separate and aggregate decision making
- Decisions about sources of retirement income
  - Selections for Social Security claiming age, retirement savings (withdrawal pattern and risk level), and guaranteed income (% wealth, starting age)
  - Also measure discount rate, loss aversion, confidence, demographics
Screenshot: Claiming decision, separate condition

Please select what options create your preferred projected income and wealth over time. You can make selections about each asset by first clicking on the three buttons at the top: Social Security, Retirement Savings, and Guaranteed Income. Below you will see specific questions appear about each financial product. The income and wealth graphs should be on the right of your screen. If you cannot see them you may need to zoom out (Command and minus on a Mac or Control and minus on a PC). When you are done you can find the advance button (>) at the bottom right of the screen. Click the Scenario Description button at the bottom of the page to show and hide the scenario information.

These graphs show estimated income and wealth over time in real dollars where each graph only shows the information about the currently selected financial resource.

Participant selects intended claiming age and sees income dynamically appear on graph.
Screenshot: Investment decision, separate condition

Please select what options create your preferred projected income and wealth over time. You can make selections about each asset by first clicking on the three buttons at the top: Social Security, Retirement Savings, and Guaranteed Income. Below you will see specific questions appear about each financial product. The income and wealth graphs should be on the right of your screen. If you cannot see them you may need to zoom out (Command and minus on a Mac or Control and minus on a PC). When you are done you can find the advance button (>) at the bottom right of the screen. Click the Scenario Description button at the bottom of the page to show and hide the scenario information.

These graphs show estimated income and wealth over time in real dollars where each graph only shows the information about the currently selected financial resource.

Social Security  Retirement Savings  Guaranteed Income

---

What strategy would you like to use for withdrawing your retirement savings?

[ ] Increasing  [ ] Flat  [ ] Decreasing

Would you like to withdraw additional money from your savings prior to claiming Social Security benefits?

[ ] Yes  [ ] No

What investment strategy would you like for your retirement savings? Each graph represents the percentage of your retirement savings invested in stocks and bonds each year. Retirement savings will fluctuate more year to year if you select options with more stock.

Participant selects withdrawal path and risk level and sees income and wealth dynamically appear on graph.

The black dots represent the middle outcome you might experience. You personally could experience something better or worse than the black dots. The chance you still have retirement savings at 85 is 16.7%.
Please select what options create your preferred projected income and wealth over time. You can make selections about each asset by first clicking on the three buttons at the top: Social Security, Retirement Savings, and Guaranteed Income. Below you will see specific questions appear about each financial product. The income and wealth graphs should be on the right of your screen. If you cannot see them you may need to zoom out (Command and minus on a Mac or Control and minus on a PC). When you are done you can find the advance button (>) at the bottom right of the screen. Click the Scenario Description button at the bottom of the page to show and hide the scenario information.

These graphs show estimated income and wealth over time in real dollars where each graph only shows the information about the currently selected financial resource.

- Social Security
- Retirement Savings
- Guaranteed Income

What percentage of your retirement savings would you like to use to purchase guaranteed income?

0% (No Guaranteed Income) 25% 50% 75% 100%

What age would you like to start receiving payments?

65 75 85

Participant selects % of wealth to annuity and starting age, and sees income dynamically appear on graph.
In aggregate condition, impact of all three sources is shown simultaneously for all decisions.

Participant selects intended claiming age and sees aggregate income and all wealth dynamically appear on graph.
Results: Annual income paths

In aggregate condition, participants were able to build an income path with less variability.
Results: Claiming Decisions

In aggregate condition, participants indicated intention to claim OASI benefits significantly earlier.

b = -1.06, t (365) = -3.69, p <0.001

Note: Error bars represent 95% confidence intervals.
Results: Investment Decisions

• No difference in withdrawal strategies ($\chi^2(2) = 4.2$, $p = 0.123$)
  – Majority select an increasing withdrawal strategy: 51% (separate condition) vs. 49% (aggregate condition)

• Aggregate condition participants less likely to select option to take extra withdrawals from savings in the years before claiming Social Security ($b = -0.092$, $t(365) = -2.13$, $p = 0.034$)

• No difference in risk allocation choices ($\chi^2(2) = 2.43$, $p = 0.297$)
  – Majority select middle risk allocation option: 75% (separate condition) vs. 77% (aggregate condition)
Results: Annuity Decisions

In aggregate condition, participants showed significantly less interest in buying a guaranteed income product.

No significant difference in choice of annuity starting year ($\chi^2(2) = 0.54, p = 0.763$).

$b = -9.84, t(365) = -3.53, p < 0.001$
Summary

• Broad framing (aggregating decision feedback) led to less predicted variability in retirement income over time
  – Lifecycle model of consumption (Modigliani 1966)
  – Better match of retirement income to overall preferences
  – More confidence in selections

• Aggregate condition also led to earlier OASI claiming, less interest in annuities
  – But no differences in retirement savings withdrawal strategies