

RESEARCH REPORT

Americans' Debt Styles by Age and over Time

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Americans' Debt Styles by Age and over Time

This research report, the first in a series, reviews five years of consumer credit data to better understand the debt styles of American consumers: how those styles differ for different age groups, and how those styles have evolved. Subsequent reports will explore other aspects of the data, as well as raise, and attempt to answer, some questions about why the data look as they do.

Our data consist of a random 2 percent sample of five years of depersonalized consumer data (2010–2014) from a major credit bureau. Consumers were chosen based on the last two digits of their personal identification number (assigned by the credit bureau for internal use). This generated a total of 5.314 million consumers for the August 2010 draw. The same information for each consumer was collected each August from 2010 through 2014, creating panel data with five snapshots for each consumer in the panel. If a consumer dropped out of the data (for example, because he or she passed away), a new consumer was added in a manner that retains randomness in the sample. All records were stripped of personally identifiable information, and no data on race/ethnicity, gender, or income were included. The data included zip code, age,¹ Vantage score,² information on debt in collection, and balance and payment information for each of the following trade types: auto loan, credit card, student loan, home equity line of credit, first mortgage, and second mortgage.

Test how much you know about consumer debt by taking our quiz on the next page.

Debt Style Pop Quiz

Q1: What kind of consumer debt do most Americans carry?

- a. No debt
- b. Credit card only
- c. Credit card and mortgage
- d. Credit card and auto
- e. Student loan and auto

Q2: At what age are borrowers most likely to have auto debt?

- a. 20s and 30s
- b. 30s and 40s
- c. 40s and 50s
- d. 50s and 60s
- e. 60s and up

Q3: Which types of debt have grown from 2010 to 2014?

- a. Student and auto loans
- b. Mortgages and home equity lines of credit (HELOCs)
- c. Credit cards for younger households
- d. a and b
- e. a and c

Q4: The borrower groups with the lowest credit scores are those with what kind(s) of debt?

- a. No debt
- b. Auto loans only
- c. Auto loans and credit cards
- d. Auto and student loans
- e. Auto loans, credit cards, mortgages, HELOCs, and student loans

Q5: Those with mortgage debt typically have less mortgage debt than other Americans if they have

- a. Only mortgage debt
- b. Mortgages and auto loans
- c. Mortgages and HELOCs
- d. Mortgages, auto loans, and HELOCs
- e. Mortgages, auto loans, and student loans

Answers: Q1: a (followed by b); Q2: b; Q3: e; Q4: a (followed by b); Q5: a.

If you answered all five questions correctly, you don't have to read this paper; you should have helped us write it. If you answered four questions correctly, you are a very astute observer of the debt scene and you may or may not benefit from reading on. If you answered three or fewer questions correctly, we promise you will learn something if you keep reading.

Age Patterns of All Debts

Middle-Aged Consumers Bear the Highest Debt Burden

Those without debt tend to be quite young: approximately 54.5 percent of consumers ages 18–22 are debt free, as are 39.2 percent of those between 23 and 27 (figure 1A).³ The percentage of borrowers with no debt drops steadily as borrowers age, falling to 18.1 percent for the 63–67 age group, after which it rises again, reaching 36.1 percent for those older than 77.⁴ And balances follow a similar pattern. Figure 2A shows that, for those with debt, the debt burden is lowest for the very young and the very old, peaking for borrowers between ages 38 and 52.

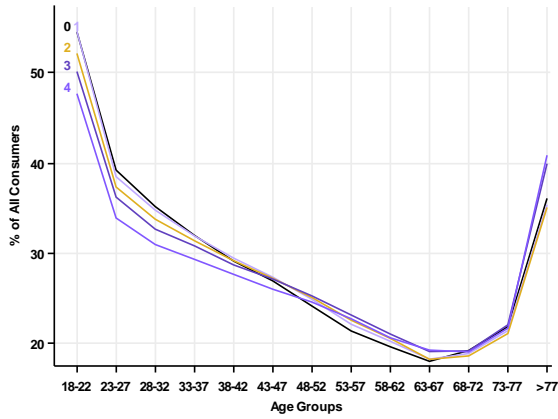
Figure 1A shows five trend lines, one for each year between 2010 and 2014. For consumers younger than 48 years old, the percentage without debt of any kind has dropped steadily; as the economy has improved, consumers have been comfortable increasing their leverage.

Figure 3A (page 9) shows the median 2014 credit scores of all consumers with and without debt. Our analysis reveals that, within each age cohort, those without debt tend to have much lower Vantage scores. For example, the 39.2 percent of 23–27-year-olds with no debt have a median Vantage score of 524, versus 669 for those who have debt. This difference is a bit narrower for older consumers, but still quite dramatic. Those over age 77 who have no debt have a median Vantage score of 675, versus 805 for consumers with debt. This suggests that those who have no debt have not built the credit history necessary to obtain debt, rather than the alternative, that they have no need for debt. Across age groups, younger consumers tend to have much lower credit scores than older consumers. For example, the median Vantage score for consumers 30 or younger is no more than 650; but it is more than 780 for consumers 68 or older.

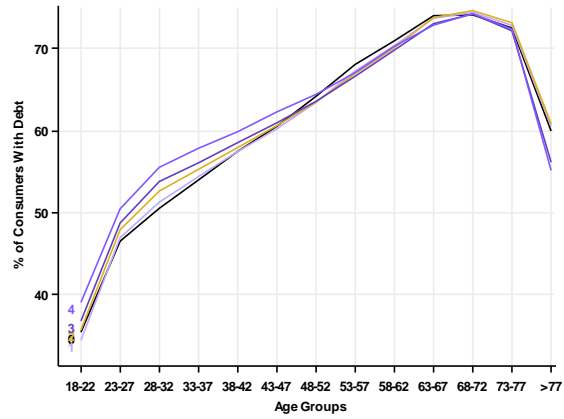
FIGURE 1

Percentage of Consumers with One of the Five Major Types of Debt, by Age Group

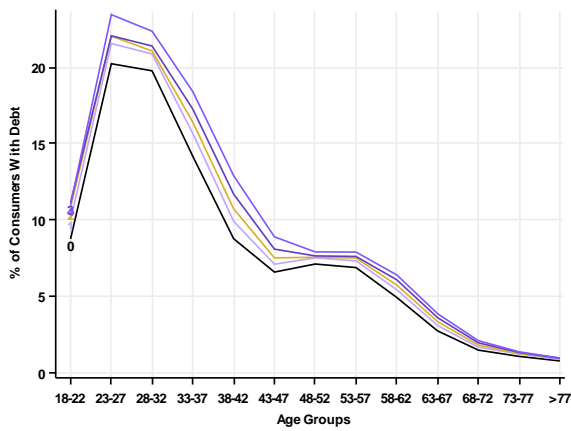
A. No debt



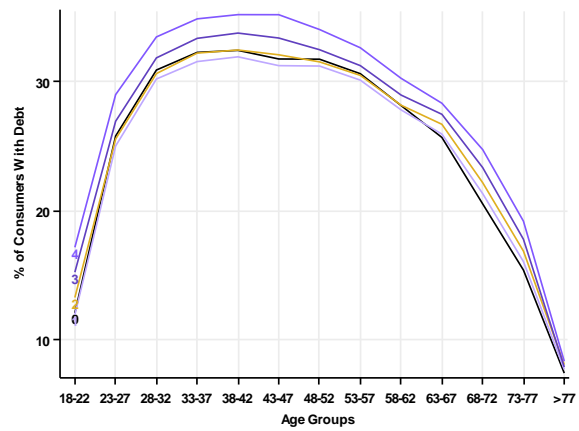
B. Credit card



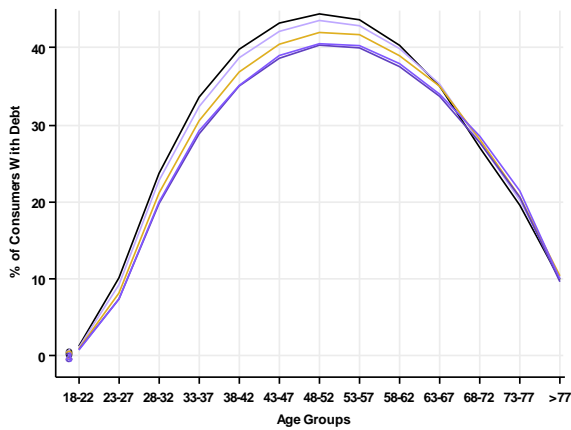
C. Student loan



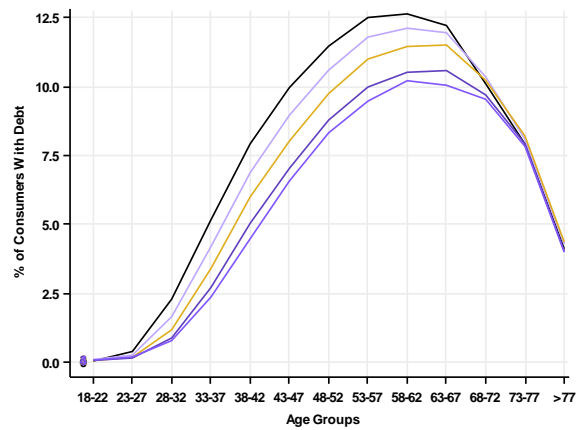
D. Auto loan



E. Mortgage



F. Home equity line of credit



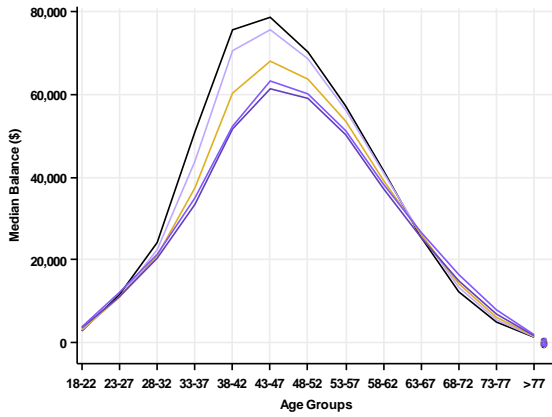
Source: Authors' calculations.

Note: Each line represents a year between 2010 and 2014.

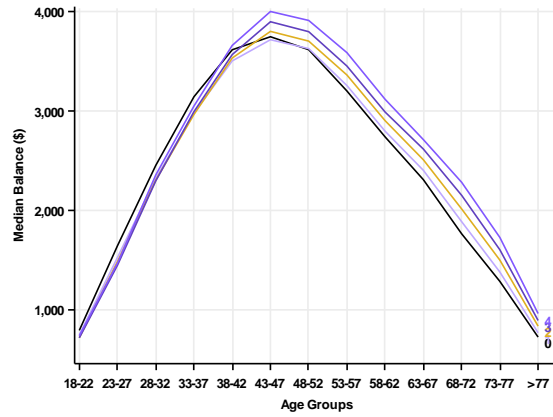
FIGURE 2

Median Balance on Major Types of Debts by Age Group

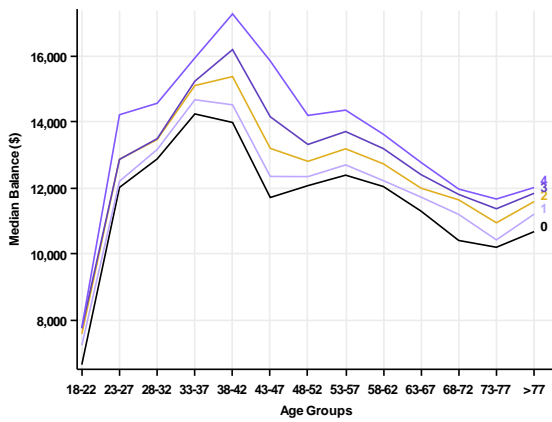
A. Any debt



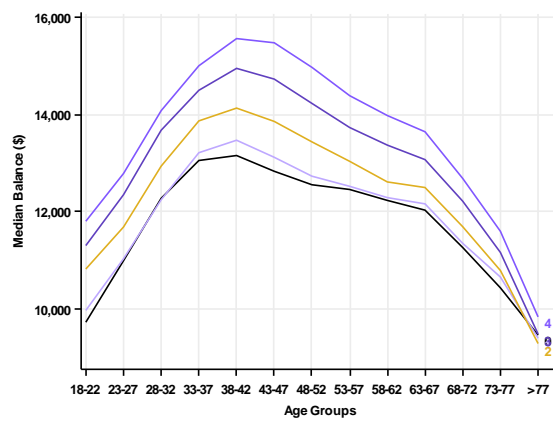
B. Credit card



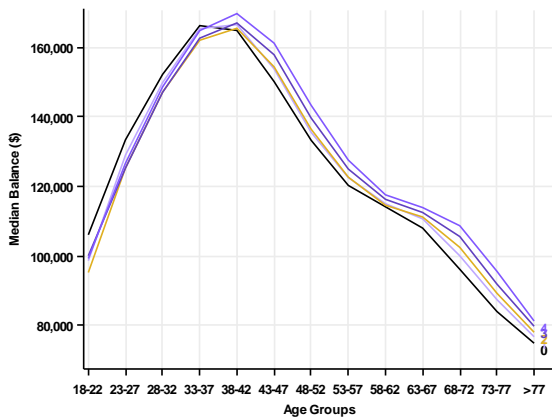
C. Student loan



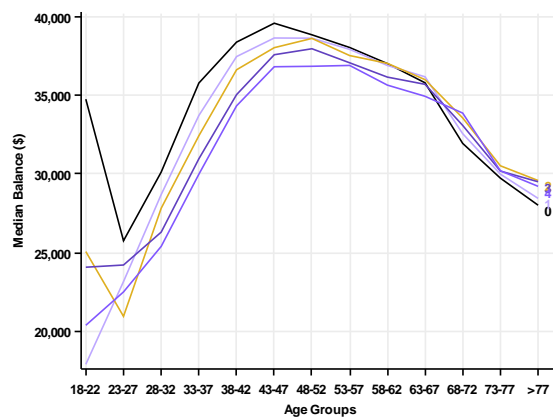
D. Auto loan



E. Mortgage



F. Home equity line of credit



Source: Authors' calculations.

Note: Each line represents a year between 2010 and 2014.

Debt Patterns and the Life-Cycle Model of Consumption

The result that the debt burden is lowest for the youngest and oldest age group is somewhat at odds with the economic literature on the life-cycle model of consumption. The model suggests that a consumer's level of consumption should be proportional to average lifetime income rather than actual income at any given age (Friedman 1956; Hall 1978; Modigliani and Brumberg 1954). That is, younger age groups theoretically consume more than their income, but as their income rises through the years, their consumption won't rise proportionately. Instead, much of the rising income is saved for retirement. During retirement, while income is low, people maintain their lifestyle by living off their savings.

We are not the first to show that this pattern does not hold. We support the conclusion of a number of earlier empirical studies that consumer's actual choices differ from those of the life-cycle model of consumption in a number of ways: First, consumers tend to borrow and consume less than predicted early in their lifetimes. Second, they also tend to consume more and save less than predicted in middle age, when they have their highest earnings; consequently they do not have enough savings to maintain their consumption levels in retirement (Bernanke 1984; Carroll 1997; Flavin 1981; Hall and Mishkin 1982; Mankiw and Shapiro 1985; Shapiro and Slemrod 2003; Souleles 1999; Stephens 2003).

Further, younger consumers tend to have lower credit scores than older consumers; and, within an age group, borrowers with no debt have lower credit scores than those with debt. Both facts support the earlier conclusion of Wilcox (1989) and Zeldes (1989): consumers avoid debt because they are constrained on what they can borrow and how much it costs, rather than because they have no need for debt.

Apart from this report, little in the literature demonstrates how the type and the amount of debt, as well as consumers credit scores by debt styles, change across age groups.

Age Patterns of Five Major Types of Debts

Debt Types by Age Groups

In 2014, the percentage of consumers with credit card spending⁵ (61 percent) exceeded the percentage of consumers with any other type of debt. The next largest debt category was auto loans (29 percent), then mortgages (28 percent), then student loans (11 percent), then HELOCs (6 percent).

Distinctive age patterns are associated with each debt type. Figure 2 shows that the percentage of consumers with each of the five major types of debt follows an inverted *U* shape, rising and then falling again as consumers move to older age groups. However, the curve for each type of debt peaks at a different age cohort and with different smoothness and symmetry. The highest percentage of consumers have credit card debt in their 30s through early 70s (figure 1B), student loan debt in their 20s and 30s (figure 1C), auto debt in their 30s through 50s (figure 1D), mortgage debt in their late 30s through early 60s (figure 1E), and HELOC debt in their early 40s through late 60s (figure 1F).

These debt patterns reflect lifestyle changes as consumers get older: they finish their higher education and largely pay off the associated debt in their 20s and 30s, finance and become auto and homeowners in their 30s through their 60s, and accumulate enough equity on their homes to finance other spending against that equity in their late 40s through late 60s.

Unfortunately, our numbers for credit card debt do not allow us to differentiate between those who use credit cards as a transaction vehicle, paying off their bills each month, and those who use credit cards as a credit vehicle to finance their purchases over time.⁶ We can see, however, that 40 percent of consumers in their early 20s have credit card spending, increasing steadily to 75 percent of consumers in their 60s and then falling again into their 70s and beyond (figure 1B).

Excluding credit card spending, the percentage of consumers without any auto, mortgage, HELOC, or student debt follows a more symmetric *U* shape: 80 percent of consumers in their early 20s do not have these types of debt. This share of consumers quickly falls to only 40 percent in their late 30s through late 50s, but rises again to more than 70 percent in their late 60s and older (figure 4).

Amount of Debt by Debt Type and Age Groups

As shown in figure 2A, consumers' median total debt balance rises from \$10,000 in their mid-20s to \$65,000 in their late 30s through early 50s, then falls again as they move to older age cohorts.

While the general inverted-*U* age patterns apply to the median balance for each type of debt, there are distinct differences among the debt types. Consumers with auto loans have the highest debt burden in from their late 30s to their 40s (\$14,000, figure 2D); consumers with mortgage debt are most burdened in their 30s and 40s (\$160,000, figure 2E); and consumers with HELOCs owe the most in their late 40s (\$36,000, figure 2F). The amount of student debt peaks from the 30s to the early 40s (\$15,000, figure 2C), an older age than the peak percentage of consumers who have student loans, perhaps reflecting higher student debt for those attending professional schools (Baum and Johnson 2015). Note

that figure 1B showed us that consumers are most likely to have credit card spending in their late 60s. However, this does not correspond to amount of credit card spending or debt; consumers in their 40s and 50s with credit card spending carry higher credit card balances (\$3,800 monthly) than other groups (figure 2B).

The percentage of auto and student loan borrowers has grown from 2010 to 2014, as have the balances of these debt types (figures 1C, 1D, 2C, and 2D; table B.3). For example, 32 percent of consumers in their 30s and 40s had auto loans in 2010, rising to 35 percent in 2014; auto debt balances for this cohort rose from \$13,000 in 2010 to \$15,000 in 2014. Similarly, 20 percent of consumers in their 20s had student loans in 2010, rising to 23 percent in 2014; student debt balances for this cohort rose from \$12,000 in 2010 to \$14,000 in 2014.

By contrast, the percentage of consumers with mortgage debt and HELOC debt has fallen, particularly for HELOC debt (figures 1E, 1F; table B.2). The proportion of consumers holding mortgage debt for the peak age cohort—late 40s—has declined from 43 percent in 2010 to 39 percent in 2014. This parallels the steady decline in the homeownership rate. However, for borrowers with mortgages, the median debt balance has risen from \$150,000 in 2010 to \$160,000 in 2014.

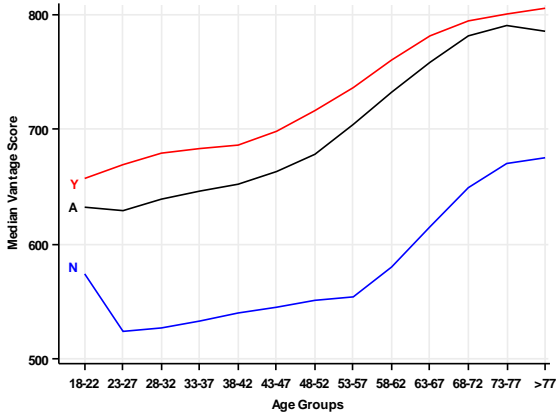
We find 12.5 percent of consumers in their 50s held HELOC debt in 2010, falling to 9.5 percent in 2014; their median HELOC balance fell from \$38,000 in 2010 to \$37,000 in 2014. The declining percentage of consumers with HELOCs most likely reflects a combination of pay-downs, foreclosures, and extremely tight credit following the financial crisis.

The percentage of consumers with credit card debt has grown from 2010 to 2014 for younger age groups (those under 48), but balances have remained largely static (figures 1B and 2B). However, for older age groups, the percentage with debt has been largely stagnant but average credit card balances have risen. For example, for consumers ages 63 to 67 there has been an increase from \$2,300 in 2010 to \$2,700 in 2014.

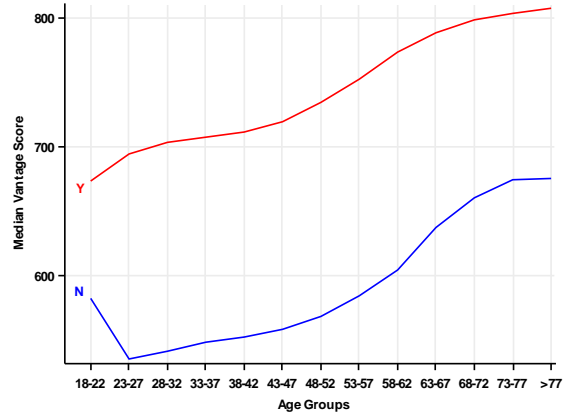
FIGURE 3

Median Vantage Scores in 2014 for Consumers with (Y) and without (N) a Type of Debt

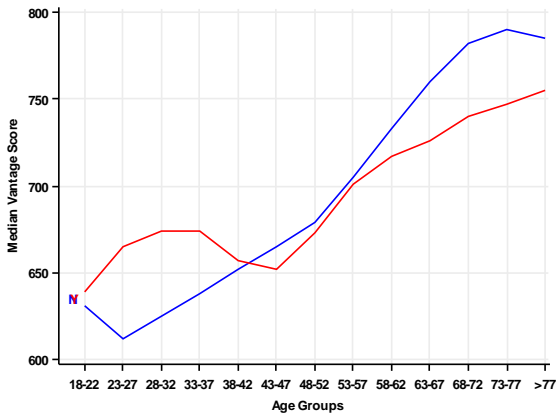
A. Any debt



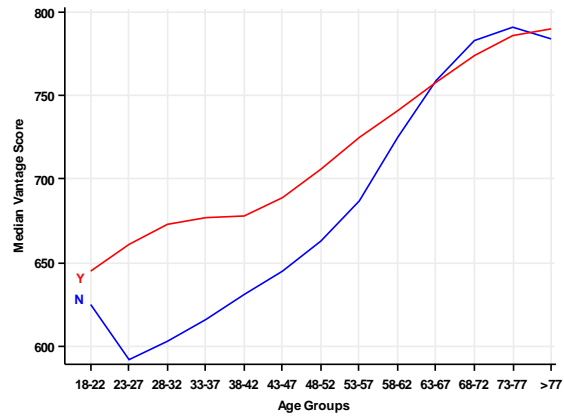
B. Credit card spending



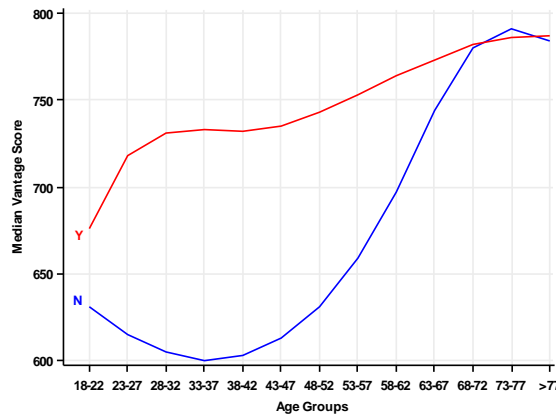
C. Student loan



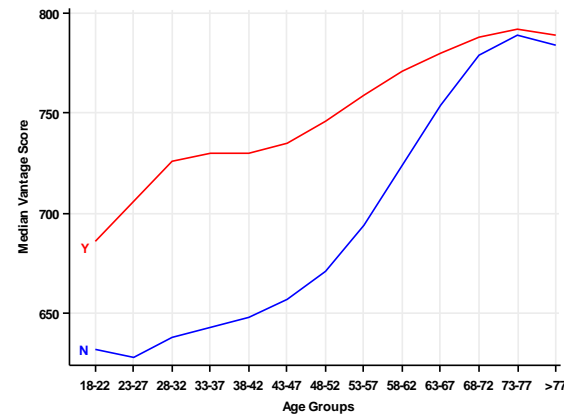
D. Auto loan



E. Mortgage



F. Home equity line of credit



Source: Authors' calculations.

Note: Curve A represents all consumers.

Consumers' Credit Scores and Debt Types

Older consumers tend to have higher credit scores than younger consumers. The median 2014 Vantage score for consumers in their 20s is 630; this number rises to more than 760 for consumers in their 60s and 70s (figure 3A and table B.4).

Within each age cohort, consumers with credit card spending have much higher median credit scores than those without, with an average 160-point gap over all age groups. While the relationship is quite strong, the causality is unclear. It is possible that those with credit card spending were those with credit scores high enough to get cards. It is also possible that responsible use of cards increased their credit scores. While the gap is largest for the youngest age groups and declines with age, the median Vantage score for consumers in their 70s with credit card spending is still 80 points higher than the score for those without (figure 3B, table B.4).

For consumers younger than their mid-60s, median credit scores are higher for consumers with mortgage debt than for those without—undoubtedly, in part, reflecting the difficulty those with low scores have in getting a mortgage. The largest gap—130 points—occurs in the late 20s and 30s, as holding a mortgage likely also reflects increased stability and, of course, the transition from renter to owner (figure 3E). This gap grows narrower as consumers age, and disappears when consumers reach their mid-60s, when many of those who had mortgages have paid them off. For those in their late 60s and older, consumers who still have mortgages actually tend to have lower credit scores than those who don't.

For those with student loans, borrowers in their late 30s, 40s, and older have lower credit scores than borrowers with no student loans (figure 3C); for auto loans, borrowers in their late 50s and older have lower credit scores than those without auto debt (figure 3D); and for HELOCs, borrowers in their early 70s and older have credit scores than those without the debt (figure 3F). We believe this crossover point reflects the age when many of the most creditworthy customers have paid off the debt in question.

Debt Styles: Combinations of Different Types of Debts

17 Debt Styles

Each of the five major types of debt reflects a different aspect of consumers' lifestyle needs. For a complete picture of a consumer's debt style, we have to look at what combinations of debts the consumer carries at any given time. The consumer may have any combination of auto, mortgage, HELOC, or student loan debt. That gives us 16 combinations; adding borrowers with only credit card balances gives us 17 debt styles. The 10 most popular combinations are shown in figure 4 (see table B.1 for a full list of all 17 debt styles). For our analysis, we have not paired credit card debt with other debt, as we cannot distinguish transaction balances from revolving balances.

The top six debt styles among consumers with a credit record, in descending order, are

1. no debt (29 percent of all consumers),
2. credit card spending only (22 percent),
3. mortgage only (13 percent),
4. auto loan only (12 percent),
5. auto and mortgage (9 percent), and
6. student loan only (4 percent).

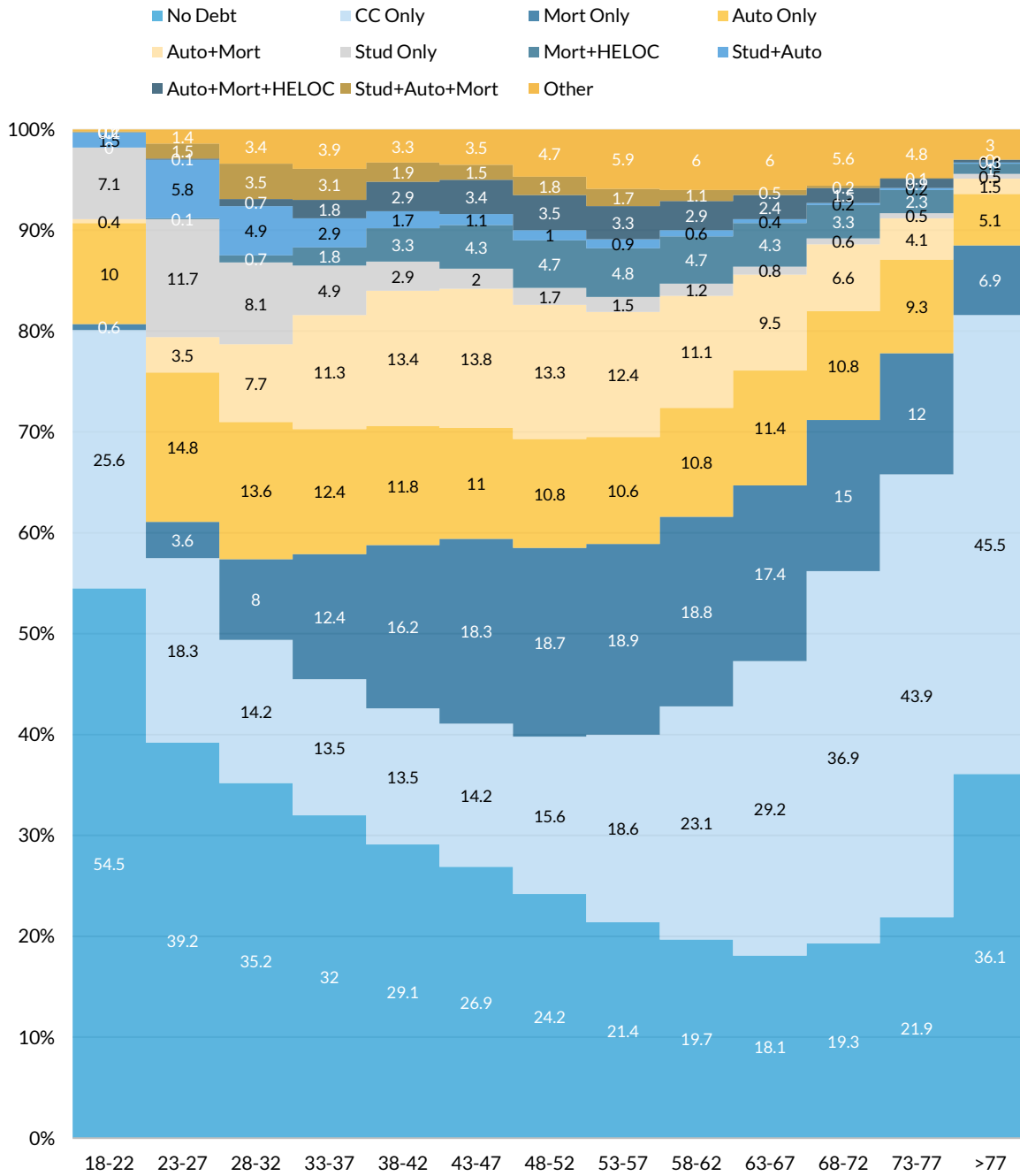
However, this rank order is not constant once we divide consumers into age groups. Rankings within age groups reveal distinct patterns of debt styles, reflecting consumers' lifestyle changes over time.

Debt Styles by Age Groups

Except for the "no debt" and "credit card only" styles, which have a *U*shape, debt styles over age follow an inverted *U*shape, first rising and then falling as consumers move to older age groups. Figure 4 shows age patterns for each debt style.

FIGURE 4

Percentage of Consumers Adopting a Debt Style, by Age Cohort



Source: Authors' calculations.

1. The “no debt” and “credit card only” debt styles dominate the oldest (82 percent) and youngest age groups (80 percent). In the middle age groups, consumers are more likely to have something other than just credit card debt: 60 percent of consumers in their 40s and 50s have at least one auto loan, student loan, mortgage, or HELOC.
2. The “mortgage debt only” style hits its high mark of 16–19 percent when consumers are in their late 30s through early 60s, while the “mortgage and HELOC together” debt styles are most common for those in their 40s through mid-60s (4–5 percent).
3. The “auto loan only” style hits its high mark of 15 percent for consumers in their 20s, but at least 10 percent of all consumers in each age cohort under 73 have an auto loan.
4. The “auto and mortgage debt together” combination hits its high mark of 13 percent with consumers in their late 30s through early 50s.
5. The “student loans only” and “student loans plus auto together” styles hits their high-water marks of 7–12 percent and 5–6 percent, respectively, for consumers in their 20s and decline quickly after the mid-30s.

In summary, for the 18 to 27 age group, the top three debt styles are “auto only,” “student loan only,” and “both auto and student loans”; for the 28 to 32 age group, the top three debt styles are “auto only,” “student only,” and “mortgage only”; for borrowers over age 32, the top three are “mortgage only,” “auto loan only,” and “both auto and mortgage loans.”

For a closer and deeper look at age patterns of the debt styles and the interrelationship between different types of debts, see appendix A.

Conclusion

In this paper, we have looked at debt styles across age groups. The basic patterns are not surprising: student loan debt is more popular among younger borrowers; mortgages are more popular among borrowers in their 30, 40s, and 50s. Home equity and “credit card only” debt is more prevalent among older adults. Vantage scores generally rise with age. Those with mortgage debt in the mix have the highest total indebtedness.

But there are a number of surprises: Consumers who have no debt have weaker credit scores than those who have debt. Consumers who have auto debt in combination with any other type of debt generally have lower credit scores than those who do not have auto debt but do have other debt. Borrowers in their 20s and early 30s with both mortgage and student loan debt have higher credit scores than borrowers in their later 30s and 40s with the same combination. Those borrowers who hold

only any one type of debt (autos, mortgages, HELOCs, credit cards) generally hold less of that type of debt than those who use that debt in combination.

We also find that consumers' actual debt patterns differ from the predictions of the life-cycle model of consumption, which can be explained by the constraints on what borrowers can borrow at what cost, rather than they have no need for debt.

Appendix A: A Closer Look at Debt Styles by Individual Debt Types

Debt styles are combinations of different types of debts. This section discusses relevant debt styles by each major debt type separately, by looking at how consumers combine a type of debt with other debt types, and how the balance on that debt differs by age cohort among different combinations. One consistent pattern is that those who have only one type of debt tend to have less of that debt than those who have that type of debt in combination with other types of debt.

One important note: for credit cards, we cannot differentiate between consumers who use their credit cards for transactional purposes and consumers who carry a revolving balance. Hence, we did not consider credit cards when discussing debt styles under each of the auto, mortgage, HELOC, and student loan sections. Instead, the last section of this appendix is devoted to “credit card only” debt and credit cards in combination with other types of debt.

Figures in appendix A are broken down to allow us to look more closely at consumers who have each debt type by debt style and age.

Auto Debt

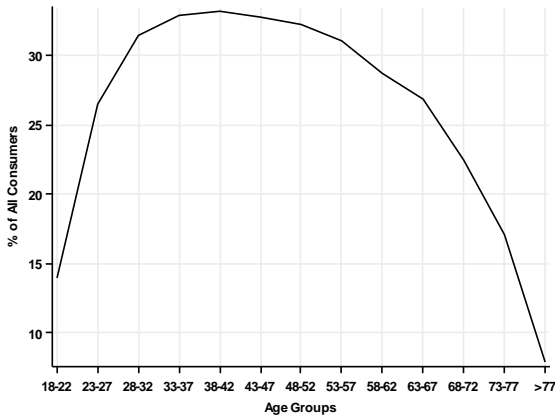
Figure A.1A shows the percentage of consumers with auto loans by age group, the same picture seen in figure 1D. For consumers in their 20s, approximately 25 percent have auto debt (figure A.1A): 14 percent have auto debt only (figure A.1B), another 6 percent have auto debt plus student loans (figure A.1C), and 3 percent have auto, and student loan debt (figure A.1D); the balance have other combinations. For consumers in their 40s, almost 40 percent have auto debt: 11 percent have auto debt only, 12.5 percent have auto and mortgage debt, 3 percent have auto, mortgage, and HELOC debt, and the balance have other combinations.

Figure A.2A shows the median balance for those who have auto debt by debt style. Those who have auto debt only have lower amounts of auto debt than those who have auto debt in combination with other debt types. Borrowers who have auto debt plus mortgage debt tend to have higher amounts of auto debt than borrowers that do not have mortgage debt. This becomes clear when comparing line 2 (auto only) to line 3 (auto + mortgage) and line 5 (auto + mortgage + HELOC), or by comparing line 4 (auto + student loan) to line 6 (auto + mortgage + student loan).

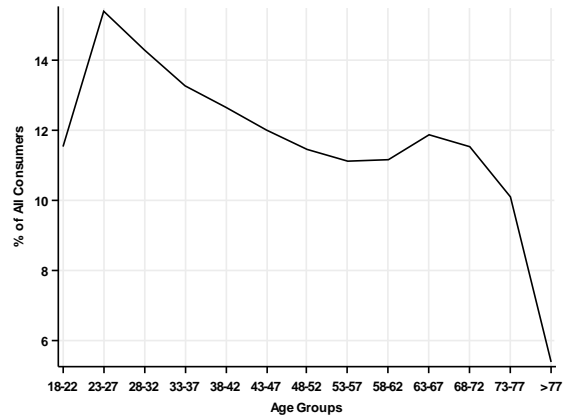
FIGURE A.1

Debt Styles of Consumers with Auto Loans, by Age Cohort

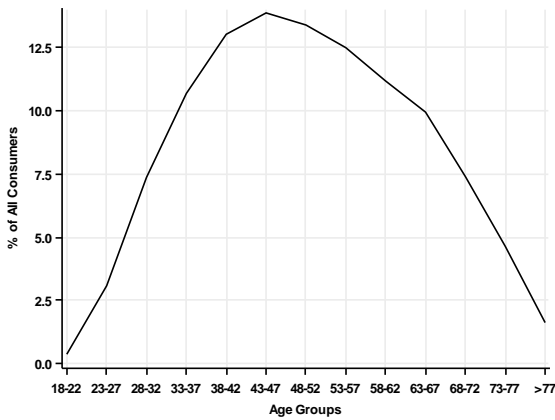
A. Percentage with auto loans



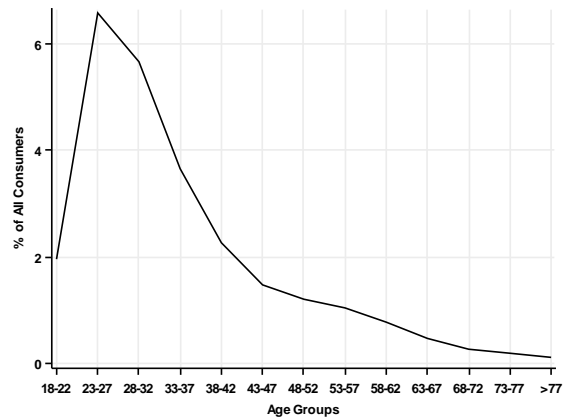
B. Percentage with only auto loans



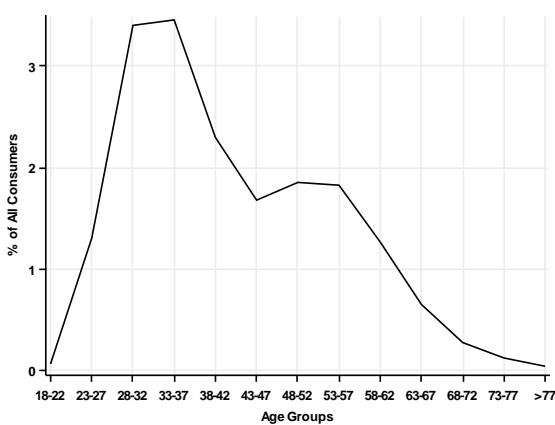
C. Percentage with auto loans + mortgages



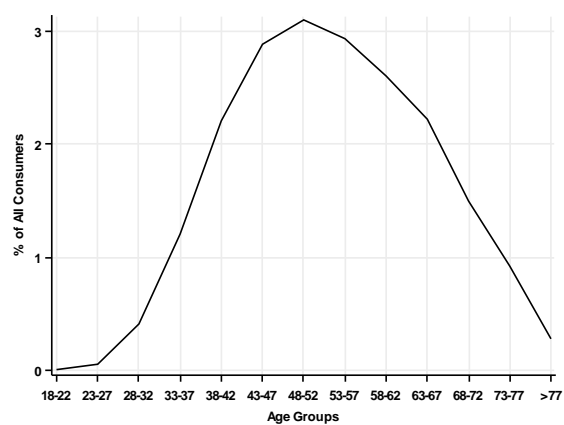
D. Percentage with auto + student loans



E. Percentage with auto + mortgage + HELOC



F. Percentage with auto + mortgage + student



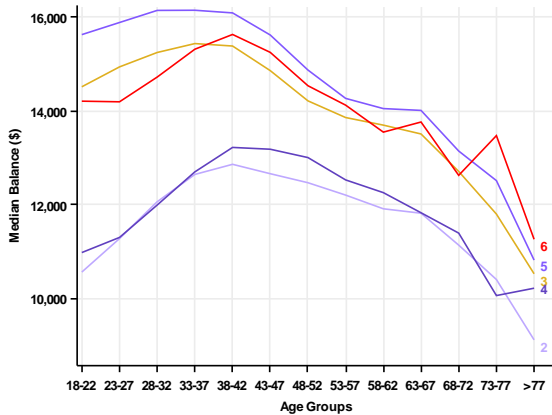
Source: Authors' calculations.

Figure A.2B shows that for all but the very oldest age groups, borrowers who have auto debt and auto plus student loan debt (lines 2 and 4) also have lower Vantage scores than borrowers who have auto debt in combination with mortgage debt (lines 3, 5, and 6).

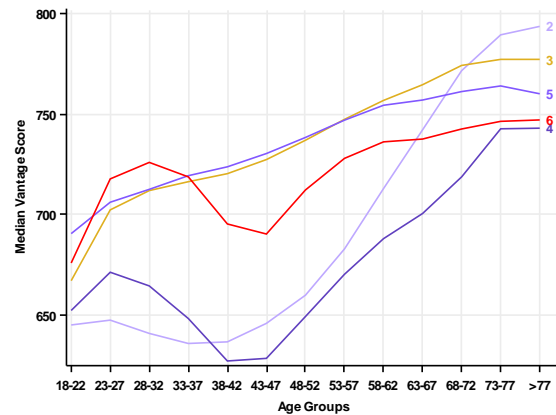
FIGURE A.2

Median Balance and Vantage Scores on Debt Styles with Auto Loan Components, by Age Cohort

A. Median balance (\$)



B. Median Vantage score



Source: Authors' calculations.

Note: Line 2 is auto only, line 3 is auto + mortgage, line 4 is auto + student loan, line 5 is auto + mortgage + HELOC, and line 6 is auto + mortgage + student loan.

Mortgage Debt

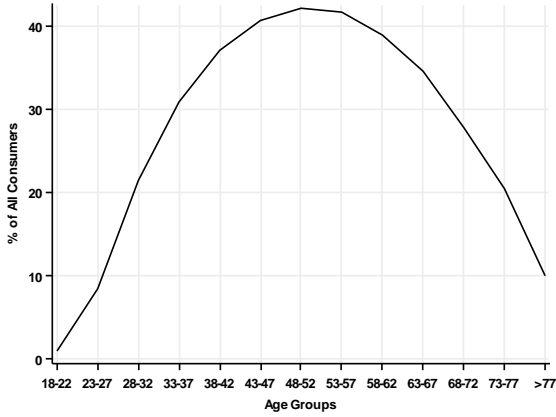
Few borrowers have mortgage debt in their 20s. By their late 40s, 40 percent have mortgage debt (figure A.3). As with auto debt, those who have mortgage debt alone have less average mortgage debt than those who have mortgage debt as well as another type of debt (figure A.4A). Consumers who also have HELOC debt have the highest amounts of mortgage debt. Consumers with mortgage debt only have higher credit scores than those who hold mortgage debt and other debt (figure A.4B).

While credit scores generally increase with age, consumers who have mortgage debt, auto debt, and student loan debt in their 20s and early 30s tend to have higher credit scores than those who have that combination by their late 30s and after (figure A.4B). One explanation: mortgage debt is relatively uncommon in one's 20s and early 30s, so perhaps those who have this debt at this age have higher incomes and better credit scores in general. Borrowers with auto debt in any combination with mortgage debt have lower credit scores than those who have no auto debt.

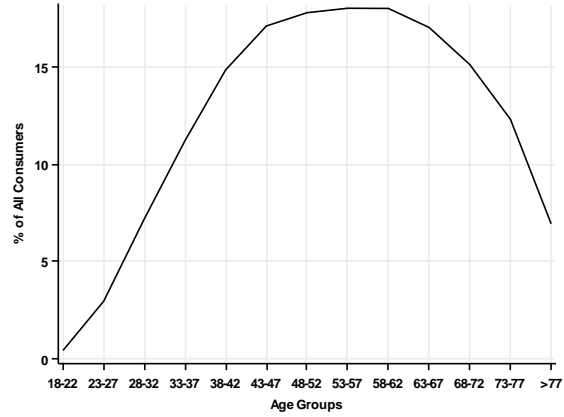
FIGURE A.3

Debt Styles of Consumers with Mortgages, by Age Cohort

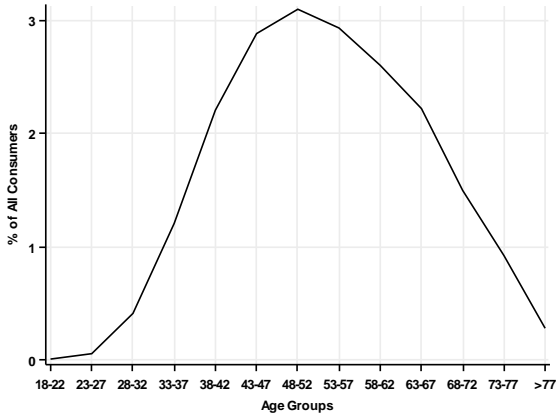
A. Percentage with mortgage



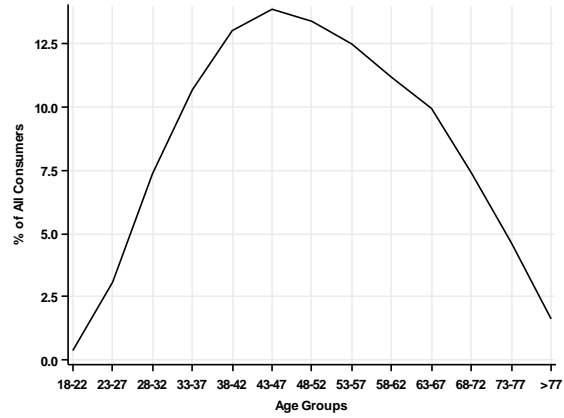
B. Percentage with mortgage only



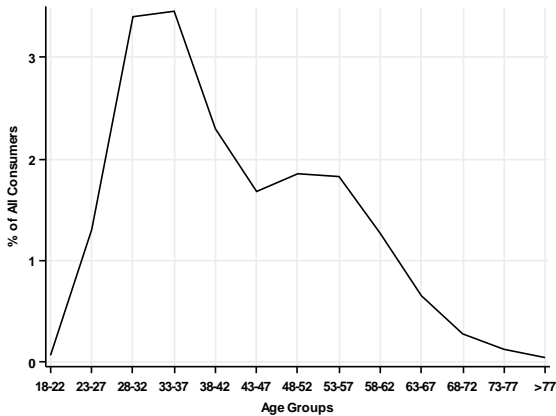
C. Percentage with mortgage + auto



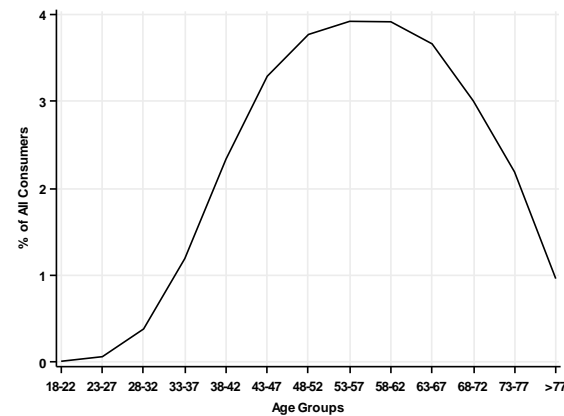
D. Percentage with mortgage + HELOC



E. Percentage with mortgage + auto + HELOC



F. Percentage with mortgage + auto + student

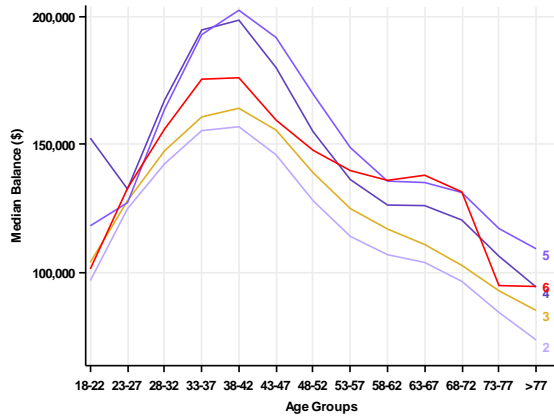


Source: Authors' calculations.

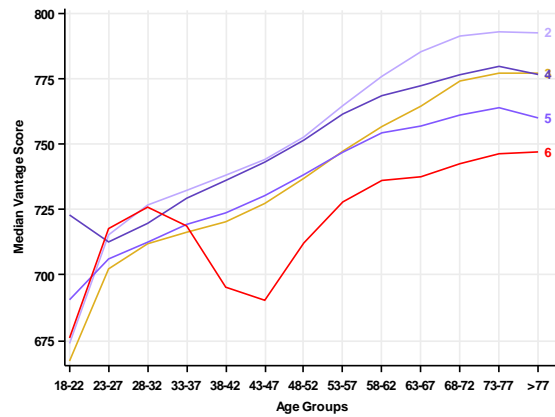
FIGURE A.4

Median Balance and Vantage Scores on Debt Styles with Mortgage Components, by Age Cohort

A. Median balance (\$)



B. Median Vantage score



Source: Authors' calculations.

Note: Line 2 is mortgage only, line 3 is mortgage + auto, line 4 is mortgage + HELOC, line 5 is mortgage + auto + HELOC, and line 6 is mortgage + auto + student loan.

HELOC Debt

HELOC debt is most commonly found as the only form of debt, or in combination with mortgage debt or mortgage and auto debt (figure A.5). Other combinations are relatively rare. We had noted earlier in the paper that HELOC debt is skewed to older borrowers, but borrowers who only have HELOC debt are even older. Those who have HELOC and mortgage debt or HELOC and mortgage and auto debt are somewhat younger.

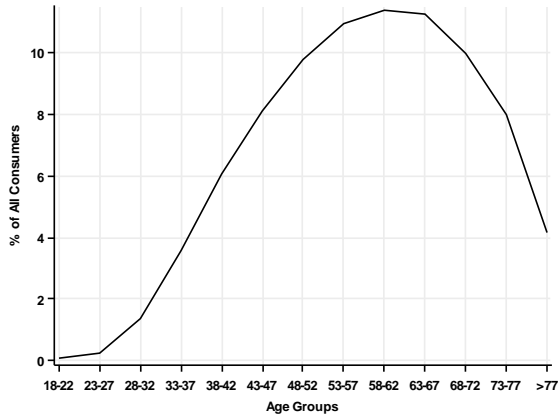
Borrowers older than their mid-50s with HELOC debt have less HELOC debt if they have only HELOC debt or HELOC and auto debt than borrowers whose debt style includes mortgage debt in any form (figure A.6A). This pattern is reversed for younger borrowers: those who hold HELOC only or HELOC and auto debt have more HELOC debt than those who hold the HELOC debt in any combination with mortgage debt. Further investigation is necessary to determine the reason for this.

Credit scores for those with HELOC debt are quite high across the board (figure A.6B). Older borrowers with HELOC debt or HELOC debt and auto debt have the highest scores. For younger borrowers with HELOCs, credit scores are fairly constant across debt styles. The only exception is that younger borrowers (under 50) who have both HELOC and auto debt have lower scores than other debt styles with HELOC debt.

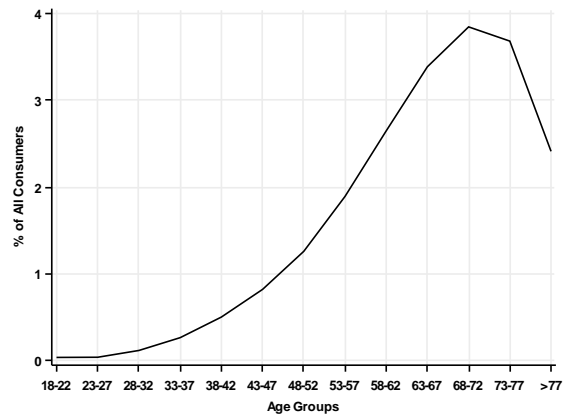
FIGURE A.5

Debt Styles for Consumers with Home Equity Lines of Credit, by Age Cohort

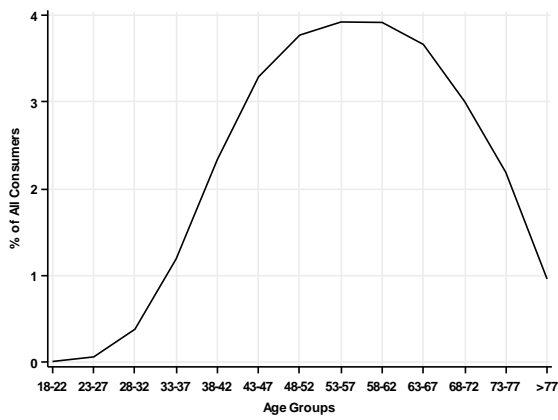
A. Percentage with HELOC



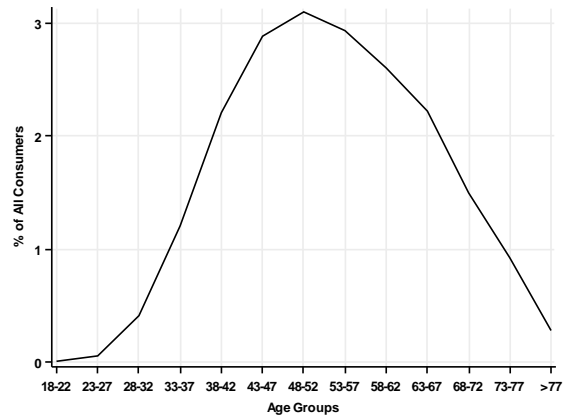
B. Percentage with Only HELOC



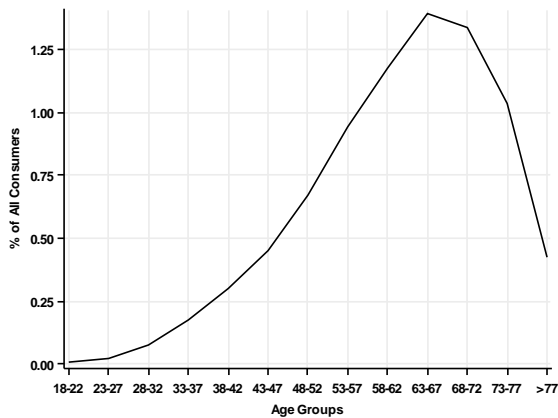
C. Percentage with HELOC+Mortgage.



D. % HELOC+Mortgage+Auto



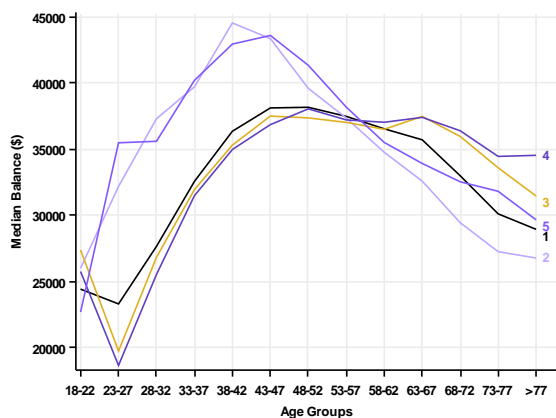
E. Percentage with HELOC+Auto



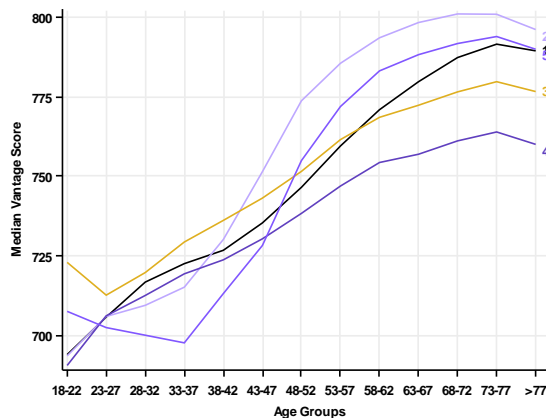
Source: Authors' calculations.

Figure A.6. Median Balance and Vantage Scores on Debt Styles with Home Equity Line of Credit Components

A. Median balance



B. Median Vantage score



Source: Authors' calculations.

Note: Line 2 is HELOC only, line 3 is HELOC + mortgage, line 4 is HELOC + mortgage + auto, and line 5 is HELOC + auto.

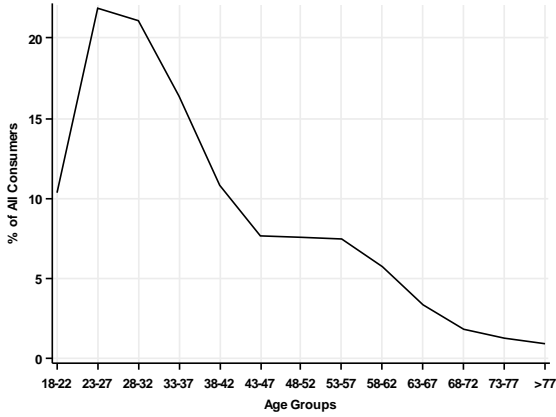
Student Loan Debt

Twenty-one percent of younger consumers have student loan debt, and approximately half of these have student loan debt only (figure A.7). The median amount of student loan debt does not vary much by debt style. Borrowers who have student loan debt only generally have slightly less student loan debt than those that have student loan debt in combination with other debt (figure A.8A). Consumers in their 30s, 40s, and 50s with student loan debt and mortgage debt, with or without auto debt, tend to have the highest amount of student loan debt of any debt style, suggesting that many have accumulated debt through graduate school. Consumers with only student loan debt tend to have lower credit scores than any other group. Those consumers who have mortgage debt in the mix have the highest credit scores (figure A.8B).

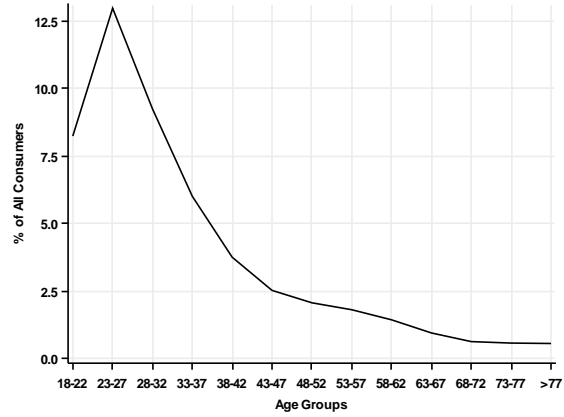
FIGURE A.7

Debt Styles of Consumers with Student Loans, by Age Cohort

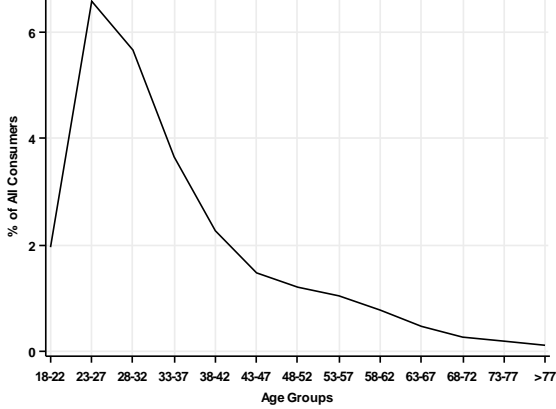
A. Percentage with student loans



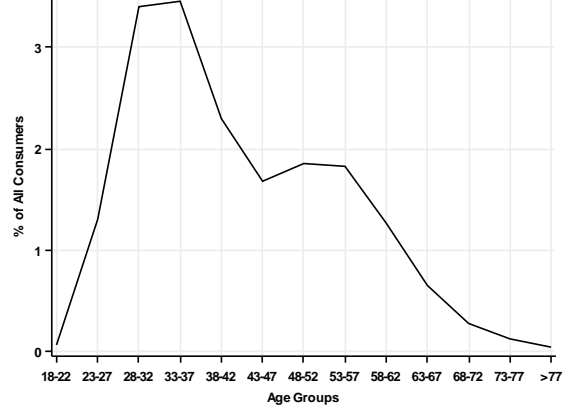
B. Percentage with student loans only



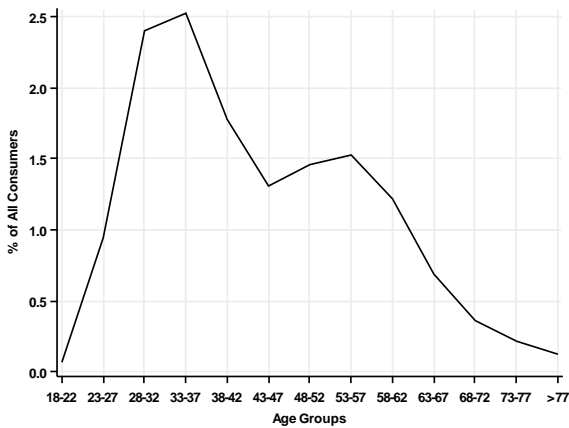
C. Percentage with student + auto



D. Percentage with student + auto + mortgage



E. Percentage with student + mortgage

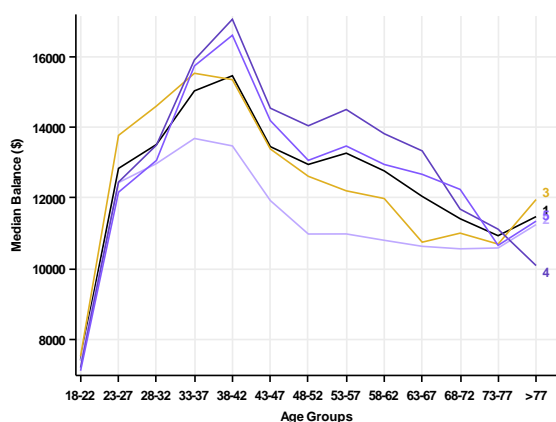


Source: Authors' calculations.

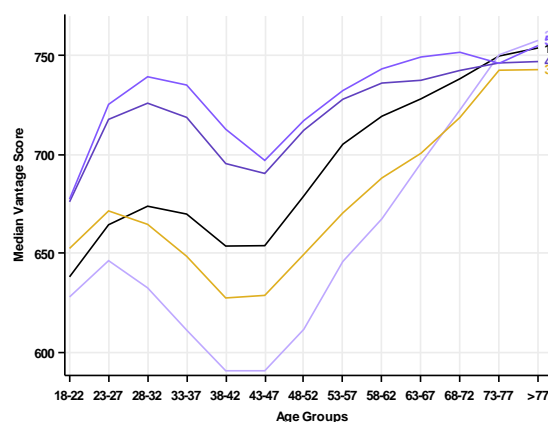
FIGURE A.8

Median Balance and Vantage Scores on Debt Styles with Student Loan Components

A. Median balance (\$)



B. Median Vantage score



Source: Authors' calculations.

Note: Line 2 is student only, line 3 is student + auto, line 4 is student + auto + mortgage, and line 5 is student + mortgage.

Credit Card Debt

Consumers with credit card debt range from 40 percent of younger borrowers to over 70 percent of borrowers in their late 50s and early 70s (figure A.9A). Not surprisingly, the percentage of “credit card only” borrowers is *U* shaped—higher for younger borrowers, reaching a low of 15 percent for those in the 30s and 40s, then beginning to rise again, reaching over 40 percent by the early 70s (figure A.9B). “Credit card and mortgage debt” and “credit card and mortgage and auto debt” have an inverted *U* shape, with peaks for consumers in their 30s, 40s, and early 50s (figures A.9C and A.9D). Credit card and auto debt is relatively constant across age groups from the mid-20s to the mid-70s, ranging from 7 to 9 percent of the total (figure A.9E). Credit card and student loan debt is, as would be expected, far more prevalent among younger age groups (figure A.9F).

Credit card balances are lowest for those with only credit card debt and highest among consumers with credit card, mortgage, and auto debt (figure A.10A). When mortgage debt is found in the mix, in any form, credit card balances are higher than when it is not. We cannot tell whether these borrowers are more apt to be carrying revolving balances or whether they are simply more affluent, so their transactions balances are higher.

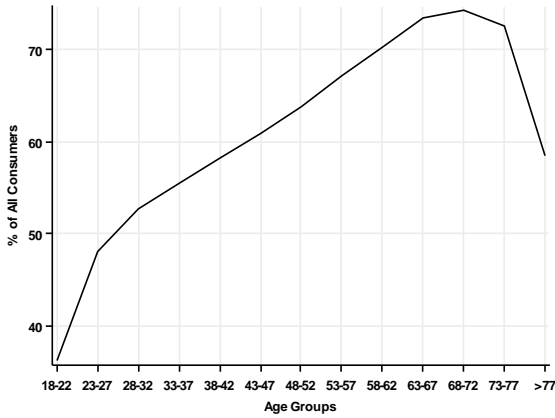
Consumers younger than mid-30s with credit card and auto debt have lower credit scores than other consumers (figure A.10B). For consumers older than this, those with credit card and student loan

debt have the lowest scores. For borrowers younger than mid-50s, those with mortgage debt have the highest credit scores. Borrowers older than this with only credit card debt have the highest scores.

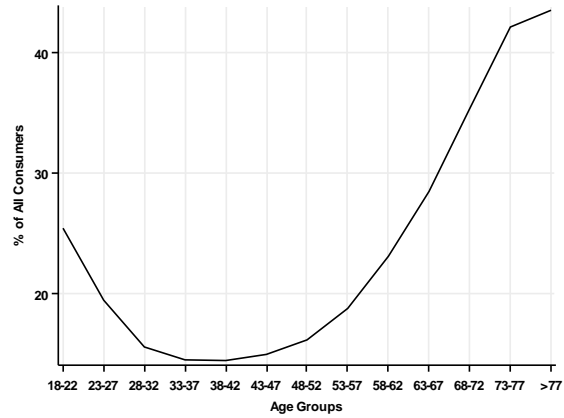
FIGURE A.9

Debt Styles of Consumers with Credit Card Debt, by Age Group

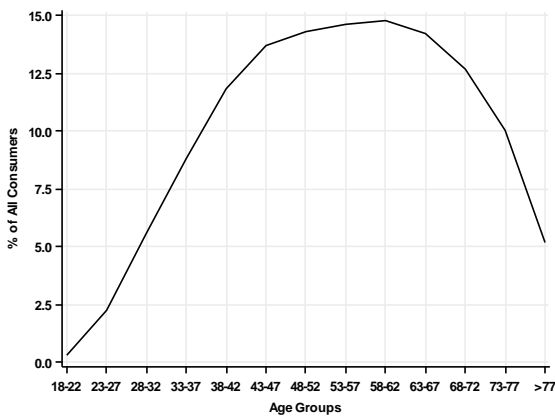
A. Percentage with credit card debt



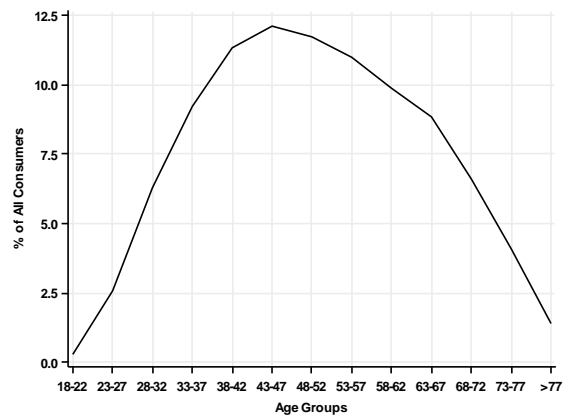
B. Percentage with credit card debt only



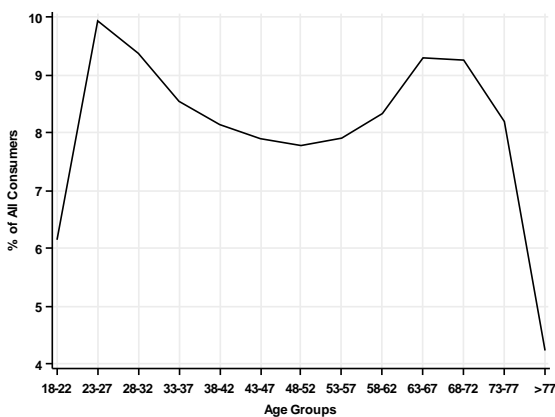
C. Percentage with credit card debt + mortgage



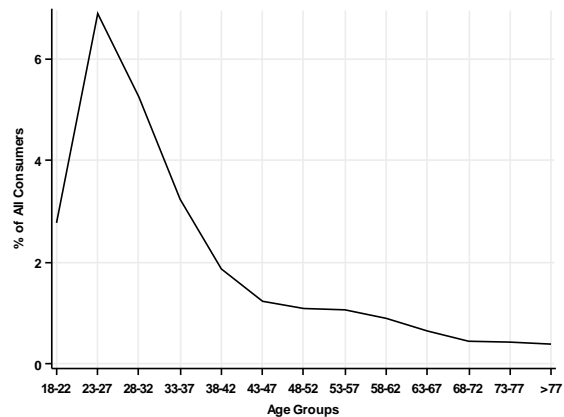
D. Percentage with credit card debt + mortgage + auto



E. Percentage with credit card debt+auto



F. Percentage with credit card debt+student

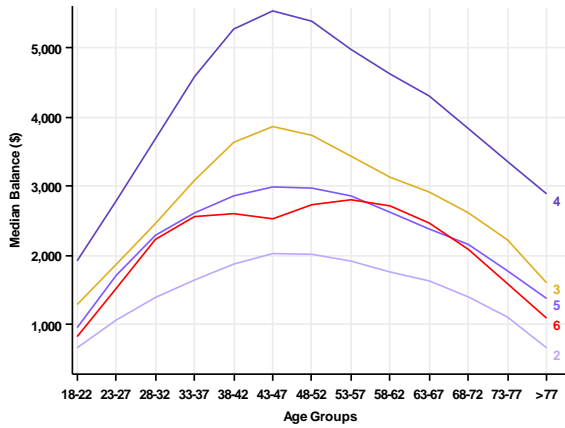


Source: Authors' calculations.

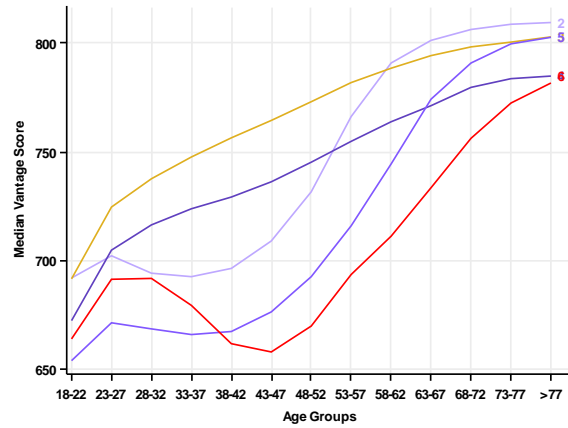
FIGURE A.10

Median Balance and Vantage Scores on Debt Styles with Credit Card Components

A. Median balance (\$)



B. Median Vantage score



Source: Authors' calculations.

Note: Line 2 is credit card only, line 3 is credit card + mortgage, line 4 is credit card + mortgage + auto, line 5 is credit card + auto, and line 6 is credit card + student loan.

Appendix B: Detailed Results

Table B.1. Percentage of Consumers with 17 Debt Styles, by Year

Debt Style	% of Consumers with Age						% of Consumers Missing Age					
	2010	2011	2012	2013	2014	Mean	2010	2011	2012	2013	2014	Mean
No debt	29.5	29.4	28.9	28.8	27.8	28.9	90.1	89.0	88.1	87.4	85.8	88.1
Credit card only	21.0	21.2	21.8	22.0	21.9	21.6	9.0	10.0	10.8	11.4	12.8	10.8
Mortgage only	13.2	13.1	12.6	12.0	11.8	12.5	0.5	0.5	0.5	0.5	0.5	0.5
Auto loan only	11.3	11.1	11.7	12.6	13.2	12.0	0.2	0.2	0.3	0.3	0.4	0.3
Auto + mortgage	9.2	9.0	9.0	8.9	9.4	9.1	0.1	0.1	0.2	0.2	0.4	0.2
Student loan only	3.7	4.2	4.4	4.5	4.5	4.3	0.1	0.1	0.1	0.0	0.0	0.1
Mortgage + HELOC	2.8	2.5	2.3	1.9	1.8	2.3						
Student + auto loans	1.9	2.0	2.2	2.4	2.7	2.2						
Auto + mortgage + HELOC	2.0	1.8	1.7	1.5	1.5	1.7						
Student + auto + mortgage	1.5	1.6	1.6	1.6	1.8	1.6						
HELOC only	1.4	1.4	1.4	1.3	1.2	1.4						
Student + mortgage	1.3	1.3	1.3	1.3	1.3	1.3						
Auto + HELOC	0.5	0.5	0.6	0.6	0.6	0.6						
All types of debts	0.3	0.3	0.3	0.2	0.2	0.3						
Student + mortgage + HELOC	0.3	0.2	0.2	0.2	0.2	0.2						
Student + HELOC	0.1	0.1	0.1	0.1	0.1	0.1						
Student + auto + HELOC	0.1	0.1	0.1	0.1	0.1	0.1						

No other debt styles

Source: Authors' calculations.

Table B.2. Percentage of Consumers Taking a Type of Debt, by Age Cohort

Debt Type	Archive Year	Age Cohort												
		18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
Auto loan	2010	12.1	25.8	30.9	32.3	32.4	31.8	31.8	30.6	28.2	25.7	20.5	15.4	7.4
	2011	12.0	25.0	30.2	31.6	31.9	31.3	31.2	30.1	27.8	25.9	21.3	16.1	7.7
	2012	13.3	25.6	30.6	32.2	32.5	32.1	31.5	30.5	28.2	26.7	22.2	16.9	8.1
	2013	15.3	26.9	31.9	33.4	33.8	33.4	32.5	31.3	29.0	27.5	23.4	17.8	7.9
	2014	17.2	29	33.5	34.9	35.2	35.2	34.0	32.6	30.3	28.3	24.8	19.2	8.4
Credit card	2010	35.4	46.5	50.5	54.0	57.5	60.5	64.2	68.1	71	74.0	74.1	72.5	60.0
	2011	34.4	46.9	51.3	54.4	57.4	60.2	63.5	67.3	70.4	73.7	74.4	72.9	61.0
	2012	35.7	47.9	52.6	55.3	57.9	60.6	63.5	67.0	70.1	73.8	74.6	73.2	61.0
	2013	36.8	48.7	53.8	56.1	58.5	60.9	63.6	66.6	69.8	73.1	74.2	72.2	56.0
	2014	39.0	50.4	55.5	57.8	59.9	62.3	64.4	67.1	70.3	72.9	74.3	72.4	55.0
HELOC	2010	0.1	0.4	2.3	5.2	7.9	10.0	11.5	12.5	12.6	12.2	10.1	7.9	4.1
	2011	0.1	0.3	1.7	4.2	6.9	9.0	10.6	11.8	12.1	11.9	10.3	8.1	4.3
	2012	0.1	0.2	1.2	3.4	6.0	8.0	9.7	11.0	11.4	11.5	10.2	8.2	4.4
	2013	0.1	0.2	0.9	2.7	5.0	7.0	8.8	10.0	10.5	10.6	9.7	7.9	4.0
	2014	0.1	0.2	0.8	2.4	4.5	6.6	8.3	9.5	10.2	10.0	9.5	7.8	4.0
Mortgage	2010	1.3	10.1	23.7	33.6	39.8	43.2	44.4	43.7	40.3	35.0	27.1	19.6	9.9
	2011	1.1	9.2	22.8	32.4	38.7	42.2	43.6	42.9	39.9	35.3	27.8	20.2	10.0
	2012	0.9	8.1	21.1	30.5	36.9	40.5	42.0	41.7	39	35.0	28.1	20.6	10.0
	2013	0.8	7.4	19.8	28.8	35.1	38.7	40.4	40.0	37.6	33.7	27.7	20.6	9.6
	2014	0.7	7.4	20.0	29.2	35.1	39.0	40.6	40.3	38	34.0	28.5	21.4	10.0
Student loan	2010	8.8	20.2	19.8	14.2	8.8	6.6	7.1	6.9	4.9	2.8	1.5	1.1	0.8
	2011	10	21.6	20.9	15.7	9.9	7.1	7.5	7.3	5.5	3.1	1.7	1.2	0.9
	2012	10.8	22.0	21.1	16.4	10.7	7.5	7.6	7.5	5.8	3.4	1.8	1.3	1.0
	2013	11.1	22.1	21.4	17.3	11.7	8.1	7.7	7.6	6.1	3.6	2.0	1.4	1.0
	2014	11.0	23.4	22.4	18.4	12.9	8.9	7.9	7.9	6.4	3.9	2.1	1.4	1.0

Source: Authors' calculations.

Table B.3. Balance on Type of Consumer Debt by Age Cohort (\$)

Debt Type	Archive Year	Age Cohort												
		18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
All	2010	2,851	11,637	24,198	50,893	75,573	78,599	70,214	57,193	41,640	25,500	12,320	4,996	1,340
	2011	3,028	11,028	22,472	43,806	70,539	75,601	68,567	56,214	41,141	26,163	13,406	5,549	1,436
	2012	3,215	11,050	21,046	37,381	60,290	68,008	63,652	53,537	39,258	26,187	14,281	6,156	1,580
	2013	3,605	11,152	20,420	33,401	51,636	61,336	59,014	50,262	37,263	25,444	14,971	6,928	1,718
	2014	3,817	12,179	21,348	34,955	52,298	63,219	60,094	51,229	38,328	26,705	16,487	7,955	1,951
Auto loan	2010	9,729	10,994	12,277	13,054	13,156	12,832	12,555	12,458	12,233	12,033	11,265	10,436	9,464
	2011	9,973	11,034	12,247	13,214	13,471	13,119	12,731	12,523	12,291	12,162	11,351	10,658	9,401
	2012	10,823	11,686	12,939	13,868	14,131	13,857	13,436	13,037	12,613	12,498	11,693	10,792	9,291
	2013	11,305	12,350	13,677	14,497	14,948	14,727	14,227	13,732	13,370	13,072	12,218	11,164	9,485
	2014	11,805	12,786	14,079	15,001	15,560	15,474	14,968	14,387	13,978	13,644	12,685	11,598	9,839
Credit card	2010	792	1,645	2,452	3,143	3,615	3,746	3,616	3,200	2,738	2,308	1,764	1,285	725
	2011	748	1,527	2,322	2,981	3,503	3,716	3,627	3,255	2,795	2,402	1,886	1,379	768
	2012	719	1,485	2,303	2,965	3,532	3,800	3,702	3,361	2,901	2,508	2,014	1,499	835
	2013	717	1,449	2,296	2,993	3,567	3,897	3,797	3,451	2,988	2,616	2,151	1,603	892
	2014	738	1,469	2,356	3,050	3,659	4,000	3,910	3,586	3,116	2,711	2,282	1,727	962
HELOC	2010	34,767	25,769	30,133	35,794	38,394	39,594	38,857	38,052	37,029	35,808	31,956	29,746	28,030
	2011	17,916	23,174	28,707	33,732	37,474	38,655	38,643	37,934	36,912	36,190	32,573	30,002	28,462
	2012	25,081	20,964	27,835	32,445	36,635	38,041	38,628	37,539	37,045	36,009	33,574	30,532	29,597
	2013	24,087	24,227	26,317	30,981	35,056	37,592	37,971	37,079	36,170	35,712	33,098	30,199	29,519
	2014	20,396	22,516	25,411	30,000	34,344	36,827	36,857	36,912	35,662	34,951	33,882	30,212	29,228
Mortgage	2010	106,120	133,445	152,280	166,289	164,912	150,209	133,291	120,316	114,164	108,045	96,195	84,039	74,929
	2011	98,653	129,039	149,914	165,428	166,584	153,855	135,562	122,571	115,048	110,708	100,076	87,464	76,781
	2012	95,271	125,353	147,163	162,091	165,533	154,435	136,469	122,680	114,605	111,237	102,499	89,293	78,082
	2013	100,086	125,297	147,119	162,696	167,063	157,926	139,688	125,024	116,317	112,535	105,613	91,932	79,811
	2014	99,301	126,706	148,672	164,873	169,755	161,266	143,356	127,591	117,613	113,946	108,721	95,613	81,315
Student loan	2010	6,665	12,025	12,886	14,246	13,988	11,719	12,078	12,394	12,051	11,307	10,420	10,215	10,687
	2011	7,249	12,211	13,172	14,675	14,521	12,356	12,351	12,704	12,229	11,731	11,208	10,437	11,215
	2012	7,596	12,877	13,472	15,104	15,375	13,205	12,813	13,191	12,738	12,002	11,648	10,955	11,595
	2013	7,764	12,871	13,499	15,237	16,191	14,161	13,323	13,713	13,198	12,411	11,812	11,379	11,847
	2014	7,787	14,222	14,569	15,940	17,270	15,848	14,201	14,361	13,631	12,780	11,974	11,673	12,020

Source: Authors' calculations.

Table B.4. Consumers' Median Vantage Scores with and without a Type of Debt, by Age Cohort

Debt Type	With and without Debt	Archive Year	Age Cohort												
			18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
All	With	2010	552	523	524	528	533	537	545	552	583	619	658	676	722
		2011	552	524	524	531	536	541	548	554	586	617	656	675	716
		2012	560	524	525	532	537	542	549	553	583	611	653	673	711
		2013	562	524	526	532	538	543	549	553	580	608	647	668	675
		2014	574	524	527	533	540	545	551	554	580	615	649	670	675
	Without	2010	662	668	671	677	688	706	725	745	768	786	796	802	806
		2011	661	670	674	680	689	705	723	744	767	785	797	803	806
		2012	660	670	675	680	687	701	720	741	764	783	795	801	805
		2013	659	669	677	681	686	700	718	739	762	782	794	801	805
		2014	657	669	679	683	686	698	716	736	760	781	794	800	805
Auto loan	With	2010	602	575	586	607	629	650	672	710	744	775	789	796	792
		2011	602	579	590	610	628	648	669	704	740	773	789	796	793
		2012	611	582	593	610	626	645	666	697	732	768	787	794	792
		2013	619	586	597	611	628	643	663	690	727	762	784	791	785
		2014	625	592	603	616	631	645	663	687	725	759	783	791	784
	Without	2010	647	661	665	668	674	688	706	723	739	755	770	782	784
		2011	647	664	671	673	679	691	709	725	741	756	773	784	788
		2012	647	664	672	675	678	690	707	725	740	756	772	783	788
		2013	646	662	672	675	677	689	706	724	741	757	773	784	789
		2014	645	661	673	677	678	689	706	725	741	758	774	786	790
Credit card	With	2010	558	527	536	543	549	552	563	582	609	642	667	689	722
		2011	568	531	539	546	552	555	566	585	609	640	665	675	718
		2012	578	531	539	546	552	556	566	584	607	635	663	675	714
		2013	580	533	540	547	552	557	566	582	604	631	656	672	675
		2014	582	535	541	548	552	558	568	584	604	637	660	674	675
	Without	2010	683	694	700	708	717	730	745	763	780	792	800	805	808
		2011	682	696	702	709	717	729	744	762	780	792	801	806	808
		2012	680	695	701	707	713	725	740	759	778	790	799	804	807
		2013	677	695	703	707	712	722	737	756	776	789	798	804	807
		2014	673	694	703	707	711	719	734	752	773	788	798	803	807
HELOC	With	2010	618	613	621	630	640	654	673	703	734	767	786	794	792
		2011	619	618	626	634	643	656	673	701	731	764	786	795	793
		2012	624	620	629	636	643	655	671	698	727	760	784	793	792
		2013	629	623	633	639	645	655	670	695	724	755	780	790	785
		2014	632	628	638	643	648	657	671	694	724	754	779	789	784
	Without	2010	699	699	709	717	727	737	748	761	771	780	787	791	790
		2011	696	707	715	721	727	737	749	761	772	780	788	792	791
		2012	696	708	716	721	725	735	746	759	771	779	787	791	789
		2013	693	709	718	724	725	733	744	758	770	780	787	792	789
		2014	686	706	726	730	730	735	746	759	771	780	788	792	789
Mortgage	With	2010	616	594	585	586	592	605	631	667	715	765	788	796	792
		2011	617	599	590	590	595	608	631	666	710	761	788	796	794
		2012	623	604	594	594	598	610	630	664	706	755	785	794	792
		2013	628	609	600	597	602	612	631	661	701	747	782	791	786

		2014	631	615	605	600	603	613	631	659	697	744	780	791	784
	Without	2010	669	706	714	717	723	732	743	754	765	775	783	786	787
		2011	672	711	720	723	726	733	743	754	765	774	784	787	789
		2012	672	713	722	724	725	732	741	753	763	773	782	786	788
		2013	670	715	726	727	727	732	741	752	763	773	781	785	786
		2014	676	718	731	733	732	735	743	753	764	773	782	786	787
Student loan	With	2010	616	592	606	630	649	665	686	716	744	771	787	794	792
		2011	617	596	610	632	651	665	684	713	742	769	787	795	793
		2012	623	601	615	633	649	664	681	709	737	766	785	793	792
		2013	627	607	620	634	650	663	679	705	734	762	782	790	786
		2014	631	612	625	638	652	665	679	705	733	760	782	790	785
	Without	2010	633	666	674	665	651	657	687	709	721	730	735	749	752
		2011	638	665	675	669	653	655	683	708	721	729	738	751	757
		2012	640	664	673	669	652	652	678	706	720	729	741	754	753
		2013	640	662	673	672	655	653	674	702	718	727	738	749	753
		2014	639	665	674	674	657	652	673	701	717	726	740	747	755

Source: Authors' calculations.

Table B.5. Percentage of Consumers Taking 1 of 17 Debt Styles, by Age Cohort

Debt Style	Archive Year	Age Cohort												
		18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
No debt	2010	54.5	39.2	35.2	32.0	29.1	26.9	24.2	21.4	19.7	18.1	19.3	21.9	36.0
	2011	54.5	38.5	34.8	31.9	29.5	27.4	24.9	22.2	20.3	18.3	18.9	21.4	35.0
	2012	52.1	37.3	33.8	31.4	29.2	27.2	25.1	22.6	20.6	18.3	18.7	21.1	35.0
	2013	50.1	36.2	32.7	30.8	28.7	27.1	25.3	23.2	21.1	19.1	19.2	22.1	40.0
	2014	47.6	33.9	31.0	29.3	27.7	26.0	24.6	22.8	20.7	19.3	19.1	21.7	41.0
Credit card only	2010	25.6	18.3	14.2	13.5	13.5	14.2	15.6	18.6	23.1	29.2	36.9	43.9	46.0
	2011	24.7	19.0	14.8	14.0	13.9	14.6	15.7	18.6	23.1	28.7	36.1	43.2	46.0
	2012	25.3	19.8	15.9	14.8	14.7	15.2	16.3	18.8	23.2	28.6	35.6	42.6	45.0
	2013	25.4	20.2	16.5	15.1	15.1	15.5	16.7	19.1	23.3	28.4	34.7	41.1	42.0
	2014	26.3	20.1	16.6	15.2	15.2	15.5	16.6	18.8	23.0	27.8	33.7	40.1	40.0
Mortgage only	2010	0.6	3.6	8.0	12.4	16.2	18.3	18.7	18.9	18.8	17.4	15.0	12.0	6.9
	2011	0.5	3.3	7.7	12.1	15.9	18.1	18.6	18.7	18.6	17.5	15.3	12.3	7.1
	2012	0.4	2.9	7.2	11.2	14.9	17.3	17.9	18.2	18.1	17.3	15.3	12.4	7.2
	2013	0.3	2.6	6.7	10.3	13.9	16.2	17.1	17.3	17.4	16.5	15.0	12.3	6.7
	2014	0.3	2.4	6.5	10.1	13.4	15.7	16.7	17.0	17.1	16.4	15.0	12.6	6.9
Auto loan only	2010	10.0	14.8	13.6	12.4	11.8	11.0	10.8	10.6	10.8	11.4	10.8	9.3	5.1
	2011	9.8	14.2	13.1	12.2	11.6	10.9	10.6	10.4	10.5	11.3	11.0	9.6	5.3
	2012	10.9	14.8	14.0	13.0	12.3	11.7	11.2	10.9	10.9	11.7	11.3	10.0	5.5
	2013	12.6	16.1	15.1	14.1	13.6	12.9	12.1	11.6	11.6	12.3	12.0	10.5	5.4
	2014	14.4	17.2	15.7	14.6	14.0	13.5	12.6	12.1	12.0	12.6	12.5	11.2	5.6
Auto + mortgage	2010	0.4	3.5	7.7	11.3	13.4	13.8	13.3	12.4	11.1	9.5	6.6	4.1	1.5
	2011	0.4	3.3	7.5	10.8	13.1	13.6	13.2	12.3	11.0	9.7	7.0	4.3	1.6
	2012	0.4	3.0	7.2	10.5	12.9	13.7	13.2	12.3	11.0	10.0	7.4	4.6	1.7
	2013	0.3	2.8	7.0	10.2	12.7	13.7	13.3	12.4	11.0	10.1	7.7	4.8	1.6
	2014	0.3	2.8	7.3	10.6	13.1	14.5	14.0	13.0	11.6	10.5	8.3	5.4	1.8
Student loan only	2010	7.1	11.7	8.1	4.9	2.9	2	1.7	1.5	1.2	0.8	0.6	0.5	0.5
	2011	8.2	13.0	9.0	5.7	3.4	2.3	2	1.7	1.3	0.9	0.6	0.6	0.5
	2012	8.8	13.4	9.5	6.2	3.8	2.5	2.1	1.8	1.4	0.9	0.6	0.6	0.6
	2013	8.8	13.2	9.7	6.5	4.1	2.8	2.2	1.9	1.6	1.1	0.7	0.6	0.6
	2014	8.4	13.6	10.0	6.7	4.5	2.9	2.3	2	1.6	1.1	0.7	0.6	0.6
Mortgage + HELOC	2010	0.0	0.1	0.7	1.8	3.3	4.3	4.7	4.8	4.7	4.3	3.3	2.3	1
	2011	0.0	0.1	0.5	1.5	2.8	3.8	4.3	4.4	4.4	4.1	3.2	2.3	1
	2012	0.0	0.0	0.3	1.1	2.3	3.2	3.8	4	4	3.8	3.1	2.3	1
	2013	0.0	0.0	0.2	0.8	1.8	2.6	3.2	3.3	3.4	3.2	2.7	2	0.9
	2014	0.0	0.0	0.2	0.7	1.5	2.4	2.9	3.1	3.2	3	2.6	2	0.9
Student + auto	2010	1.5	5.8	4.9	2.9	1.7	1.1	1	0.9	0.6	0.4	0.2	0.2	0.1
	2011	1.7	6.1	5.2	3.2	1.9	1.2	1.1	0.9	0.7	0.4	0.2	0.2	0.1
	2012	1.9	6.4	5.5	3.6	2.2	1.4	1.2	1	0.8	0.5	0.3	0.2	0.1
	2013	2.2	6.9	6.1	4.1	2.6	1.6	1.3	1.1	0.9	0.5	0.3	0.2	0.1
	2014	2.4	7.7	6.6	4.5	2.9	1.9	1.5	1.2	0.9	0.6	0.3	0.2	0.1
Auto + Mortgage +	2010	0.0	0.1	0.7	1.8	2.9	3.4	3.5	3.3	2.9	2.4	1.5	0.9	0.3
	2011	0.0	0.1	0.5	1.4	2.5	3.1	3.3	3.1	2.7	2.3	1.5	0.9	0.3
	2012	0.0	0.0	0.4	1.1	2.1	2.8	3	2.9	2.6	2.3	1.5	0.9	0.3
	2013	0.0	0.0	0.3	0.9	1.8	2.5	2.8	2.7	2.4	2.1	1.5	0.9	0.3

HELOC	2014	0.0	0.0	0.2	0.8	1.7	2.5	2.9	2.7	2.4	2.1	1.6	1.0	0.3
Student +	2010	0.1	1.5	3.5	3.1	1.9	1.5	1.8	1.7	1.1	0.5	0.2	0.1	0.0
	2011	0.1	1.4	3.6	3.3	2.1	1.6	1.9	1.8	1.2	0.6	0.2	0.1	0.0
Auto +	2012	0.1	1.2	3.3	3.4	2.2	1.6	1.8	1.8	1.2	0.7	0.3	0.1	0.0
	2013	0.1	1.2	3.2	3.6	2.4	1.7	1.8	1.8	1.3	0.7	0.3	0.1	0.0
Mortgage	2014	0.1	1.2	3.4	4.0	2.8	2.0	2.0	2.0	1.5	0.8	0.4	0.2	0.0

Source: Authors' calculations.

Table B.6. Total Median Debt Balance, by Debt Style and Age Cohort

Debt Style	Archive Year	Age Cohort												
		18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
Credit card only	2010	762	1,327	1,667	2,013	2,340	2,452	2,388	2,165	1,896	1,707	1,349	1,032	611
	2011	727	1,220	1,558	1,905	2,183	2,370	2,340	2,190	1,933	1,763	1,453	1,110	649
	2012	698	1,192	1,577	1,904	2,220	2,423	2,354	2,251	1,995	1,829	1,547	1,203	697
	2013	695	1,164	1,612	1,951	2,262	2,513	2,485	2,336	2,103	1,931	1,668	1,283	742
	2014	704	1,166	1,625	1,966	2,277	2,505	2,513	2,380	2,197	1,994	1,746	1,376	793
Mortgage only	2010	103,543	133,126	149,160	162,580	162,137	147,837	130,096	117,718	112,141	107,317	96,662	84,177	74,244
	2011	97,076	129,621	147,965	162,924	164,058	152,318	132,894	119,854	114,057	110,231	100,538	88,058	75,790
	2012	94,931	125,993	145,176	159,681	162,758	153,184	134,905	120,926	113,567	111,473	102,802	90,132	78,058
	2013	100,735	125,580	145,804	160,722	165,533	156,663	138,131	123,460	115,634	113,288	106,443	92,435	79,575
	2014	99,266	128,187	148,567	164,080	168,112	159,036	141,841	125,363	116,795	113,927	109,022	95,392	80,866
Auto loan only	2010	10,734	12,715	14,223	15,230	15,644	15,808	15,789	15,933	15,672	15,694	14,850	13,571	11,920
	2011	10,924	12,653	14,071	15,219	15,718	15,825	15,836	15,888	15,733	15,726	14,889	13,691	11,722
	2012	11,772	13,433	15,048	16,115	16,747	16,855	16,923	16,740	16,341	16,348	15,407	14,176	11,753
	2013	12,300	14,128	15,899	17,018	17,856	17,936	17,934	17,662	17,244	16,994	15,894	14,470	12,212
	2014	12,948	14,616	16,402	17,756	18,615	18,997	18,859	18,565	18,063	17,777	16,547	15,115	12,669
Auto + mortgage	2010	129,711	154,637	174,195	188,267	188,362	175,965	161,089	147,177	140,828	132,313	118,902	110,423	98,172
	2011	122,645	151,063	172,362	188,937	191,843	180,988	164,599	150,628	142,581	136,324	123,375	113,062	102,924
	2012	119,543	149,504	172,317	188,057	193,652	184,103	166,006	151,582	143,730	136,864	129,125	113,457	104,314
	2013	126,242	149,507	173,027	189,061	197,320	189,774	171,299	155,647	145,944	140,891	133,079	118,459	108,392
	2014	123,814	151,712	176,021	192,541	200,490	195,722	176,799	159,907	149,588	143,944	136,890	125,424	111,267
Student loan only	2010	7,675	13,842	15,624	16,243	15,964	14,051	14,071	14,983	15,484	15,044	13,552	13,663	13,387
	2011	8,028	13,907	15,700	16,642	16,256	14,140	13,841	14,734	14,941	15,596	15,480	13,952	14,161
	2012	8,313	14,580	16,235	17,331	17,222	15,213	14,847	15,640	15,351	15,444	15,391	14,223	14,133
	2013	8,493	14,527	16,483	18,085	18,302	17,014	16,101	16,267	16,503	15,732	15,527	15,117	15,048
	2014	8,599	15,821	17,771	19,483	20,219	19,239	17,273	17,685	17,303	16,877	16,336	15,963	15,808
Mortgage + HELOC	2010	218,780	180,704	219,719	258,473	260,889	240,442	215,072	199,308	191,984	191,016	176,981	157,443	145,027
	2011	225,690	165,466	208,221	250,467	257,878	242,079	216,130	202,397	191,658	189,569	182,210	158,651	145,287
	2012	167,712	158,295	198,248	246,207	256,310	242,033	218,842	197,239	191,551	188,673	180,192	162,357	144,222
	2013	196,642	162,473	204,997	241,120	254,079	243,774	220,376	196,258	189,798	188,107	183,652	162,849	145,943
	2014	154,540	157,241	210,347	246,955	260,932	248,453	221,808	200,832	188,236	187,643	184,971	164,712	146,671
Student + auto	2010	20,017	29,129	33,623	35,991	36,204	34,503	34,617	35,129	34,979	32,604	30,423	29,214	30,408
	2011	20,986	29,649	33,721	36,370	36,984	35,352	35,500	35,077	35,144	32,548	30,684	28,423	29,639
	2012	22,156	31,087	34,941	38,532	38,287	37,163	37,054	36,545	36,599	34,878	35,878	29,975	30,859
	2013	22,844	31,585	36,157	39,465	40,852	39,847	38,954	38,392	38,661	34,521	35,086	33,154	33,288
	2014	23,411	33,466	37,967	41,224	44,035	42,573	41,348	40,224	39,914	38,233	36,958	31,230	32,782
Auto + mortgage + HELOC	2010	229,264	200,100	236,156	278,351	282,715	274,780	250,521	232,163	222,454	220,998	211,557	182,608	184,626
	2011	207,566	178,720	226,934	270,981	281,734	275,248	249,996	229,510	216,787	218,815	205,244	189,665	183,743
	2012	154,722	167,683	229,163	260,065	279,377	273,125	254,723	229,790	217,663	214,293	210,826	193,578	183,121
	2013	183,705	169,459	215,990	262,988	280,675	278,892	258,774	232,820	219,404	215,477	208,755	203,568	185,263
	2014	133,178	173,902	227,624	263,658	284,355	281,339	263,445	236,511	221,000	215,699	218,242	203,270	182,210
Student + auto + mortgage	2010	135,010	178,057	207,988	230,332	227,838	205,967	196,290	189,592	185,143	189,292	178,161	133,938	122,823
	2011	135,281	172,002	204,182	230,675	232,849	208,107	198,038	192,954	186,133	192,164	182,370	149,395	140,811
	2012	126,910	169,102	201,873	228,704	234,425	212,651	202,013	195,354	190,702	187,472	179,881	150,538	145,931
	2013	133,076	172,514	202,563	231,452	236,556	220,406	206,658	196,713	191,126	192,040	183,291	157,537	131,204
	2014	134,233	174,351	204,172	233,774	246,182	227,992	211,277	203,026	195,973	197,101	188,594	150,745	132,974

Source: Authors' calculations.

Table B.7. Consumers' Median Vantage Scores, by Debt Style and Age Cohort

Debt Style	Archive Year	Age Cohort												
		18-22	23-27	28-32	33-37	38-42	43-47	48-52	53-57	58-62	63-67	68-72	73-77	>77
No debt	2010	552	524	524	530	535	540	549	557	586	622	658	675	722
	2011	555	524	526	533	538	544	552	561	588	620	655	674	715
	2012	563	524	527	534	539	545	552	559	586	615	653	673	710
	2013	567	524	528	534	541	546	552	559	585	612	647	668	675
	2014	577	524	528	535	542	548	552	560	584	618	649	670	675
Credit card only	2010	696	701	693	695	701	718	743	776	794	803	807	809	810
	2011	694	703	693	693	698	713	737	772	794	803	808	810	810
	2012	692	702	694	692	696	708	731	767	791	801	806	808	809
	2013	691	703	696	693	695	706	727	763	789	800	805	808	809
	2014	687	702	695	690	692	700	720	753	786	799	805	808	809
Mortgage only	2010	670	709	718	727	736	746	755	769	779	787	792	794	794
	2011	671	713	723	731	738	745	755	767	778	788	793	795	794
	2012	673	715	726	731	736	742	751	764	775	785	791	793	793
	2013	669	718	730	733	738	742	751	762	774	783	790	791	791
	2014	687	722	737	740	743	746	752	762	774	784	791	792	791
Auto loan only	2010	645	645	635	630	633	642	658	683	713	742	772	788	790
	2011	646	648	640	636	637	646	662	684	714	744	774	792	795
	2012	646	649	643	639	638	649	661	684	713	742	770	788	795
	2013	645	649	644	638	640	648	661	683	713	741	771	789	794
	2014	644	647	643	637	636	645	658	681	712	742	771	790	794
Auto + mortgage	2010	665	693	701	706	713	721	733	743	753	764	770	773	772
	2011	671	700	708	713	719	726	736	746	756	763	774	775	777
	2012	668	704	712	716	720	728	736	748	756	764	774	777	777
	2013	666	707	716	721	722	730	739	749	759	765	776	779	779
	2014	666	708	723	726	728	732	741	751	760	767	777	782	781
Student loan only	2010	621	649	634	607	589	595	621	654	670	698	727	754	759
	2011	629	647	632	610	589	592	619	649	671	696	726	760	759
	2012	629	644	629	609	586	586	609	643	667	702	720	760	755
	2013	631	641	632	614	593	588	607	643	666	693	719	744	759
	2014	629	650	635	615	595	591	601	640	663	689	721	735	757
Mortgage + HELOC	2010	699	701	714	727	738	748	756	766	770	775	778	780	779
	2011	725	701	718	728	738	745	755	765	771	773	779	782	782
	2012	719	714	719	728	733	742	750	761	768	771	776	780	776
	2013	723	716	718	729	733	739	747	758	766	771	773	778	773
	2014	749	732	730	735	739	742	750	758	768	772	777	779	774
Student + auto	2010	652	671	661	643	629	630	653	672	687	700	715	739	720
	2011	653	673	666	647	628	632	651	671	690	700	721	745	747
	2012	655	672	666	650	625	627	648	674	689	703	719	746	750
	2013	651	670	666	652	629	629	649	670	690	704	723	743	749
	2014	651	671	664	650	626	625	646	665	685	696	716	741	750
Auto + mortgage +	2010	686	694	703	712	720	728	736	744	751	754	760	761	755
	2011	710	709	711	718	723	731	739	747	754	756	761	767	758
	2012	673	701	712	718	721	730	738	746	754	756	760	762	757
	2013	697	714	714	722	725	729	738	747	755	758	762	762	765

HELOC	2014	687	714	723	727	730	734	741	751	758	761	763	768	766
Student + auto + mortgage	2010	673	714	719	704	683	684	714	724	734	734	738	744	742
	2011	678	719	725	717	691	689	714	728	734	736	735	743	737
	2012	676	719	725	720	695	691	713	729	737	735	748	747	752
	2013	678	718	729	724	702	693	710	730	738	742	746	743	745
	2014	675	719	732	729	706	695	711	729	738	741	747	756	761

Source: Authors' calculations.

Notes

1. Consumers' ages are reported separately for each yearly 2010–2014 sampling period. Twenty-four percent of consumers have no age information at all for the entire five sampling periods; 98.9 percent of those consumers who do not have age information either have no debt (88.1 percent, see table B.1) or only have credit card spending (10.8 percent, see table B.1). For consumers who do have age information, the vast majority (94 percent) have consistent age over the five consecutive annual sampling points. For the rest of consumers without consistent age information (6 percent), we calculate the median age over the five sampling points for each consumer, and assign the median age as the age of the consumer in 2012; for the other four sampling periods, the consumer's age is assigned to make it consistent over time.
2. Lenders rely extensively upon two scoring models in making credit decisions, Vantage score and FICO. Vantage score is a credit score derived from consumer credit information. It is jointly owned by the big three credit bureaus—Experian, Equifax, and TransUnion, who all contribute their data. Vantage 3.0, used in our analysis, was introduced in March 2013 and is able to calculate a score for an additional 30 to 35 million previously “unscorable” consumers. Consumers receive a score within the range of 300–850. This is the same scale used by FICO.
3. Consumers with zero balance on all open trades reported in the last six months of a sampling period are considered as consumers without any debt for that sampling period. We use the same definition to define whether a consumer has debt for a specific type of trade, such as credit card debt, an auto loan, a student loan, a home equity line of credit, or a mortgage. For mortgage debt, the balance used is the combined balance on both a first and a second mortgage.
4. Readers should be aware that major credit bureaus will only have data on consumers with either credit of the types included by the credit bureau or collections activity, such as medical bills, utility bills, or government debt. Thus, our numbers will likely understate the percentage of those who have no debt, as many consumers with no debt have no credit history and no items in collection, and hence there is no record of the consumer at any of the three major credit bureaus.
5. We use the term “credit card spending,” because our data on credit card debt do not distinguish between those who pay off their credit cards each month and those who carry over a balance.
6. There is no consensus on the percentage of borrowers who pay their balances in full. An American Bankers Association “Credit Card Monitor,” released in December 2014 and covering Q2 2014, found that 29.0 percent of borrowers pay in full each month, 29.8 percent are dormant accounts that showed no activity over the quarter, and 41.2 percent are revolvers in which some percentage of the monthly balance is rolled over to the next month at least once during the quarter (American Bankers Association, “Credit Card Market Monitor, December 2014,” December 16, 2014, <http://www.aba.com/Press/Documents/12.16.14ABACreditCardMonitorFAQ.pdf>).

In our analysis, a dormant account with a zero balance would be picked up as no credit card debt. If we rescaled, assuming all dormant accounts are zero balance, it would suggest of those with credit card debt, 41 percent pay off their balances in full each month. A Gallup poll survey, done in April of 2014, found that 48 percent of borrowers said they always paid the full amount of their credit card balances each month, and another 16 percent said they usually did. Another 20 percent said they usually left balances, 12 percent usually paid the minimum, and 1 percent paid less than the minimum (Art Swift, “Americans Rely Less on Credit Cards Than in Previous Years,” Gallup.com, April 25, 2014, <http://www.gallup.com/poll/168668/americans-rely-less-credit-cards-previous-years.aspx>). A Bankrate.com survey in August 2014, found that 40 percent of borrowers under 30 said they paid off their cards each month, versus 53 percent of those 30 and older (Jeanine Skowronski, “More Millennials Say ‘No’ to Credit Cards,” *Millennials and Money* (blog), Bankrate.com, September 8, 2014, <http://www.bankrate.com/finance/credit-cards/more-millennials-say-no-to-credit-cards-1.aspx>).

References

- Baum, Sandy, and Martha Johnson. 2015. "Student Debt: Who Borrows Most? What Lies Ahead?" Washington, DC: Urban Institute. <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000191-Student-Debt-Who-Borrows-Most-What-Lies-Ahead.pdf>.
- Bernanke, Ben S. 1984. "Permanent Income, Liquidity, and Expenditure on Automobiles: Evidence from Panel Data." *Quarterly Journal of Economics* 99(3): 587-614.
- Carroll, Christopher D. 1997. "Buffer-Stock Saving and the Life Cycle/Permanent Income Hypothesis." *Quarterly Journal of Economics* 112(1): 1-55.
- Flavin, Marjorie A. 1981. "The Adjustment of Consumption to Changing Expectations about Future Income." *Journal of Political Economy* 89(5): 974-1009.
- Friedman, Milton. 1956. *A Theory of the Consumption Function*. Princeton, NJ: Princeton University Press.
- Hall, Robert E. 1978. "Stochastic Implications of the Life Cycle-Permanent Income Hypothesis: Theory and Evidence." *Journal of Political Economy* 86(6): 971-87.
- Hall, Robert E., and Frederic S. Mishkin. 1982. "The Sensitivity of Consumption to Transitory Income: Estimates from Panel Data on Households." *Econometrica* 50(2): 461.
- Mankiw, N. Gregory, and Matthew D. Shapiro. 1985. "Trends, Random Walks, and Tests of the Permanent Income Hypothesis." *Journal of Monetary Economics* 89(5): 165-74.
- Modigliani, Franco, and Richard Brumberg. 1954. "Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data." In *Post-Keynesian Economics*, edited by Kenneth K. Kurihara. New Brunswick, NJ: Rutgers University Press.
- Shapiro, Matthew D., and Joel Slemrod. 2003. "Consumer Response to Tax Rebates." *American Economic Review* 93(1): 381-96.
- Souleles, Nicholas S. 1999. "The Response of Household Consumption to Income Tax Refunds." *American Economic Review* 89(4): 947-58.
- Stephens, Melvin, Jr. 2003. "'3rd of the Month': Do Social Security Recipients Smooth Consumption between Checks?" *American Economic Review* 93(1): 406-22.
- Wilcox, James A. 1989. "Liquidity Constraints on Consumption: The Real Effects of Real Lending Policies." *Federal Reserve Bank of San Francisco Economic Review* 4: 39-52.
- Zeldes, Stephen P. 1989. "Consumption and Liquidity Constraints: An Empirical Investigation." *Journal of Political Economy* 97(2): 305-46

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