Household Debt in America: A Look Across Generations Over Time

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The views expressed here are those of the speakers and do not necessarily represent the views of the Federal Reserve Bank of St. Louis or of the Federal Reserve System.
How Much Have Different Generations of Americans Borrowed Relative to Their Income?
Household Debt in America

Debt to Income Ratio

- Personal Income

Year


Percent

0 20 40 60 80 100 120 140

SOURCES: Bureau of Economic Analysis and Federal Reserve Board.
Household Debt in America

Debt to Income Ratio

Sources: Bureau of Economic Analysis and Federal Reserve Board.
Personal vs. Disposable Income

Debt to Income Ratio

- Personal Income
- Disposable Income

Year

Percent

Sources: Bureau of Economic Analysis and Federal Reserve Board.
Household Debt in America: Interest Rate

Debt and Interest Rates

- Debt to Income
- 10-Yr Treasury (Right Axis)

Year


Percent

0 50 100

10-Yr Treasury Rate

0 5 10 15

SOURCES: Bureau of Economic Analysis and Federal Reserve Board.
The connection between these factors is not obvious. Why?

- Future rates matter as much as current rates.
- Expectations.
- Demographics (i.e., baby boom generation).
Debt and the Great Recession

- This was the **first postwar U.S. recession** in which deleveraging has played a key role.

- **Evidence:** States with the largest declines in home values had the weakest recoveries.

- **Monetary policy** may not be able to reach households that are deleveraging.
Purpose of Today’s Talk

- Why do households use debt?
- Which are the most important forms of debt over the life cycle?
- What role did borrowing play in the financial crisis?
- What has been the response of the Fed?
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- Which are the most important forms of debt over the life cycle?
- What role did borrowing play in the financial crisis?
- What has been the response of the Fed?

These questions will be analyzed through the lens of a life-cycle framework.
Why Do Households Borrow (or Save)?
Consumption and Income Over the Life Cycle

Consumption / Income

Consumption

Saving

Borrowing

Income

Dissaving

Age

Retirement

Death
The Message from this Framework

- Over an individual's life, there is a natural mismatch of income and consumption that can result in borrowing.
- Holding debt does not necessarily indicate a future financial problem!
- Household debt decisions must be consistent with repayment over the life horizon.
- What determines consumption?
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- Household debt decisions must be consistent with repayment over the life horizon.
- What determines consumption?
  - Current income
  - Expected future income
  - Unexpected income variations (e.g., job loss)
Average Life-Cycle Income in the United States

Life-Cycle Earnings of Families

SOURCE: Survey of Consumer Finances.
The Message from this Framework for Borrowing

1. **Life-cycle motive**: Borrow to go to school and repay when in the labor force.

2. **Smoothing motive**: Maintain stable consumption pattern when income fluctuates.

3. **Insurance motive**: Mitigate the negative/positive effect of shocks (i.e., market and self-insurance).

4. **Purchase of large ‘ticket’ items**: These items provide service for many years.
What Are Households Doing With All This Debt?
Evidence: Unsecured Credit (Credit Cards)

Average Unsecured Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Evidence: Mortgages

Average Mortgage Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Evidence: Auto Loans

Average Auto Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Evidence: Student Loans

Average Student Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Note: Data prior to 2003 are not consistent.
Some of these forms of borrowing happen at different ages over the life cycle

- Young individuals finance college
- Newly formed households purchase homes
- Middle-aged households tend to use credit more frequently
- All households finance auto purchases
Changes in Borrowing Behavior during the Great Recession
Why Is the Great Recession Recovery Different?

- The Great Recession had a significant (negative) impact on households' earnings - rewards to all types of labor, including entrepreneurial labor.
Why is the Great Recession Recovery Different?

- The Great Recession had a significant (negative) impact on households' earnings and income.
  - **Earnings** - rewards to all types of labor, including entrepreneurial labor.
  - **Income** - earnings plus capital income plus government transfers.
Why is the Great Recession Recovery Different?

- The Great Recession had a significant (negative) impact on households' earnings.
  - **Earnings** - rewards to all types of labor, including entrepreneurial labor.
  - **Income** - earnings plus capital income plus government transfers.
  - **Net Worth** - the value of all assets net of debt.
## Income Distribution in Large Postwar Recessions

### 1980-1982 Recession

<table>
<thead>
<tr>
<th>Income Group</th>
<th>1979</th>
<th>1982</th>
<th>1985</th>
<th>Δ79-82</th>
<th>Δ82-85</th>
</tr>
</thead>
<tbody>
<tr>
<td>95th Percentile</td>
<td>$191.8</td>
<td>$189.6</td>
<td>$209.5</td>
<td>-1%</td>
<td>11%</td>
</tr>
<tr>
<td>Median</td>
<td>$71.9</td>
<td>$65.0</td>
<td>$71.1</td>
<td>-10%</td>
<td>9%</td>
</tr>
<tr>
<td>20th Percentile</td>
<td>$33.1</td>
<td>$26.3</td>
<td>$29.1</td>
<td>-20%</td>
<td>11%</td>
</tr>
</tbody>
</table>

### 2007-2009 Recession

<table>
<thead>
<tr>
<th>Income Group</th>
<th>2006</th>
<th>2009</th>
<th>2012</th>
<th>Δ06-09</th>
<th>Δ09-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>95th Percentile</td>
<td>$289.7</td>
<td>$277.8</td>
<td>$270.2</td>
<td>-4%</td>
<td>-3%</td>
</tr>
<tr>
<td>Median</td>
<td>$83.2</td>
<td>$76.0</td>
<td>$74.5</td>
<td>-9%</td>
<td>-2%</td>
</tr>
<tr>
<td>20th Percentile</td>
<td>$33.6</td>
<td>$26.9</td>
<td>$25.0</td>
<td>-20%</td>
<td>-7%</td>
</tr>
</tbody>
</table>

NOTE: All values are in thousands of 2012 dollars.
Average Earnings and Net Worth by Age

Earnings of Families

Net Worth of Families

SOURCE: Survey of Consumer Finances.
Average Earnings and Net Worth by Age

SOURCE: Survey of Consumer Finances.
Average Earnings and Net Worth by Age

SOURCE: Survey of Consumer Finances.
Average Earnings and Net Worth by Age

SOURCE: Survey of Consumer Finances.
Has the Income Distribution in the United States Actually Changed?

### Changes in Income Distribution

<table>
<thead>
<tr>
<th>Date</th>
<th>Earnings</th>
<th>Income</th>
<th>Net Worth</th>
<th>Earnings</th>
<th>Income</th>
<th>Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>3.62</td>
<td>1.69</td>
<td>3.83</td>
<td>3.35</td>
<td>2.94</td>
<td>7.18</td>
</tr>
<tr>
<td>1998</td>
<td>2.80</td>
<td>1.67</td>
<td>4.00</td>
<td>3.22</td>
<td>2.78</td>
<td>6.88</td>
</tr>
<tr>
<td>2004</td>
<td>2.68</td>
<td>1.69</td>
<td>3.98</td>
<td>3.50</td>
<td>3.00</td>
<td>9.02</td>
</tr>
<tr>
<td>2007</td>
<td>2.69</td>
<td>1.64</td>
<td>4.53</td>
<td>3.47</td>
<td>2.98</td>
<td>7.55</td>
</tr>
<tr>
<td>2010</td>
<td>3.40</td>
<td>1.62</td>
<td>5.23</td>
<td>3.72</td>
<td>3.11</td>
<td>12.35</td>
</tr>
<tr>
<td>2013</td>
<td>3.30</td>
<td>1.64</td>
<td>5.49</td>
<td>4.07</td>
<td>3.31</td>
<td>11.58</td>
</tr>
</tbody>
</table>

SOURCE: Survey of Consumer Finances.
NOTE: Median earnings for 1992-2013 respectively are $36,584, $40,585, $42,046, $41,567, $37,039, and $33,479 in 2013 dollars.
How Has the Great Recession Impacted Minorities?

Hispanic Mean Household Income

African–American Mean Household Income

How Has the Great Recession Impacted Minorities?

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**Hispanic Mean Household Income**

- **1990 ALL**
- **1990 HSP**
- **2000 HSP**
- **2010 HSP**

**African–American Mean Household Income**

- **1990 ALL**
- **1990 AA**
- **2000 AA**
- **2010 AA**

How Has the Great Recession Impacted Minorities?

Changes in Four Major Consumer Debt Categories
Unsecured Consumer Credit (Credit Cards)

Average Unsecured Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Unsecured Consumer Credit (Credit Cards)

Average Unsecured Debt of Individuals

- 1999
- 2005

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Unsecured Consumer Credit (Credit Cards)

Average Unsecured Debt of Individuals

Inflation-Adjusted 2014 Dollars

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Unsecured Consumer Credit (Credit Cards)

Average Unsecured Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Unsecured Consumer Credit (Credit Cards)

Average Unsecured Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Mortgages

Average Mortgage Debt of Individuals

Inflation-Adjusted 2014 Dollars

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Mortgages

Average Mortgage Debt of Individuals

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Average Mortgage Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Auto Loans

Average Auto Debt of Individuals

Inflation-Adjusted 2014 Dollars

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Auto Loans

Average Auto Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.

Inflation-Adjusted 2014 Dollars

Age

1999
2005
Auto Loans

Average Auto Debt of Individuals

Inflation-Adjusted 2014 Dollars

SOURCE: FRBNY Credit Panel / Equifax Based on Authors' Calculations.
Auto Loans

Average Auto Debt of Individuals

- 1999
- 2005
- 2008
- 2010

Inflation-Adjusted 2014 Dollars

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Auto Loans

Average Auto Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Student Debt

Average Student Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Note: Data prior to 2003 is not consistent
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Average Student Debt of Individuals

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.

Note: Data prior to 2003 is not consistent.
Combining All Forms of Debt
Holding Only Mortgage Debt: 1999

Average Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Only Mortgage Debt: 2005

Average Debt

- Auto Debt
- Unsecured Debt
- Mortgage Debt
- Student Debt

Inflation-Adjusted 2014 Dollars

Age Cohort

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Only Mortgage Debt: 2008

Average Debt

- Auto Debt
- Unsecured Debt
- Mortgage Debt
- Student Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Only Mortgage Debt: 2010

Average Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Only Mortgage Debt: 2013

Average Debt

- Auto Debt
- Unsecured Debt
- Mortgage Debt
- Student Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Mortgage and Auto Debt

Average Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Unsecured Credit and Auto Debt

Average Debt

Inflation-Adjusted 2014 Dollars

- Auto Debt
- Unsecured Debt
- Mortgage Debt
- Student Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding Mortgage, Unsecured, and Student Debt

Average Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
Holding All Four Types of Debt

Average Debt

Inflation-Adjusted 2014 Dollars

Age Cohort


Auto Debt
Unsecured Debt
Mortgage Debt
Student Debt

SOURCE: FRBNY Credit Panel / Equifax Based on Authors’ Calculations.
The Great Recession brought sizable changes in borrowing behavior.

- Boom and a bust in credit cards, mortgages and auto loans.
- Significant deleverage in three debt categories.
- The only exception is college debt, which has been increasing since 1999.
Households’ Balance Sheets, the Economy and Monetary Policy
Household Balance Sheets and the Great Recession

- **Prior to 2005**
  - Interest rates and mortgage rates were low.
  - House prices were increasing, and the economy was growing.
  - Households had wealth and could spend.
Household Balance Sheets and the Great Recession

- **Prior to 2005**
  - Interest rates and mortgage rates were low.
  - House prices were increasing, and the economy was growing.
  - Households had wealth and could spend.

- **After 2005**
  - Interest rates and mortgage rates were still low, but...
  - House prices were decreasing, and growth was weak.
  - Households wealth *declined*, and spending was *reduced*.
  - The lack of spending and the decline in construction *magnified* the recession.
What Has Been the Fed’s Response?

- The Fed has the mission to be the lender of last resort.

- By providing liquidity and keeping rates low, it provides a scenario conducive for stable growth.

- These policies are effective in a low-inflation environment.

- The role of quantitative easing (QE).
St. Louis Fed Initiatives

- Why is the Fed interested in microeconomic data?
St. Louis Fed Initiatives

- Why is the Fed interested in microeconomic data?

- Two important programs:

  1. The Center for Household Financial Stability: This is a new research initiative of the Federal Reserve Bank of St. Louis focused on rebuilding the household balance sheets of struggling American families.  

  2. Econ Ed: Promote economic literacy for students (elementary, middle, HS, and college), and consumers.  