

# Paying it back: Real-world debt service trends and implications for retirement planning

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May 2019

**61% of workers say that their debt is negatively impacting their retirement savings**

**In 2016, 70% of households age 65-74 had debt, up from 53% in 1998**

# U.S. household debt is at an all-time high of \$13.54 trillion

**5.3% of 75+ aged households have debt servicing equal to 40% or more of their income**

**The median ratio of primary mortgage to home value rose from 5% to 30% for Early Boomers – meaning they will need to continue servicing their mortgages well into retirement**

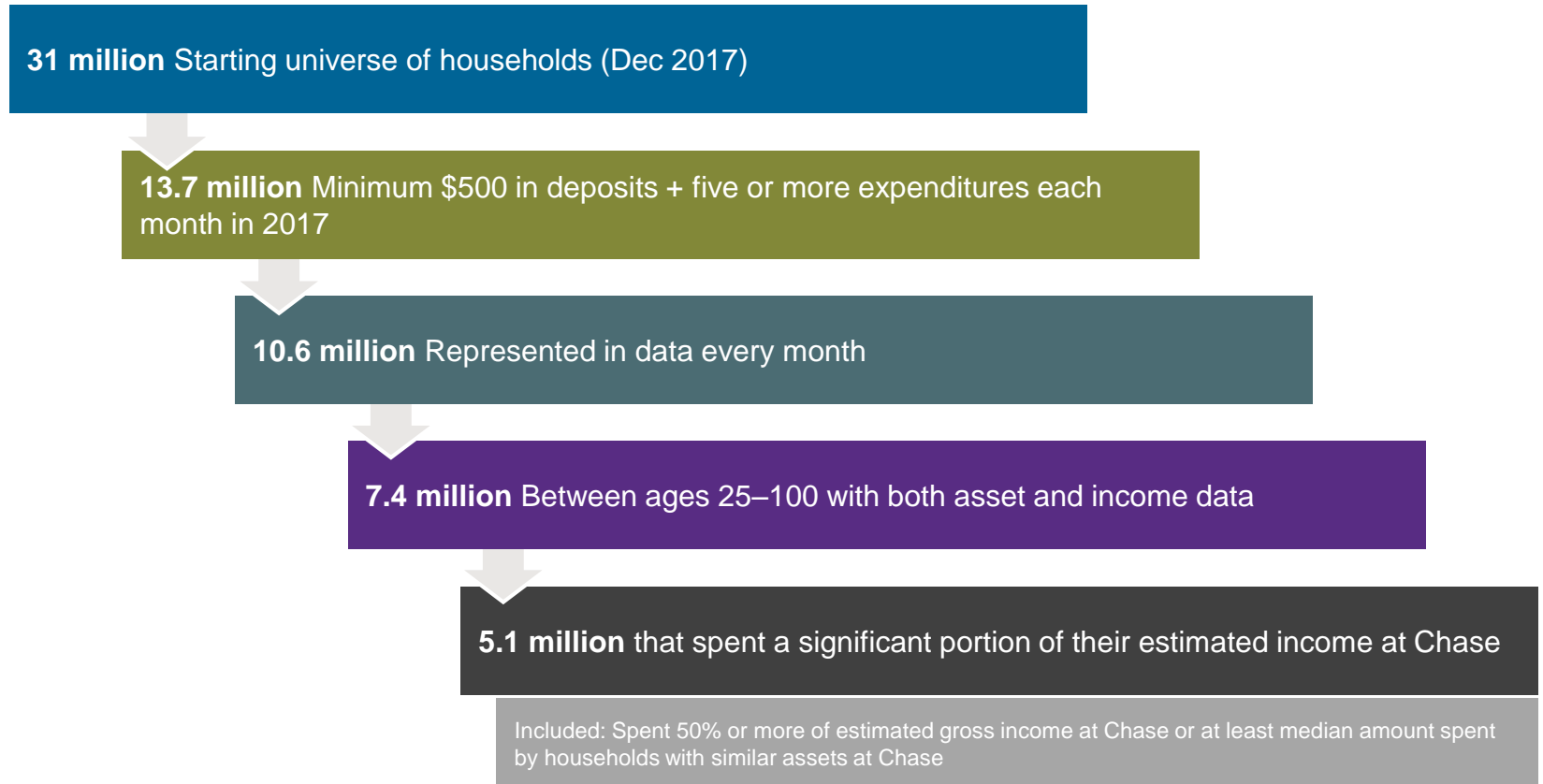
# Agenda

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- JPMorgan Chase big data research background
- Preliminary results
  - Debt servicing trends by age cohort
  - Debt servicing trends by debt type
  - Asset range analysis
- Next steps

## Data filtering methodology

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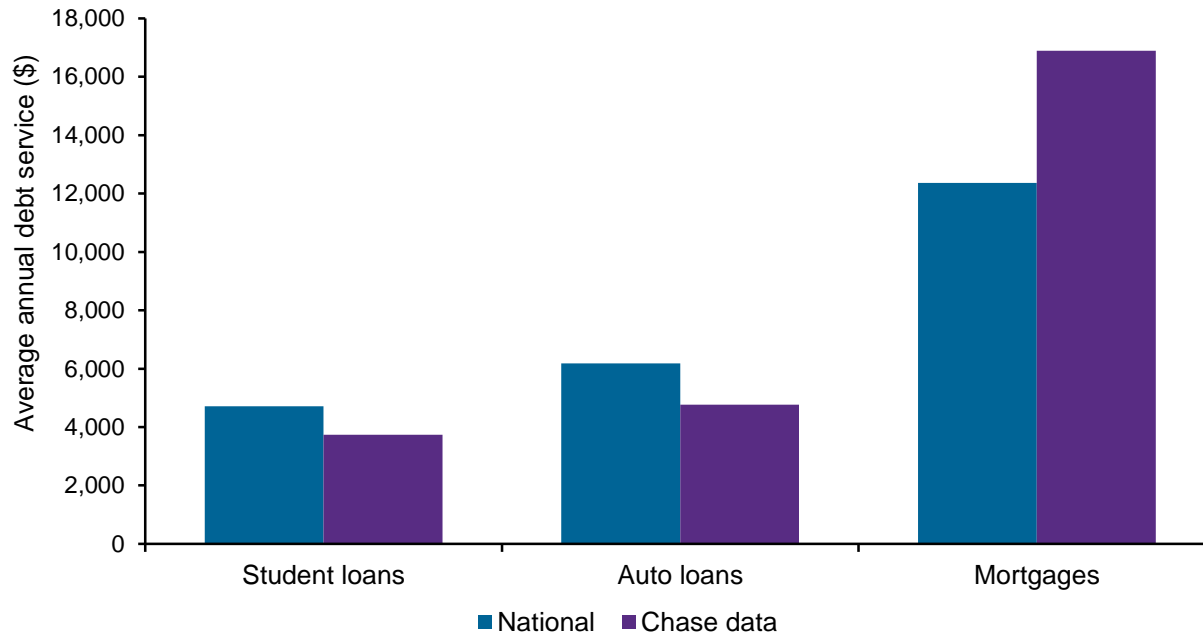


Note: Starting universe of 31 million households with both JPMorgan Chase credit card and banking relationships through year-end 2017. Chase credit card data excludes certain Chase co-branded cards.

Source: J.P. Morgan Asset Management, based on Chase data.

# Chase data debt service averages are reasonably close to national averages

## Data validation

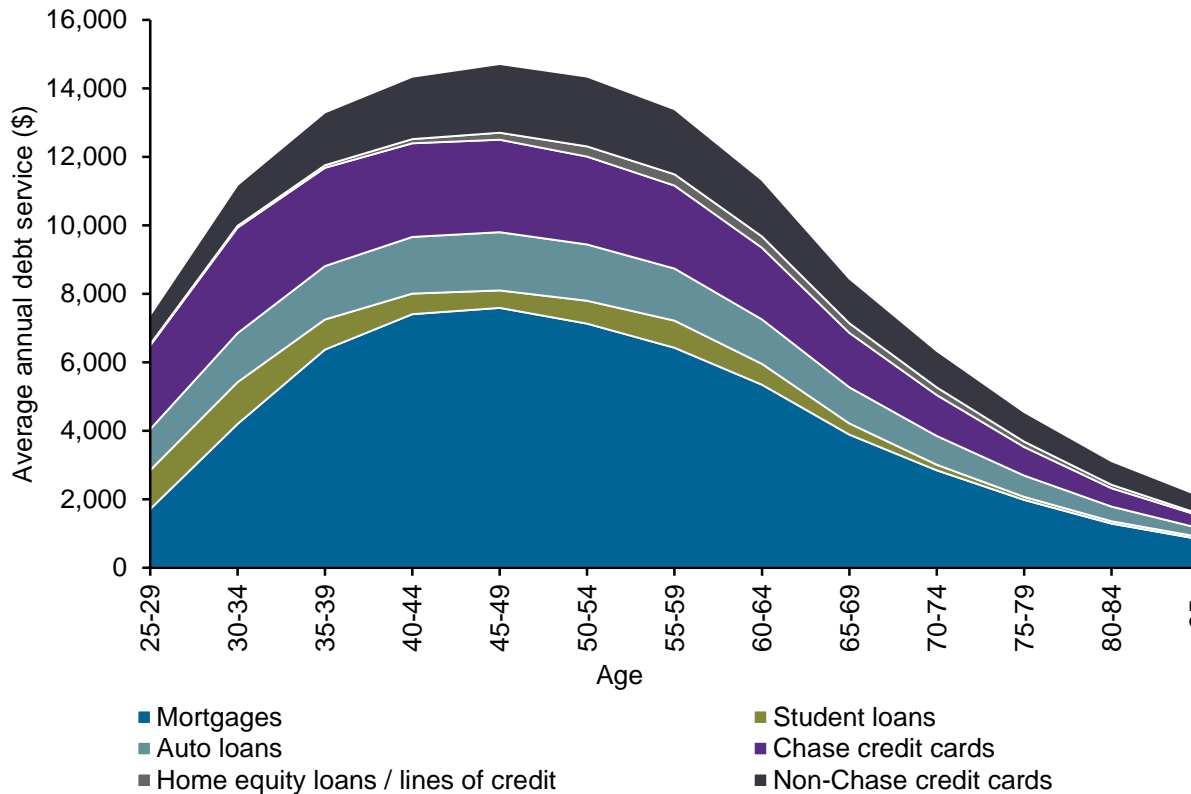


Note: Chase averages based on 5.1 million households, of which 0.86 million exhibited positive annual debt service for student loans, 1.4 million for auto loans, and 1.5 million for mortgages.

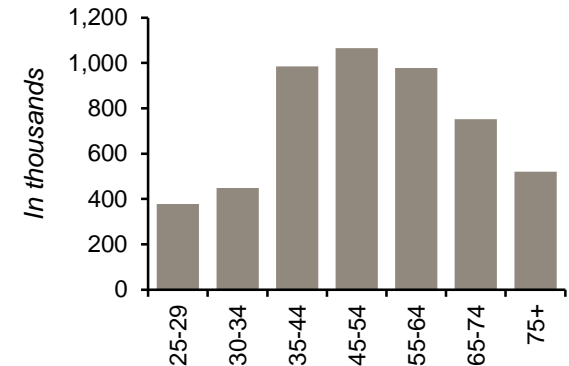
Source: National averages: Student loans, Federal Reserve, 2016 numbers published in May 2017, borrowers ages 20–30 only. Auto loans, Experian, “State of the Automotive Finance Market” Q4 2017, new vehicles only; includes neither leased (\$4,848) nor used (\$4,452) vehicles. Mortgages, Census Bureau, American Housing Survey, median from 2015.

# Average annual debt service displays a clear life cycle trend

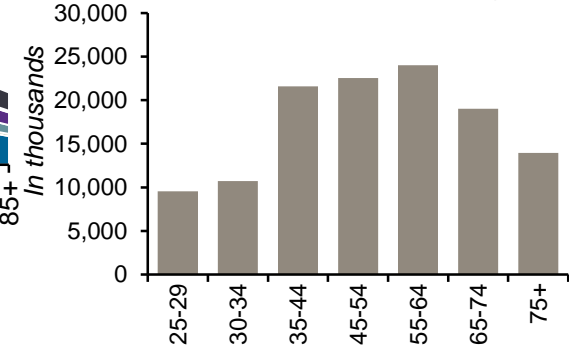
Average annual debt service patterns by age for all households



Number of Chase households by age



All U.S. households by age

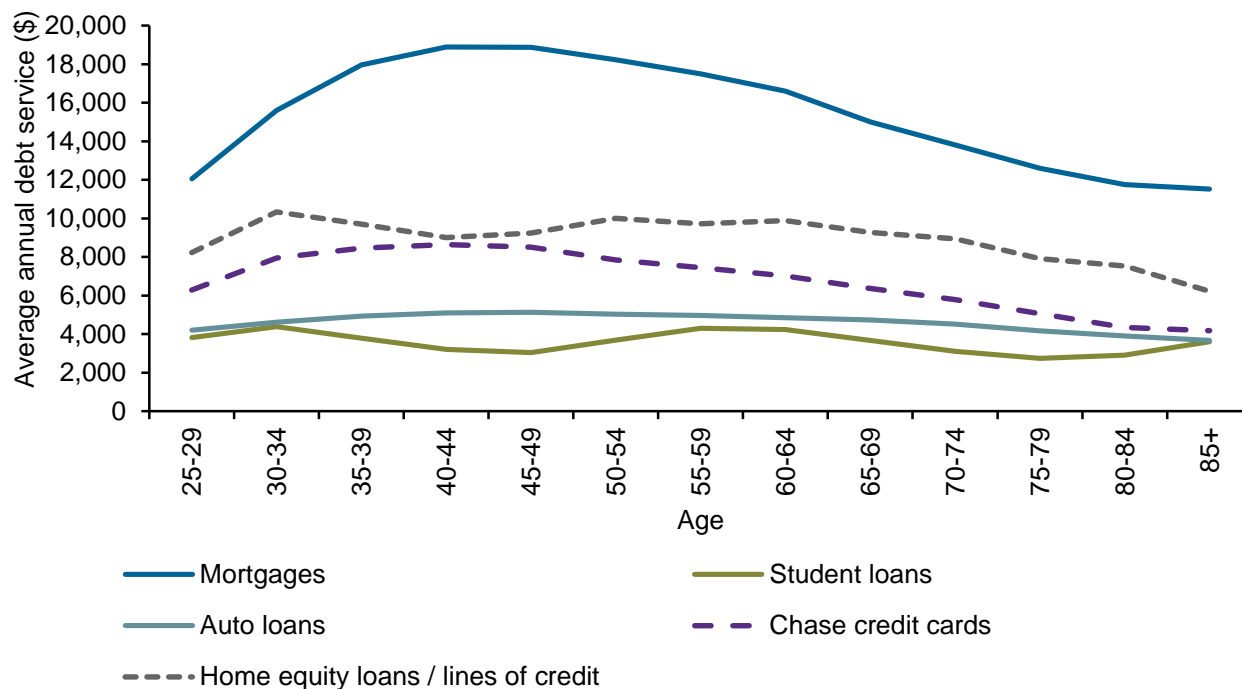


Note: Based on 5.1 million households whether or not they hold a particular category of debt. Extreme outliers excluded so that overall averages are not skewed. Average credit card payments are separated into two groups: Chase credit cards, which offer direct, detailed data, and non-Chase credit cards, from which we are able to infer information based on overall household debt service and general spending patterns. Credit card debt service data includes only revolving balances in order to focus solely on credit card debt versus broad credit card usage, which would be more reflective of spending patterns instead of debt accumulation.

Source: J.P. Morgan Asset Management, based on Chase data.

# Certain debt type dominates household balance sheet

Average annual debt service patterns for households with a particular debt type

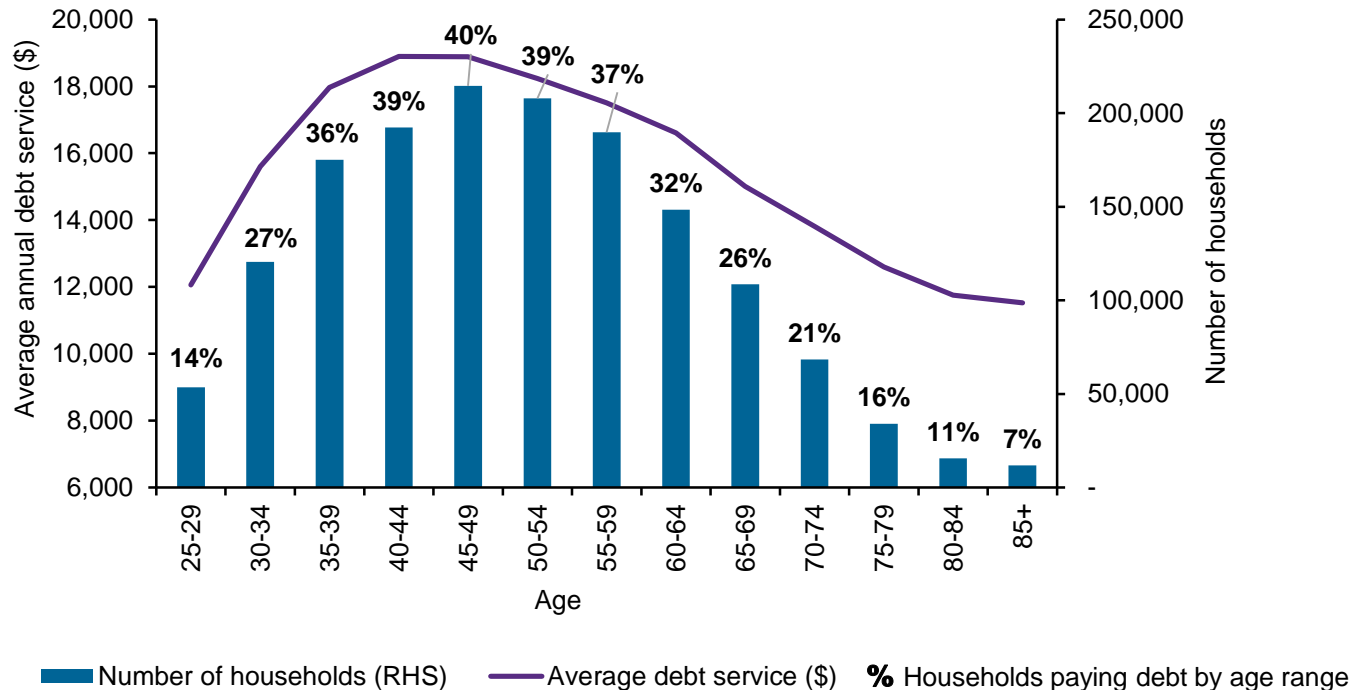


Note: Based on 5.1 million households, if they hold the particular category of debt.

Source: J.P. Morgan Asset Management, based on Chase data

# Mortgage debt payments peak around age 40-49

Annual debt service for households with mortgages



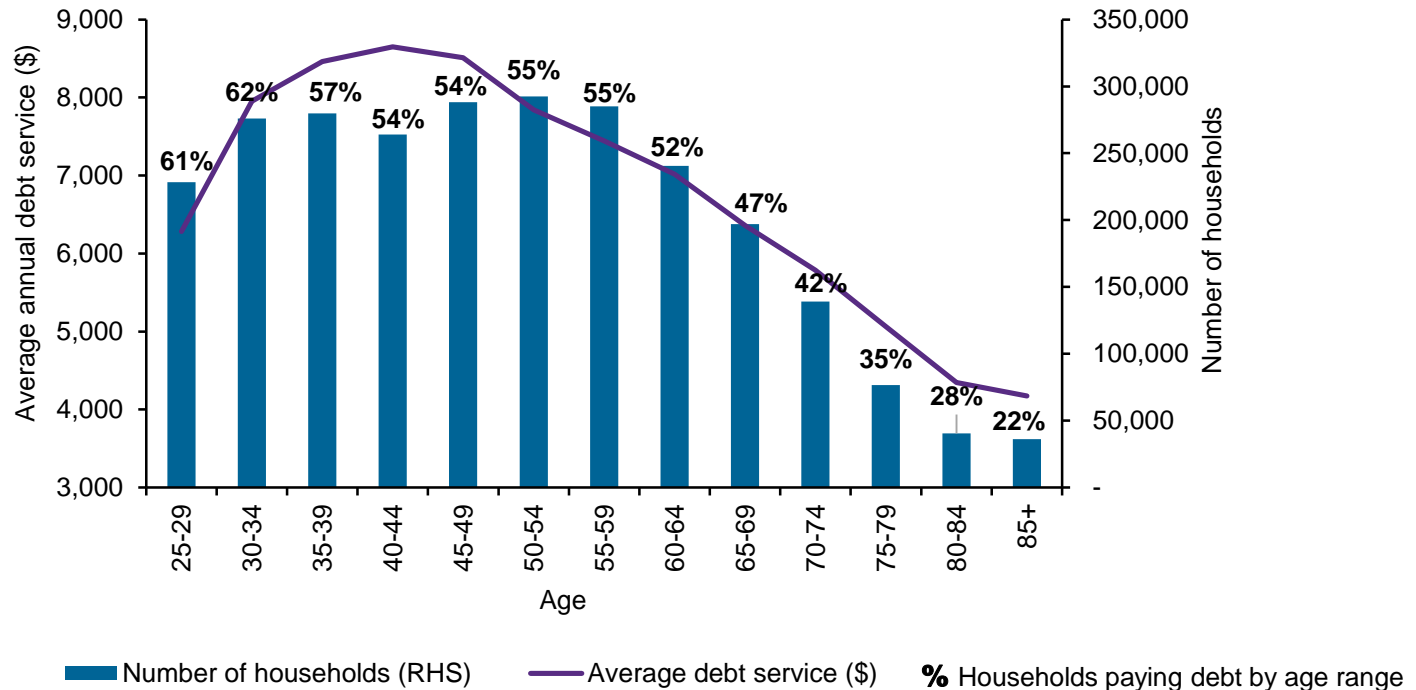
Note: Data based on the following number of households holding a particular category of debt from the 5.1 million overall data set: 859,402 servicing student loan debt, 1,540,324 servicing mortgage debt, 2,643,601 servicing Chase credit card debt, 1,409,649 servicing auto loan debt, and 103,481 servicing home equity loan/line of credit debt.

Source: J.P. Morgan Asset Management, based on Chase data.



# Credit card revolving debt has alarming impact

Annual debt service for households with Chase credit card revolving debt

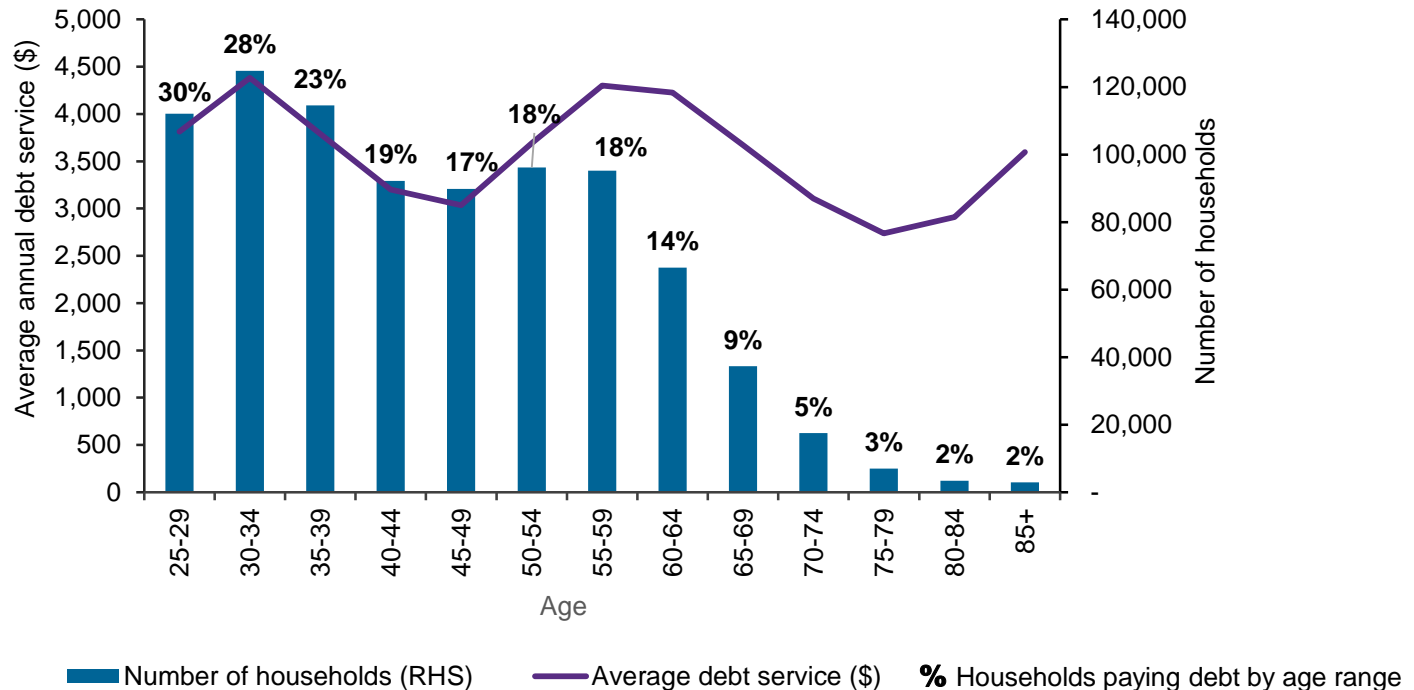


Note: Data based on the following number of households holding a particular category of debt from the 5.1 million overall data set: 859,402 servicing student loan debt, 1,540,324 servicing mortgage debt, 2,643,601 servicing Chase credit card debt, 1,409,649 servicing auto loan debt, and 103,481 servicing home equity loan/line of credit debt.

Source: J.P. Morgan Asset Management, based on Chase data.

# Parents and grandparents continue to pay student loans

## Annual debt service for households with student loans

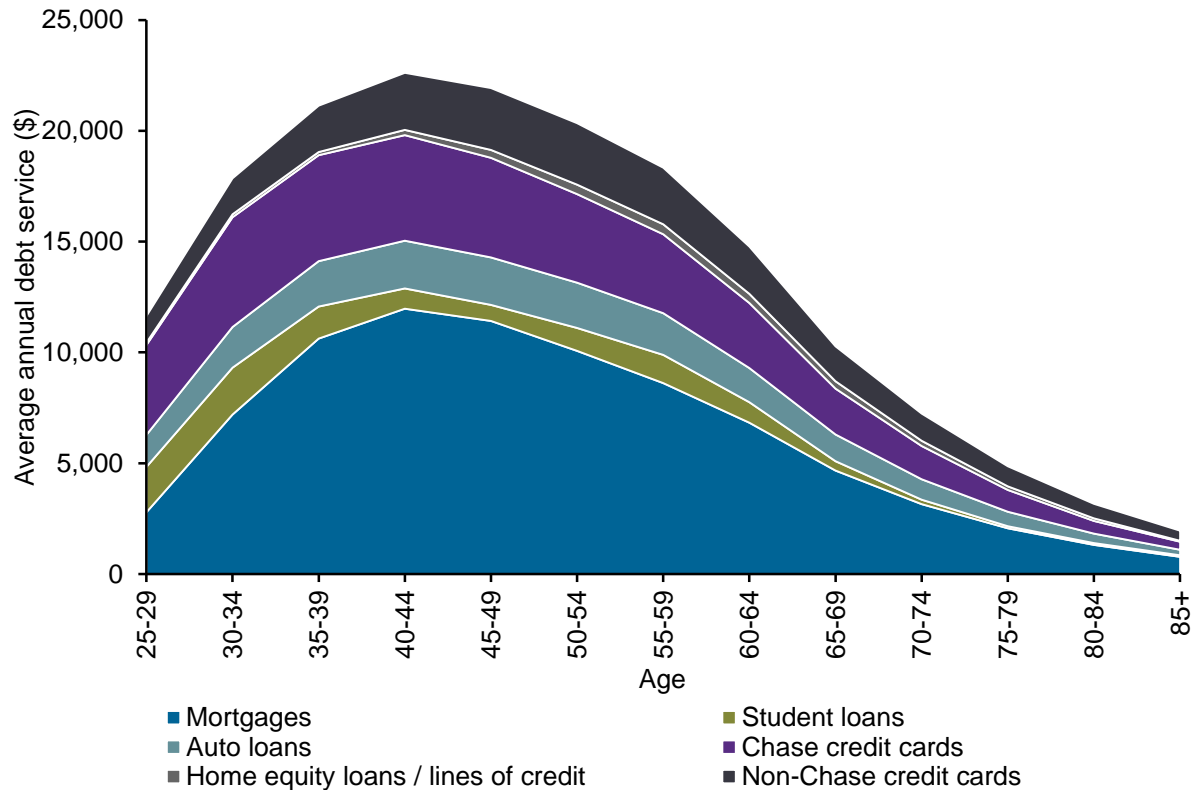


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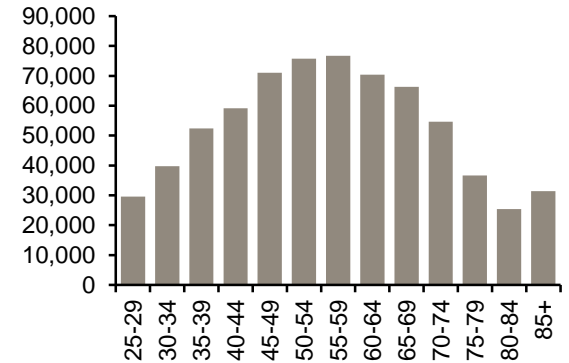
Source: J.P. Morgan Asset Management, based on Chase data.

# Households in the \$50,000–\$100,000 asset range

Average annual debt service for HH in \$50,000 - \$100,000 asset range



Number of households by age

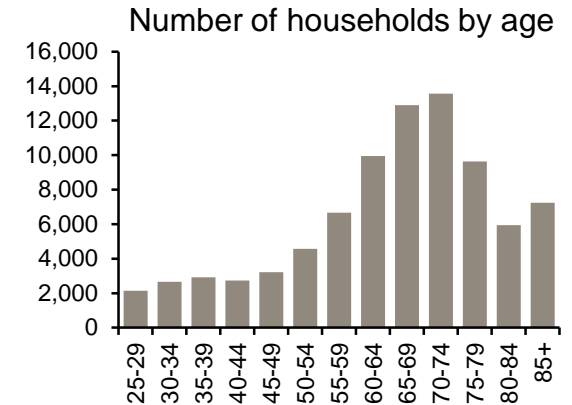
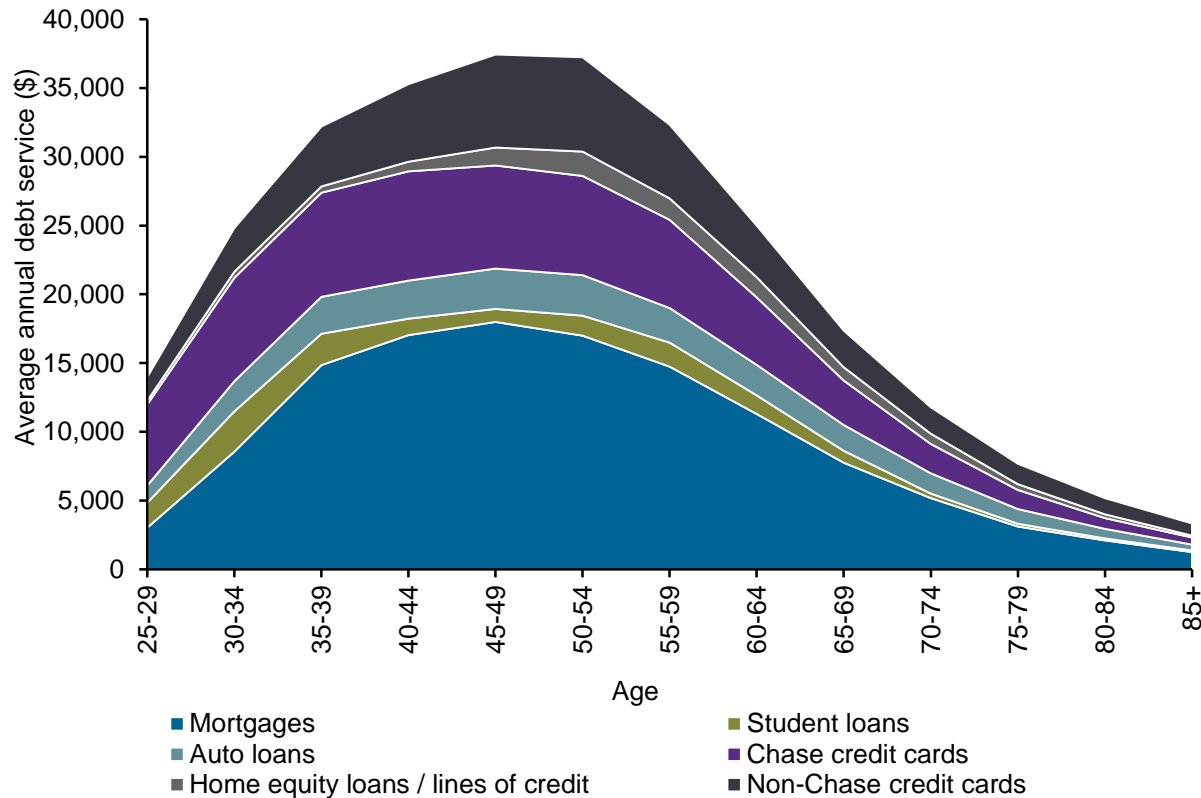


Note: A total of 689,048 households are represented in the \$50,000–\$100,000 asset range. All are included in the data whether or not they hold a particular category of debt.

Source: J.P. Morgan Asset Management, based on Chase data.

# Households in the \$500,000–\$1 million asset range

Average annual debt service for HH in \$500,000 - \$1 million asset range



Note: A total of 84,103 households are represented in the \$500,000–\$1 million asset range. All are included in the data whether or not they hold a particular category of debt.

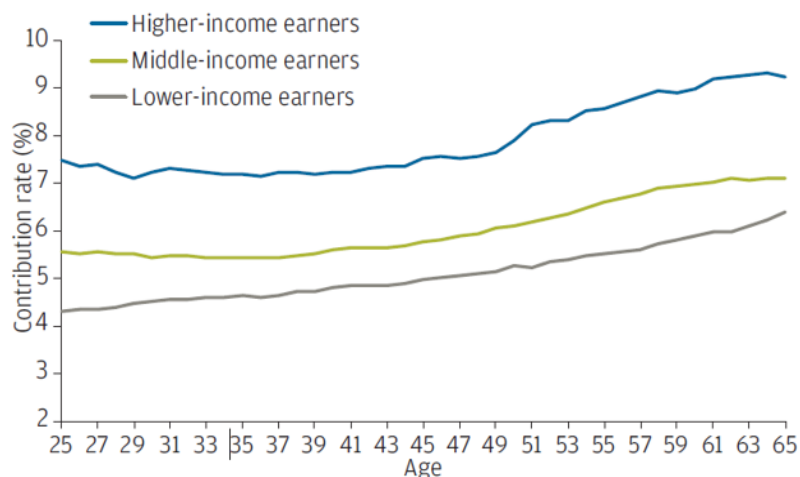
Source: J.P. Morgan Asset Management, based on Chase data.

## Next steps

- Data refinement
- Analysis of households who own each debt type
- Longitudinal view of debt decisions over time
- Debt service as a percentage of income
- Better understand the debt 'peak' across in-plan loans & observed out-of-plan debt servicing

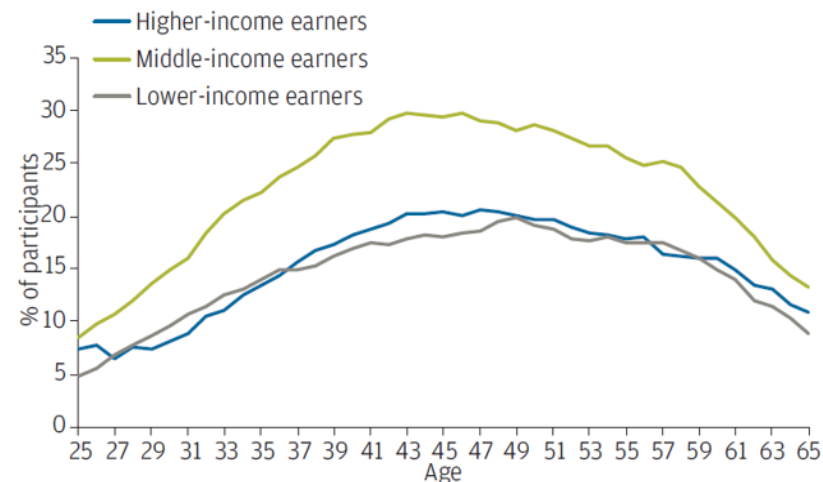
### Higher-income earners tend to contribute the highest rates

Average contribution rates by salary level



### Middle-income earners are most likely to take a loan

Percentage of participants with loans by salary level



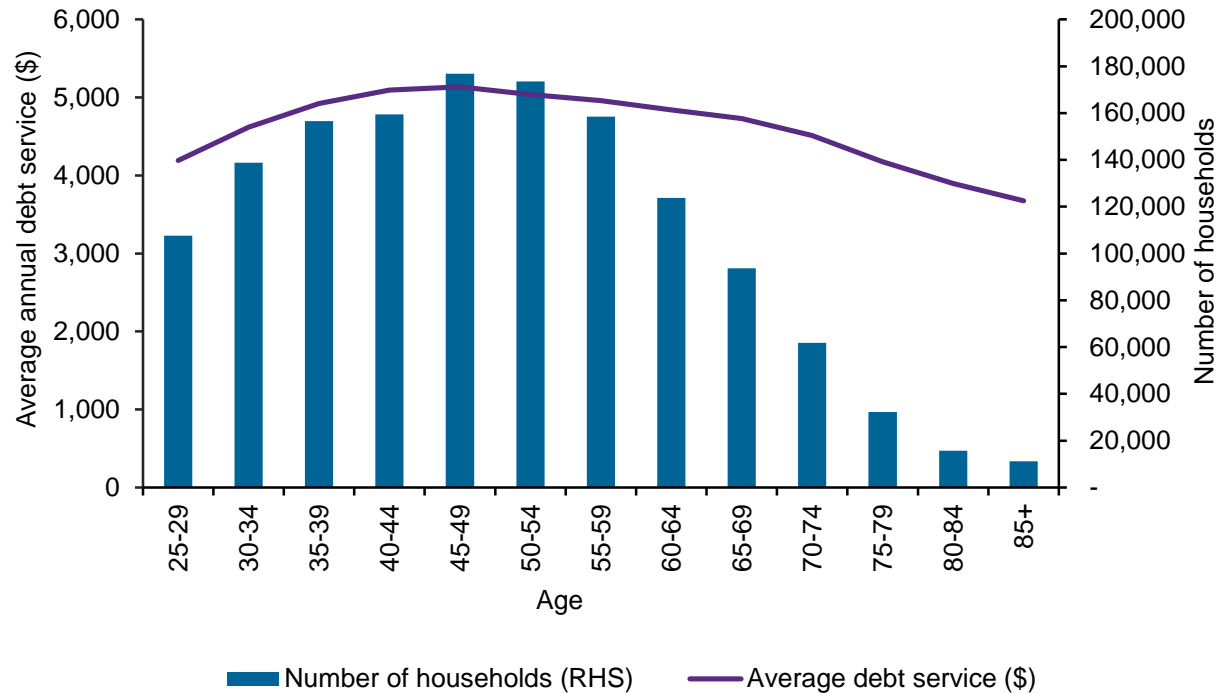
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# Appendix

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# Auto loan payments doesn't have clear life cycle pattern

Annual debt service for households with auto loans

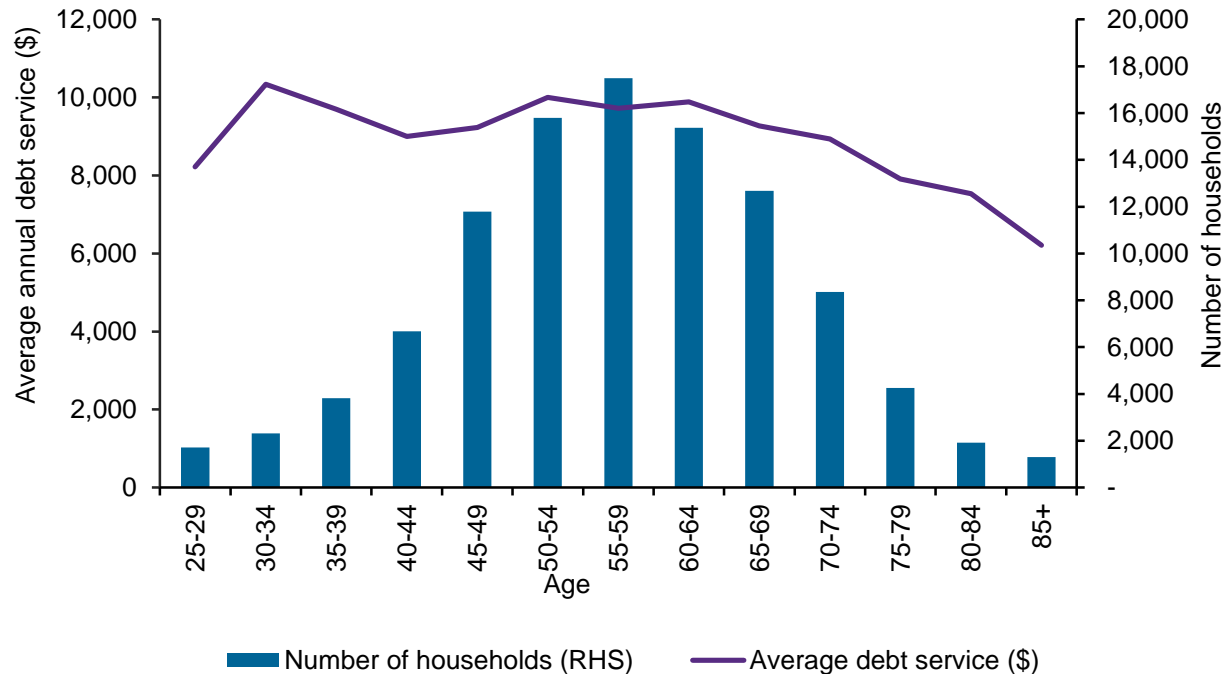


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Source: J.P. Morgan Asset Management, based on Chase data.

# Home equity loan volume peaks in late 50s

Annual debt service for households with home equity loans/lines of credit






Note: Data based on the following number of households holding a particular category of debt from the 5.1 million overall data set: 859,402 servicing student loan debt, 1,540,324 servicing mortgage debt, 2,643,601 servicing Chase credit card debt, 1,409,649 servicing auto loan debt, and 103,481 servicing home equity loan/line of credit debt.

Source: J.P. Morgan Asset Management, based on Chase data.



# Data-driven insights: Real-life participant behaviors

Big data used

| Population   | Sample data set   | History  |
|--|---|--|
|  2M people<br> From 4000 companies | <ul style="list-style-type: none"><li>■ Contributions</li><li>■ Loans</li><li>■ Distributions: pre-retirement and post-retirement</li><li>■ Salary raises</li></ul> |  <ul style="list-style-type: none"><li>■ Data starting 2001</li><li>■ Published 5 research papers</li></ul> |

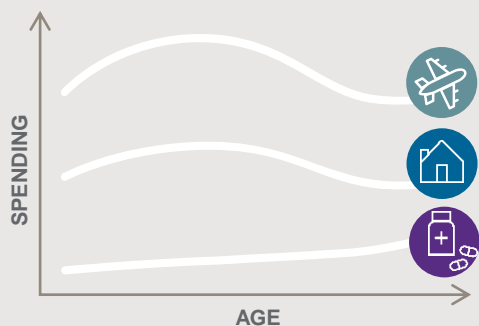
Source: J.P. Morgan Asset Management, Ready! Fire! Aim? 2018

# Data-driven insights: Real-life retiree spending behavior

Key takeaways from analyzing Chase® data starting in 2012

## 1 Spending Curve<sup>1</sup>

Overall spending level declines with age on a real dollar basis



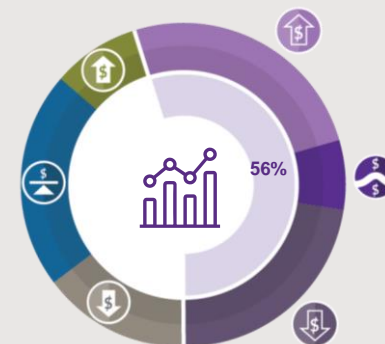
## 2 Variation in Spending<sup>2</sup>

There's wide variation in spending the year after retirement



## 3 Spending Volatility<sup>2</sup>

Spending volatility persists three years into retirement



<sup>1</sup> Source: Total spending and all category sub-totals except checks, cash and health care costs: Chase data including aggregated and de-identified Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from January 1 – December 31, 2016; J.P. Morgan analysis. <sup>2</sup> Source: Aggregated and de-identified Chase credit card, debit card, electronic payment, ATM withdrawal and check transactions from October 2012 – December 2016. Outliers in each asset group were excluded (0.1% of top spenders in each spending category). Information that would have allowed identification of specific customers was removed prior to each analysis.

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- J.P. Morgan Asset Management has put privacy protocols for its researchers in place. Researchers are obligated to use the data solely for approved research and are obligated not to re-identify any individual represented in the data.
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