Financial Well-Being of the Millennial Generation: An In-Depth Analysis of Its Drivers and Implications

November 13, 2019
Motivation

• Millennials have become the largest living adult generation
  • Ethnically diverse
  • Well-educated

• Many have low financial knowledge and exhibit costly money management behaviors

• Previous research suggests that financial well-being is lower among the young
  • More research is needed to understand the factors that influence financial well-being for Millennials and how these factors may vary by demographic groups.

• This paper aims to further understand the underlying factors that influence financial well-being to inform the development of financial education programs.
Research Objectives

- Investigate how financial well-being varies among Millennials
- Examine potential factors that are associated with financial well-being
- Examine financial well-being by demographic subgroups
Main Findings

A) Many Millennials have lower financial well-being than older working-age adults and can vary widely
   • Financial situations and experiences vary among Millennials
   • Need to take into account both sides of the balance sheet (assets & debt)

B) There are subgroups that have lower financial well-being: old Millennials, women, those who are single, do not have a college degree, and the unemployed.
   • The factors that are associated with financial well-being may vary by subgroup

C) Financial literacy is correlated with financial well-being
   • Even after accounting for many demographic characteristics, including income and education.
The NFCS is an nationally representative survey of the US population

Sample selection

- Millennials: ages 23-37*, non-retired
  - Sample size: 7,123
- Older working-age: 38-61*, non-retired
  - Sample size: 9,869

- Commissioned by FINRA Investor Education Foundation. The NFCS started in 2009 and now has 10 years of data (collected every 3 years)
- Large number of observations allow researchers to study subgroups of Millennials
- Offers unique information on financial literacy, financial capability, and financial behavior

*At the time the survey was taken in 2018
- 2018 wave is the first to include Abbreviated FWB scale (5 questions)
  - Average FWB scores of the NFCS have similar characteristics reported in the Financial Well-Being Survey

- Financial Literacy
  - Big Three financial literacy questions (measuring knowledge of interest rate, inflation, and risk diversification)

- Measures of financial situation and experiences
  - Several measures for individuals’ financial situation (homeownership, retirement accounts, loans from retirement account)
  - Several measures of financial experiences (experienced a drop in income, unpaid medical bills, and financial fragility)
Empirical Findings –

(A) Many Millennials have lower financial well-being than older working-age adults and can vary widely.
Distribution of financial well-being scores

- Financial well-being is lower among Millennials than the older working-age population
- Greater percentage of Millennials fall within the very low, low, and medium low categories

Source: NFCS 2018
Assets and Debt (Retirement Plan)

- Retirement plan: 50
- No retirement plan: 44
- Retirement plan (hasn't taken a loan against their plan)*: 54
- Taken a retirement loan*: 43
- Taken a hardship withdrawal*: 43

Source: NFCS 2018, 23- to 37-year-olds

Note: * Indicates statistics are conditional on having the related asset.
Expensive borrowing behavior is high among Millennials:
- 43% have used AFS
- 61% have used their credit cards expensively

Note: * Indicates statistics are conditional on having the related asset.

Source: NFCS 2018, 23- to 37-year-olds
B) There are subgroups that have lower financial well-being: old Millennials, women, singles, those without a college degree, and the unemployed.
The full regression model is:

\[ FWB = \beta_0 + \beta'_D D + \beta'_E E + \beta'_S S + \beta'_L L + \beta'_W W + \epsilon \]

Where

- **FWB**: Financial well-being (continuous variable)
- **D**: Demographic and family characteristics
  - Gender, age, census region, education, income, race/ethnicity, marital status, children
- **E**: Employment status
  - Employed, unemployed, full-time student, out of labor force
- **S**: Shocks to income and health
  - Income shock (large unexpected drop in income in the previous 12 months), outstanding medical bills (unpaid medical bills that are past due)
- **L**: Financial literacy
  - Big Three financial literacy questions answered correctly (interest, inflation, risk div.)
- **W**: Proxies for wealth
  - Home ownership, bank account
<table>
<thead>
<tr>
<th>Dependent variable: financial well-being (continuous variable 0-100)</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
</tr>
<tr>
<td>Gender (omitted category: male)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>-1.623***</td>
</tr>
<tr>
<td>Age (omitted category: ages 23-29)</td>
<td></td>
</tr>
<tr>
<td>Old Millennials (ages 30-37)</td>
<td>-1.417***</td>
</tr>
<tr>
<td>Education (omitted category: high school degree or less)</td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td>-1.709***</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>-0.246</td>
</tr>
<tr>
<td>Post graduate degree</td>
<td>-0.175</td>
</tr>
<tr>
<td>Marital Status (omitted category: Single)</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>2.347***</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>0.548</td>
</tr>
<tr>
<td>Widowed</td>
<td>-1.968</td>
</tr>
<tr>
<td>Work Status (omitted category: Employed)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>-2.696***</td>
</tr>
<tr>
<td>Full-time student</td>
<td>0.0951</td>
</tr>
<tr>
<td>Homemaker/sick, disabled or unable to work</td>
<td>-0.750</td>
</tr>
<tr>
<td>Additional control variables</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>6,623</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.248</td>
</tr>
</tbody>
</table>

FWB is lower among
- Women
- Old Millennials
- Some college
- Single
- Unemployed

Source: NFCS 2018, 23- to 37-year-olds
Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1
### Family characteristics

<table>
<thead>
<tr>
<th>Dependent variable: financial well-being (continuous variable 0 -100)</th>
<th>Female Millennials</th>
<th>Male Millennials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong> <em>(omitted category: Single)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>3.317***</td>
<td>1.222**</td>
</tr>
<tr>
<td></td>
<td>(0.450)</td>
<td>(0.566)</td>
</tr>
<tr>
<td>Divorced/Separated</td>
<td>1.121</td>
<td>-0.369</td>
</tr>
<tr>
<td></td>
<td>(0.872)</td>
<td>(1.258)</td>
</tr>
<tr>
<td>Widowed</td>
<td>-2.487</td>
<td>-2.163</td>
</tr>
<tr>
<td></td>
<td>(3.350)</td>
<td>(4.044)</td>
</tr>
<tr>
<td><strong>Have children</strong> <em>(omitted category: No financially dependent children)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have financially dependent children</td>
<td>-0.620***</td>
<td>0.329</td>
</tr>
<tr>
<td></td>
<td>(0.172)</td>
<td>(0.242)</td>
</tr>
</tbody>
</table>

**Demographic variables**
- Yes
- Yes
- Yes
- Yes
- Yes
- Yes

**Observations**
- 3,856
- 2,767

**$R^2$**
- 0.247
- 0.258

The impact of family characteristics differ by gender

- Being married is more significant for females
- Having financially dependent children is negatively correlated to FWB for females only

Source: NFCS 2018, 23- to 37-year-olds
Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1
C) Financial literacy is correlated with financial well-being
## Financial literacy

### Dependent variable: financial well-being (continuous variable 0 -100)

<table>
<thead>
<tr>
<th>Financial Literacy</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three questions correct (interest, inflation, risk)</td>
<td>2.458*** (0.410)</td>
</tr>
</tbody>
</table>

**Demographic variables**
- Yes

**Employment status**
- Yes

**Shocks to income**
- Yes

**Financial literacy**
- Yes

**Proxies for wealth**
- Yes

<table>
<thead>
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</tbody>
</table>

Financial literacy remains correlated with FWB

- Total sample of Millennials
## Financial literacy by subgroup

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female Millennials</th>
<th>Male Millennials</th>
</tr>
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<tbody>
<tr>
<td><strong>Dependent variable: financial well-being (continuous variable 0-100)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Financial Literacy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three questions correct (interest, inflation, risk)</td>
<td>2.436*** (0.578)</td>
<td>2.520*** (0.600)</td>
</tr>
<tr>
<td>Demographic variables</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Employment status</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Shocks to income</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Financial literacy</td>
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<td>Yes</td>
</tr>
<tr>
<td>Proxies for wealth</td>
<td>Yes</td>
<td>Yes</td>
</tr>
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<td><strong>R²</strong></td>
<td>0.247</td>
<td>0.258</td>
</tr>
</tbody>
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Financial literacy remains correlated with FWB
- Across gender

Source: NFCS 2018, 23- to 37-year-olds
Robust standard errors in parentheses.
***p<0.01, **p<0.05, *p<0.1
Discussion

• Financial well-being is lower among Millennials than older working-age adults

• Costly money management behaviors (i.e., the use of high-cost methods of borrowing) are correlated with lower financial well-being.

• Financial literacy remains significant across almost all subgroups, even after controlling for many other variables

• Need more holistic programs to improve financial well-being among Millennials
  • FWB varies widely
  • Should not focus on one behavior only