Debt and Financial Vulnerability on the Verge of Retirement

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(PRELIMINARY WORK)

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Motivation

• Access to credit is easier and more widespread

• Decision of how much to borrow more in the hands of individuals
  • Subprime mortgages
  • Credit cards

• Increase in the complexity of financial decisions and products

• Importance of personal finance and financial literacy
Reasons to focus on debt

• We have made it easy to borrow (checks are sent in the mail)

• Debt normally charges higher interest rates than assets
  • Particularly in the case of non-collateralized debt

• Debt needs to be serviced and lack of payments is consequential (leverage, balance sheets matter)
  • Default or bankruptcy
  • Evicted from the house/returning car, etc.
  • Worse credit score/increase in interest rates, etc.
Larger project

• What is the effect of debt on labor’s market attachment?

• Entrepreneurship and self-employment later in life
  • Does wealth matter?
Theoretical scheme

• Simple life-cycle model

• Examine individuals on the verge of retirement
  • Wealth accumulation should be highest

• Compare debt across similar age groups over time (and before and after financial crisis)

• Determinants of debt behavior
  • Does financial literacy play a role?
Empirical work and data

- Empirical strategy: Focus on those age 56-61
  - Health and Retirement Study (HRS)
  - National Financial Capability Study (NFCS)
    2012 and 2015.
HRS 1992 - onward

- 3 cohorts of 56-61 year olds:
  - HRS in 1992,
  - WBB in 2004,
  - EBB in 2010.
Previous Literature

- Our work on saving and retirement planning (JEL 2014):
  - Many people do not plan for retirement, even close to it.
  - Those who plan accumulate much larger amounts of wealth.
- High wealth inequality close to retirement: about 30% can be explained by financial literacy (JPE, forthcoming); particularly important for women (AER, 2008).


✓ HRS: Delavande/Rohwedder/Willis (2008): cognitive function & retirement preparedness

➡ THIS paper: What’s happened to debt over time, for those on the verge of retirement?
<table>
<thead>
<tr>
<th></th>
<th>% debt owners in sample</th>
<th>p50 ($’12)</th>
<th>Mean ($’12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total debt</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>64.0</td>
<td>6,545</td>
<td>40,598</td>
</tr>
<tr>
<td>War Babies</td>
<td>69.8</td>
<td>30,389</td>
<td>73,364</td>
</tr>
<tr>
<td>Early Boomers</td>
<td>71.4</td>
<td>31,587</td>
<td>99,557</td>
</tr>
<tr>
<td><strong>Value of all mortgages/land contracts (1y residence)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>40.8</td>
<td>0</td>
<td>28,221</td>
</tr>
<tr>
<td>War Babies</td>
<td>49.0</td>
<td>0</td>
<td>56,066</td>
</tr>
<tr>
<td>Early Boomers</td>
<td>48.7</td>
<td>0</td>
<td>74,602</td>
</tr>
<tr>
<td><strong>Value of other home loans (1y residence)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>11.8</td>
<td>0</td>
<td>5,049</td>
</tr>
<tr>
<td>War Babies</td>
<td>15.2</td>
<td>0</td>
<td>6,425</td>
</tr>
<tr>
<td>Early Boomers</td>
<td>17.2</td>
<td>0</td>
<td>9,909</td>
</tr>
</tbody>
</table>
More on Rising Debt by Cohort

<table>
<thead>
<tr>
<th></th>
<th>% debt owners in total sample</th>
<th>p50</th>
<th>Mean ($'12)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Value of other debt</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRS</td>
<td>36.7</td>
<td>0</td>
<td>3,786</td>
</tr>
<tr>
<td>War Babies</td>
<td>39.1</td>
<td>0</td>
<td>6,705</td>
</tr>
<tr>
<td>Early Boomers</td>
<td>42.9</td>
<td>0</td>
<td>8,731</td>
</tr>
</tbody>
</table>
Rising Financial Vulnerability in the HRS (%)

Total debt/Total assets > 0.5

HRS 8.9
War Babies 15.6
Early Boomers 23.2

→War Babies 2X more financially fragile, & Early Boomers 3X as HRS baseline.

All 1ry res. loans/1ry res value > 0.5

HRS 16.6
War Babies 26.1
Early Boomers 35.1

→Much of it due to home loans!
Additional Vulnerability Measures

Other debt/Liquid assets >0.5
HRS 16.6
War Babies 22.4
Early Boomers 26.9

Respondents with < $25,000 in savings
HRS 14.9
War Babies 15.0
Early Boomers 24.7
Multivariate Regression Analysis of Financial Vulnerability

We study the four financial vulnerability outcomes:
• Total debt/asset ratio > 0.5,
• Ratio of 1ry residence loans to value > 0.5;
• Other debt/liquid asset ratio > 0.5; and
• Total net worth < $25,000.

Controls:
• Age, married, male, #Kids, White, HS/somecoll/coll+, HH income, Poor health
HRS Findings

1. Cohort differences confirmed w/ controls: Early Boomers much more fragile than prior cohorts.

2. Factors associated with LESS financial vulnerability: being married, White, better educated, and higher income.

3. Factors significantly associated with MORE fin vulnerability: having had more children and being in poor health.

4. For singles, poor health especially problematic.
National Financial Capability Study (NFCS): 2012 and 2015

State-by-State Survey: Online survey of > 25K respondents (~500/ state + DC)

• Unique information on Americans’ financial capability;
• Provides overview of personal finances;
• Includes self-assessed debt burden & financial distress;
• Informative on financial literacy levels.
On July 12th 2016, GFLEC hosted the release of the 2015 NFCS

- We helped design and develop the NFCS over time.
NFCS 2012 & 2015: Level/Composition of Self-Reported Household Debt (%) (age 56-61)

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mortgage debt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home value underwater*</td>
<td>16.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Late with mortgage payments, at least once*</td>
<td>16.2</td>
<td>10.6</td>
</tr>
<tr>
<td>Foreclosure process on their home*</td>
<td>2.6</td>
<td>n/a</td>
</tr>
<tr>
<td><strong>Other types of debt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit card debt*</td>
<td>52.4</td>
<td>46.5</td>
</tr>
<tr>
<td>Credit card fees, at least one type*</td>
<td>36.7</td>
<td>30.3</td>
</tr>
<tr>
<td>Unpaid medical bills</td>
<td>23.4</td>
<td>20.2</td>
</tr>
<tr>
<td>High-cost borrowing*</td>
<td>19.8</td>
<td>19.4</td>
</tr>
<tr>
<td>Student loan***</td>
<td>9.6</td>
<td>14.0</td>
</tr>
<tr>
<td><strong>Borrowing from retirement account</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan from retirement account**</td>
<td>7.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Hardship withdrawal from retirement account**</td>
<td>5.7</td>
<td>4.9</td>
</tr>
</tbody>
</table>

→NFCS respondents doing better post Financial Crisis. But not out of hot water!

Note: Statistics weighted using sample weights. *Values conditional on holding the asset or debt. **Statistics conditional to owning a retirement account. ***Direct comparison between 2012 and 2015 is not possible.
We analyze two indicators of financial vulnerability

1) Financial fragility

How confident are you that you could come up with $2000 if an unexpected need arose within the next month?

- I am certain I could come up with the full $2,000
- I could probably come up with $2,000
- I could probably not come up with $2,000
- I am certain I could not come up with $2,000
- Don’t know
- Prefer not to say
What this measure does

- Symptom of lack of assets
- Indicates lack of borrowing capacity of highly leveraged households
We analyze two indicators of financial vulnerability

1) Financial fragility

*How confident are you that you could come up with $2000 if an unexpected need arose within the next month?*

- I am certain I could come up with the full $2,000
- I could probably come up with $2,000
- I could probably not come up with $2,000
- I am certain I could not come up with $2,000
- Don’t know
- Prefer not to say

These responses classified as financially fragile.
How confident are you that you could come up with $2000 if an unexpected need arose within the next month?
The Evolution of Financial Fragility over the life-cycle

[Bar chart showing financial fragility over different age groups from 18-74 and comparing 2012 and 2015 data]
Another indicator

2) Having too much debt

How strongly do you agree or disagree with the following statement: I have too much debt right now.

- 1 = “Strongly Disagree”
- 2
- 3
- 4 = “Neither Agree or Disagree”
- 5
- 6
- 7 = “Strongly Agree”
- Don’t know
- Prefer not to say
Another indicator

2) Having too much debt

How strongly do you agree or disagree with the following statement: I have too much debt right now.

- 1 = “Strongly Disagree”
- 2
- 3
- 4 = “Neither Agree or Disagree”
- 5
- 6
- 7 = “Strongly Agree”
- Don’t know
- Prefer not to say

People with these responses are classified as over-indebted.
How strongly do you agree or disagree with the following statement: I have too much debt right now.

Summary statistics: Having too much debt (age 56-61)

- 39.9% (2012)
- 36.5% (2015)
The Evolution of Self-assessed Debt over the Life-Cycle

Having "Too much debt"

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2012</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32-37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38-43</td>
<td></td>
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<tr>
<td>44-49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56-61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>62-67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68-73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>74+</td>
<td></td>
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</tbody>
</table>
Multivariate regression analysis

Dependent variables:

- “I have too much debt right now” (1=strongly disagree, 7=strongly agree). Proxies for problems with debt (instead of HRS ratios).
- Financial fragility. Indicator = 1 if could not (probably/certainly) come up with $2,000 in an emergency within a month.

Controls:

- Socio-demographic controls + whether respondents experienced large/unexpected income drop previous year + financial literacy.
- All age-eligible individuals age 56-61 in 2012-2015 NCFS (all wtd).
Financial Literacy

The NFCS includes five questions assessing the knowledge of:

- Numeracy
- Knowledge of inflation
- Risk diversification
- Interest on mortgages
- Basic asset pricing

Financial Literacy Index 2012 2015

Average # of FinLit answers (age 56-61) 3.2 3.1
## Multivariate Regression Model of Self-assessed Debt and Financial Fragility

<table>
<thead>
<tr>
<th></th>
<th>Self-assessed Debt (values 1 to 7)</th>
<th>Financial Fragility (dummy variable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of dependent children</td>
<td>0.197***</td>
<td>0.021**</td>
</tr>
<tr>
<td>Afro-American</td>
<td>0.184*</td>
<td>0.098***</td>
</tr>
<tr>
<td>High school</td>
<td>0.045</td>
<td>-0.076**</td>
</tr>
<tr>
<td>Some college</td>
<td>0.060</td>
<td>-0.085**</td>
</tr>
<tr>
<td>College or more</td>
<td>-0.081</td>
<td>-0.113***</td>
</tr>
<tr>
<td>Income $15-25K</td>
<td>-0.003</td>
<td>-0.133***</td>
</tr>
<tr>
<td>Income $25-35K</td>
<td>-0.138</td>
<td>-0.228***</td>
</tr>
<tr>
<td>Income $35-50K</td>
<td>-0.205</td>
<td>-0.335***</td>
</tr>
<tr>
<td>Income $50-75K</td>
<td>-0.459***</td>
<td>-0.433***</td>
</tr>
<tr>
<td>Income $75-100K</td>
<td>-0.697***</td>
<td>-0.510***</td>
</tr>
<tr>
<td>Income $100-150K</td>
<td>-0.780***</td>
<td>-0.581***</td>
</tr>
<tr>
<td>Income $150K+</td>
<td>-1.371***</td>
<td>-0.578***</td>
</tr>
<tr>
<td>Income shock</td>
<td>0.863***</td>
<td>0.151***</td>
</tr>
<tr>
<td>FinLit index</td>
<td>-0.088***</td>
<td>-0.023***</td>
</tr>
<tr>
<td>Year 2015</td>
<td>-0.239***</td>
<td>-0.025**</td>
</tr>
<tr>
<td>Observations</td>
<td>5,852</td>
<td>5,925</td>
</tr>
</tbody>
</table>
Summary of NFCS results:

• Results consistent with HRS analysis.
• Evidence of financial distress at a time when people should be at the peak of their wealth accumulation.
• Those reporting excessive debt and financially fragile:
  – have higher income;
  – have more dependent kids;
  – experienced income shocks;
  – are the least financial literate.
Concluding comments:

1. Rising financial distress on the verge of retirement

2. Many financially fragile and over-indebted and did not plan for retirement:
   - Income, shocks, education & financial literacy played a role.
Summary and policy relevance

- Recent cohorts: more debt, face more financial insecurity

Why?
- Bought more expensive homes with smaller down payments.
- Use alternative financial services (payday loans, etc.); carried credit card debt; borrowed on retirement accounts

Less debt exposure: higher income, more education, and greater financial literacy

More financial fragility: more children, poor health, and unexpected large income declines.

Shocks do play a role in debt accumulation near to retirement. But people also need the capacity to manage those resources.
Implications for research on debt

• Theoretical models focus on savings/portfolio choice but have not devoted much attention to debt.

• Researchers/policymakers: incorporate debt and debt management into factors driving retirement security.
Thank you!

For more information: Download books and working papers

Global Financial Literacy Excellence Center: http://www.gflec.org/

The Pension Research Council: http://www.pensionresearchcouncil.org/