

Balancing saving and debt paydown: Money mistakes to avoid

- Debt is widespread and rising, and borrowing decisions are central to household financial outcomes. More than three in four American households carry debt, with balances reaching nearly \$19 trillion. A crucial, and missing, insight for many households is that debt repayment is just another form of savings.
- Using novel data linking investors' assets and debts, we document two common mistakes that arise when households fail to coordinate their borrowing and saving decisions. Many investors pay down higher-interest debt too slowly, carrying revolving credit card debt while holding cash or contributing above their 401(k) employer match. Others pay off lower-interest debt too quickly, making extra mortgage, student loan, and auto loan payments while leaving matching employer contributions on the table.
- Simple rules of thumb can help people avoid these money mistakes. Paying down higher-interest debt or taking full advantage of an employer match are good ways to maximize total returns and grow wealth.

Authors



Malena de la
Fuente, Ph.D.



Aaron Goodman,
Ph.D.



Ekaterina
Goncharova, Ph.D.



Andy Reed, Ph.D.



Fiona Greig, Ph.D.

Introduction

When it comes to the balance sheets of American households, assets are only half the picture. Debt—the obligations households take on to buy homes, finance education, and manage day-to-day spending—makes up the other half.

More than three in four American households carry some form of debt (Federal Reserve Board, 2023). While the average debt-to-income ratio has declined since 2020 (Federal Reserve Bank of St. Louis, 2026), the total amount of debt households carry has increased over time, reaching nearly \$19 trillion in 2025 across the “Big Four” debts: mortgages, credit cards, student loans, and auto loans (Federal Reserve Bank of New York, 2026). These rising balances matter for well-being. High debt burdens are associated with higher levels of financial stress, and investors with unsecured debt also report lower financial well-being (Costa, Martino, and de la Fuente, 2025b; Madamba and Reed, 2025).

Importantly, these effects are not uniform across households. Student and auto debt are most common earlier in life, while mortgage debt becomes increasingly prevalent when people are in their 30s and 40s, peaking in middle age before declining in later decades (see **Figure 1a**).

Debt composition also differs across income groups (see **Figure 1b**). Higher-income households are more likely to carry mortgage debt, reflecting their greater access to secured borrowing. Lower-income households, by contrast, are less likely to have mortgages but are more exposed to credit card debt and auto loans, incurring higher overall interest rates.

Together, these patterns underscore why debt decisions matter for household finances—and also why they can be difficult to get right. Paying down debt is a form of savings, just like saving for an emergency fund or retirement. The challenge is which savings goals and debts to prioritize and how much to contribute to each. As shown in **Figure 2**, most people simultaneously manage more than one debt. Paying more toward one balance can mean having less left for other savings goals, and focusing on the “wrong” debt can slow progress overall. As a result, repayment choices that feel sensible in the moment—such as paying off a mortgage as fast as possible—can sometimes lead to lower long-term wealth.

FIGURE 1
The prevalence of debts across age and income

a. Most investors carry multiple forms of debt—and the mix shifts as they age

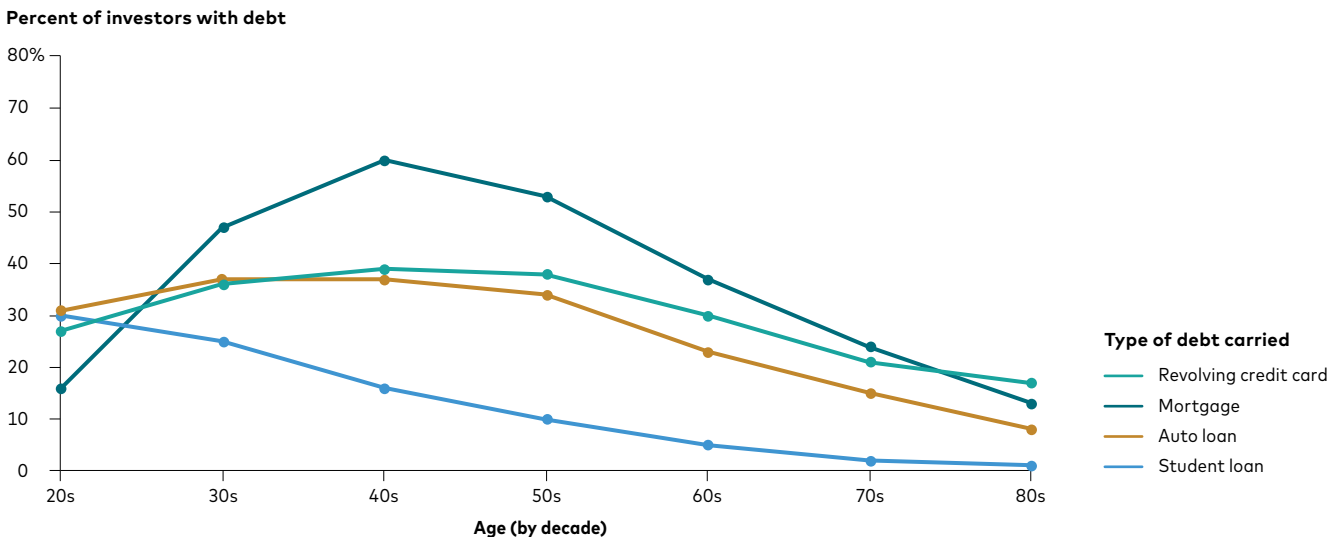
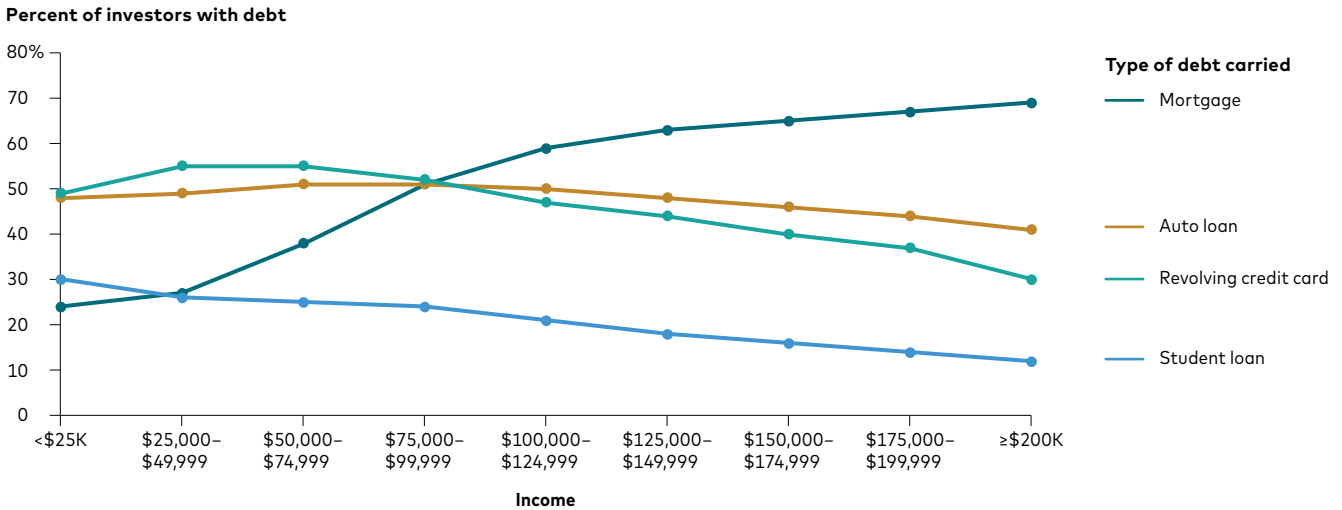


FIGURE 1 (CONTINUED)

b. Most debt decreases with income, while mortgage prevalence increases

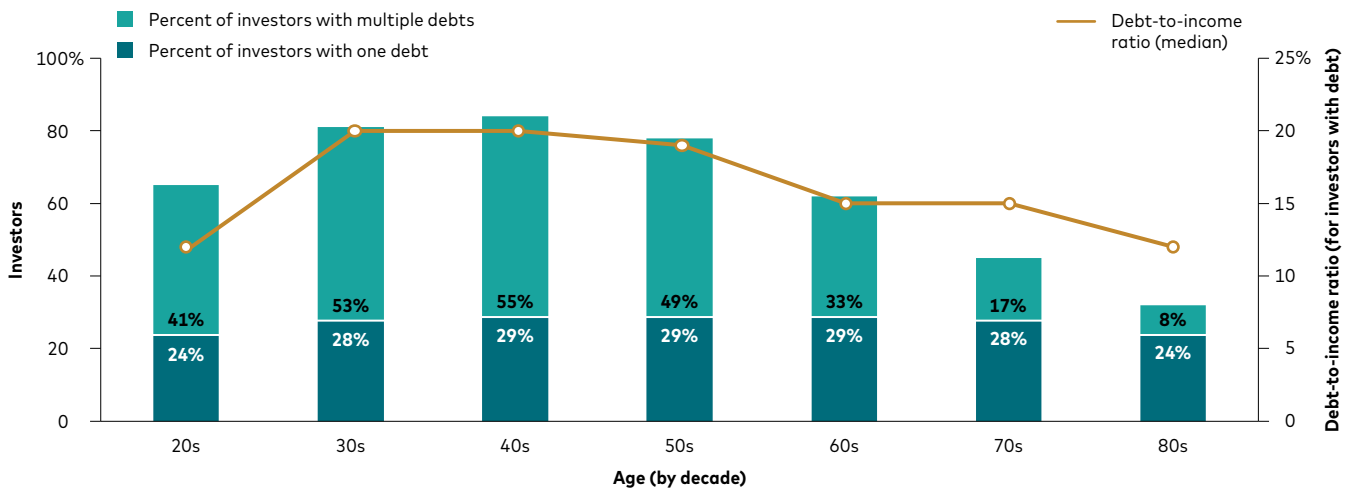


Notes: We consider 5.5 million Vanguard investors for whom we have quarterly credit bureau data for 2023 and 1 million Vanguard investors for whom we have monthly credit bureau data for 2023. We combine these data with Vanguard administrative data for 2023 that include investor age and income. We calculate the percentages of these investors who carry each of four types of debt: mortgage, student loan, auto loan, and revolving credit card. Quarterly data are used to estimate the prevalence of mortgages, student loans, and auto loans, while monthly data are used to estimate the prevalence of revolving credit card debt. The monthly data are necessary for calculating revolving credit card debt, as each credit card balance is either paid off in full or starts accruing interest in the following month (see Gibbs et al., 2025).

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

FIGURE 2

Debt burdens peak in the 30s and 40s



Notes: The left y-axis in the figure represents the percent of investors in the sample; the right y-axis represents the debt-to-income ratio for those investors with debt. We consider 1 million Vanguard investors for whom we have monthly credit bureau data for 2023. We combine these data with Vanguard administrative data that include investor age and income. We calculate the percentage of these investors who carry either one or several of the following types of debt: mortgage, student loan, auto loan, and revolving credit card. We calculate the debt-to-income ratio by taking the median of the monthly debt-servicing cost per person (which is the sum of all monthly payments that must be made toward debts) and dividing that result by the monthly pre-tax income (estimated as the yearly pre-tax income divided by 12). The monthly data are necessary for calculating revolving credit card debt, as each credit card balance is either paid off in full or starts accruing interest in the following month (see Gibbs et al., 2025).

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

How common household debts differ

When households carry multiple debts, repayment choices depend on a small number of features (see **Figure 3**). These features shape not only the cost of borrowing, but also how different debts interact with saving and long-term financial goals.

Interest rates determine how costly it is to carry a balance over time. Credit card debt typically carries much higher interest rates than the other common types of household debt, making it expensive to leave unpaid. Mortgages, auto loans, and student loans generally have lower interest rates and are therefore less costly to carry.

Repayment structure and loan length also matter. Mortgages, auto loans, and student loans are installment debts with scheduled payments and a defined payoff horizon. Credit card debt, by contrast, is revolving and does not have a fixed loan length. Since additional interest gets added to unpaid credit card balances each month, these debts can not only persist if they are not paid down in full each month—they can grow.

Whether a debt is secured affects both cost and risk. Mortgages and auto loans are secured by assets, which generally lowers borrowing costs but exposes households to the risk of losing essential assets if payments stop. While mortgages are secured by the value of the home, which typically appreciates over the long term, auto loans are backed by the value of the car, which depreciates as soon as the car leaves the lot. Student and credit card debt is usually unsecured and not tied to specific assets, but it typically carries higher interest rates than mortgages and auto loans.¹

Beyond these features, debts also differ in how they are typically used. Mortgages and student loans are often taken on to invest in or support longer-term financial goals, such as buying a home or preparing for a career. Higher-interest debts like credit card debt, by contrast, are more often used for day-to-day spending or short-term needs. When carried over time, this type of borrowing can come at the expense of saving, progress toward longer-term financial goals, or future spending.

FIGURE 3
The “Big Four” debts vary meaningfully across features

	Lower-interest debt ←		→ Higher-interest debt	
	Mortgage	Student loan	Auto loan	Credit card
Typical interest rate	5%–6%	6%–9%	7%–12%	21%–22%
Loan length	30 years	10 years	5–6 years	Monthly revolving
Secured/unsecured	Secured	Unsecured*	Secured (by a depreciating asset)	Unsecured

* Although student loans are unsecured, defaulting on federal student loans can lead to wage garnishment and seizure of tax refunds, Social Security benefits, and other government payments until the loan is paid off.

Notes: We highlight mortgages, student loans, auto loans, and revolving credit card debt because these are the largest and most common types of household debt (Federal Reserve Bank of New York, 2026). Many types of debt that fall outside the scope of this research could be categorized along the same lines, including personal loans, buy-now pay-later loans, payday loans, medical debt, 401(k) loans, and others.

Sources: Vanguard calculations, using data from the Consumer Financial Protection Bureau, the Federal Housing Finance Agency, the Federal Reserve Board, the Federal Home Loan Mortgage Corporation, and Federal Student Aid (an office of the U.S. Department of Education).

¹ While student loans are unsecured, defaulting on federal student loans can lead to wage garnishment and seizure of tax refunds, Social Security benefits, and other government payments until the loan is paid off.

Money mistakes: Missed opportunities to optimize across debts, income, and assets

Investors who carry multiple debts while pursuing other financial goals like saving for retirement, buying a home, or paying for a child's education face complex decisions about where to put their next dollar.

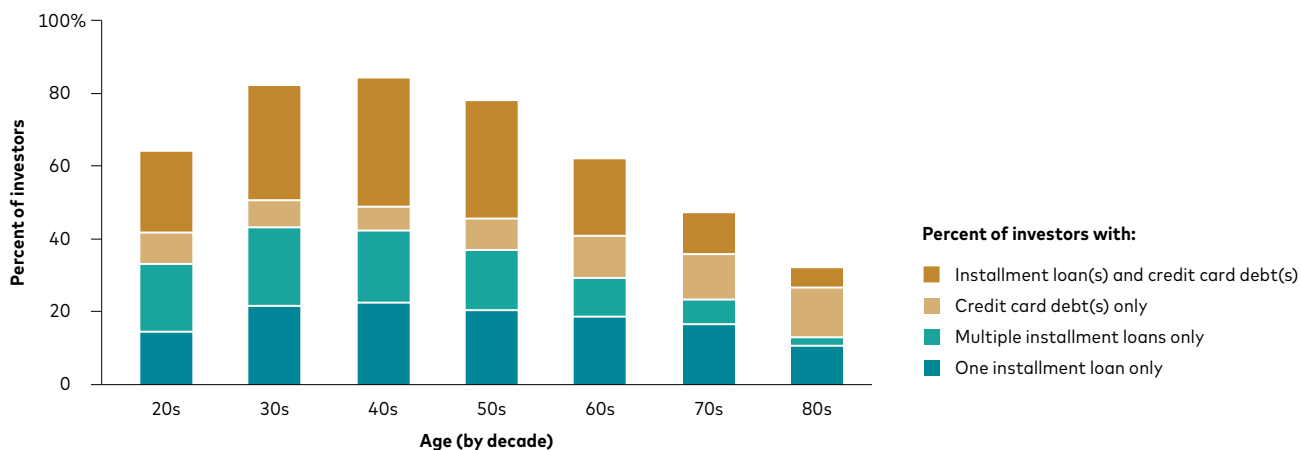
Optimizing payments across multiple debts and savings goals is a surprisingly common challenge. A plurality of investors carry both higher-interest credit card debt and one or more installment debts, particularly when debt burdens peak in the 30s and 40s (see **Figure 4**). And with a more complicated financial picture comes the increased likelihood of making mistakes.

In this section, we document some of the financial mistakes that arise when debt paydown decisions are considered separately from each other and from savings and investing decisions, rather than integrated into a household's overall financial decision-making.

These mistakes can end up having significant effects: Borrowers will end up paying more in interest over the life of their loans and getting lower total returns on their investments. This means they will end up saving less or reaching financial goals far later than they otherwise would. In short, their long-term financial well-being suffers.

FIGURE 4

Many people carry a mix of higher- and lower-interest debt



Notes: We consider 1 million Vanguard investors for whom we have monthly credit bureau data for 2023. We combine these data with Vanguard administrative data that include investor age. We calculate the percentage of these investors who carry either one installment loan (mortgage, student loan, or auto loan), multiple installment loans, revolving credit card debt only, or revolving credit card debt and one or more installment loans. The monthly data are necessary for calculating revolving credit card debt, as each credit card balance is either paid off in full or starts accruing interest in the following month (see Gibbs et al., 2025).

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

Paying down higher-interest debt too slowly

Revolving debt is pervasive in the U.S.: The Consumer Financial Protection Bureau estimates that almost half of credit cards carry a revolving balance and are accruing interest (Consumer Financial Protection Bureau, 2025). Similarly, 35% of all Vanguard investors carry revolving credit card debt at any point in time. The average size of these debts is about \$4,100, meaning the interest charges are more than \$800 per year.²

Given the high interest rates on credit cards, it is generally best to pay down this debt as quickly as possible. To our knowledge, no investment earns a guaranteed 21% return every year, meaning that someone who holds assets that could be used to pay down credit card debt is earning less in interest from their investments than they are paying toward their debts. Previous work on credit card debt has shown substantial evidence of coholding—holding both credit card debt and cash in checking or savings accounts (Gathergood and Weber, 2014; Gross and Souleles, 2002;

Medina and Pagel, 2025). We extend this research by combining credit card data with information on other assets, going beyond savings accounts to study credit card debt repayment decisions in multiple financial contexts.³

Failing to pay down credit card debt quickly is a common mistake. Our data show that 35% of Vanguard investors carry credit card debt month-to-month, and of these, 57% have missed opportunities to pay down this debt. Among investors with brokerage accounts, 26% hold revolving credit card debt. Our data show that 67% of these investors have cash in their accounts, either in a settlement fund or a money market fund, that could partially or fully pay off their revolving credit card debt: By redirecting their brokerage cash, 37% could pay off their debt partially, while 30% could pay it off in full. The average cash holding of these investors is \$19,400, while their average revolving debt is \$3,200 (see **Figure 5**).

FIGURE 5

Many investors carry revolving credit card debt despite having cash available

Investors with revolving credit card debt	Percent able to pay down debt with cash	Source of available cash	Average debt	Average available cash
26% of taxable investors	67%	Holding excess cash in brokerage account	\$3,200	\$19,400
53% of 401(k) participants	60%	Contributing above the employer match	\$4,500	\$3,900
35% of all Vanguard investors	30%	Prepaying low-cost loans	\$5,000	\$3,400

Notes: We consider a million-person sample of Vanguard investors from 2023 that contains both eligible 401(k) participants and individual investors and for which we have monthly credit bureau data for 2023. The monthly data are necessary for calculating revolving credit card debt, as each credit card balance is either paid off in full or starts accruing interest in the following month (see Gibbs et al., 2025). We define “prepaying low-cost loans” as making payments on installment loans (mortgage, student loan, or auto loan) that exceed the minimum required payment by at least \$20. We define “contributing above the employer match” as contributing a higher percentage of one’s income than the employer match limit. We calculate the average available cash for brokerage account holders as the average amount of cash held in their brokerage accounts as of December 2023. We calculate the contributions above the 401(k) employer match limit as the average amount above the match that is contributed in 2023. We calculate the extra loan payments as the average amount that is paid above minimum payments during the course of 2023.

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

2 We assume a typical 21% interest rate on \$4,100 (Federal Reserve Board, 2026).

3 We examine these missed opportunities to pay down credit card debt by studying credit bureau records for 1 million Vanguard investors for 2023. We measure revolving credit card debt as each month’s statement balance minus the following month’s payment. We also link the credit records with Vanguard administrative data to measure assets.

We found that over half of 401(k) participants (53%) hold revolving credit card debt in any given month, 60% of whom contribute above their company match limit in their retirement plan (\$3,900 per year above the employer match, on average). Contributing to a 401(k) plan up to an employer's match is one of the only financial decisions that generates a higher return than paying down credit card debt: Employer match rates of 50% or 100% are common (Clark, 2025), generating immediate returns for investors that far exceed interest rates or investment returns. However, contributions beyond the employer's match cap yield only investment returns, which are neither immediate nor guaranteed. These investors could increase their overall wealth by temporarily dropping their retirement contributions to the match cap and using the newly available cash to pay down their credit card debt. On average, this debt paydown strategy would take just over a year. As long as these 401(k) participants are enrolled in automatic escalation, their contributions would continue to increase each year, allowing them to catch up on saving for retirement even if they don't actively increase the contribution level after paying off the debt.

Additionally, 30% of all investors with revolving credit card debt are at the same time making extra payments toward other lower-interest debts such as mortgages or student loans. While these debts also accrue interest, the rates are

generally much lower (see Figure 3, on page 4). As a result, these investors are prepaying an average of \$3,500 per year toward lower-interest debts while still carrying about \$5,000 in credit card debt. Because credit cards typically have the highest interest rates, focusing available cash flow on paying down revolving credit card debt first would reduce total interest paid. Paying off credit card debt would also free up cash flow to make larger payments toward lower-interest debts going forward.

There are also many other opportunities to pay down credit card debt quickly that fall outside the scope of this research. Cash windfalls, such as year-end bonuses, birthday and holiday gifts, inheritances, and tax refunds are all potentially such opportunities. Excess cash (beyond emergency savings—see Costa, Martino, and de la Fuente, 2025b) sitting in checking or low-interest savings accounts can be another such opportunity, as it generally earns very little interest. In an emergency, a 401(k) loan is also a possibility. 401(k) participants should be cautious as these loans generally become due in full if the employee leaves their job. And, if the borrower defaults, they may owe taxes and penalties. However, 401(k) loans have much lower interest rates than credit cards, and the interest is paid back to oneself into the retirement account rather than to an external creditor.⁴ About 75% of 401(k) participants with credit card debt are eligible for a 401(k) loan but have not used one.

⁴ Interest paid on 401(k) loans is taxed before being repaid.

Paying down lower-interest debt too quickly

While it's usually best to pay down higher-interest debt as quickly as possible, other debt repayment decisions are not so clear-cut. Certain debts, like mortgages and student loans, have much lower interest rates than credit card debt and often carry the opportunity for tax subsidies, which further lowers their effective costs. In these cases, extra payments toward these debts could often grow wealth more quickly if allocated elsewhere.

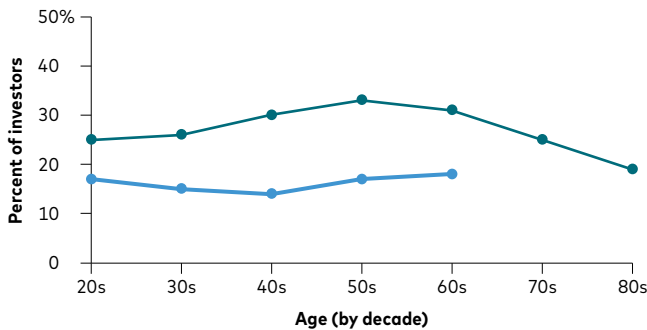
Prior research has investigated mortgage prepayment (Adelman, Cross, and Shrider, 2010; Amromin, Huang, and Sialm, 2007; Liebersohn,

Fitzpatrick, and Jambulapati, 2025; McCollum, Lee, and Pace, 2015). However, this previous work has not examined other types of installment debt and has not generally studied the trade-off between repayment and retirement savings decisions.

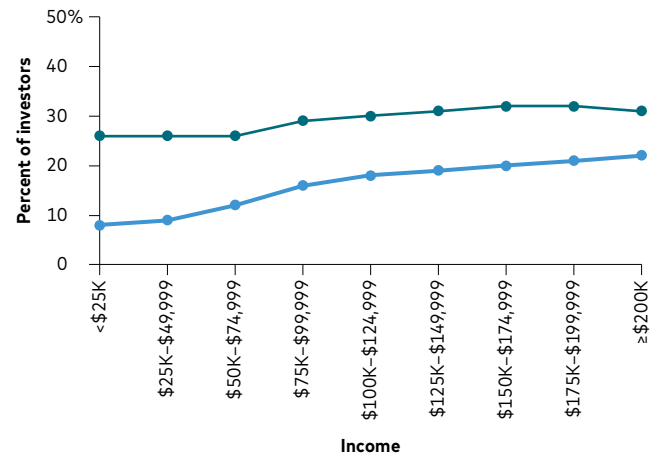
Debt prepayment is common: 50% of Vanguard investors who hold installment debt make extra payments toward these debts at least once a year. Prepayment decisions vary based on three key factors: the investor's age, their income, and the percentage of the loan that is left to be repaid (see **Figure 6**).

FIGURE 6
Prepayment varies with age, income, and percentage of loan remaining

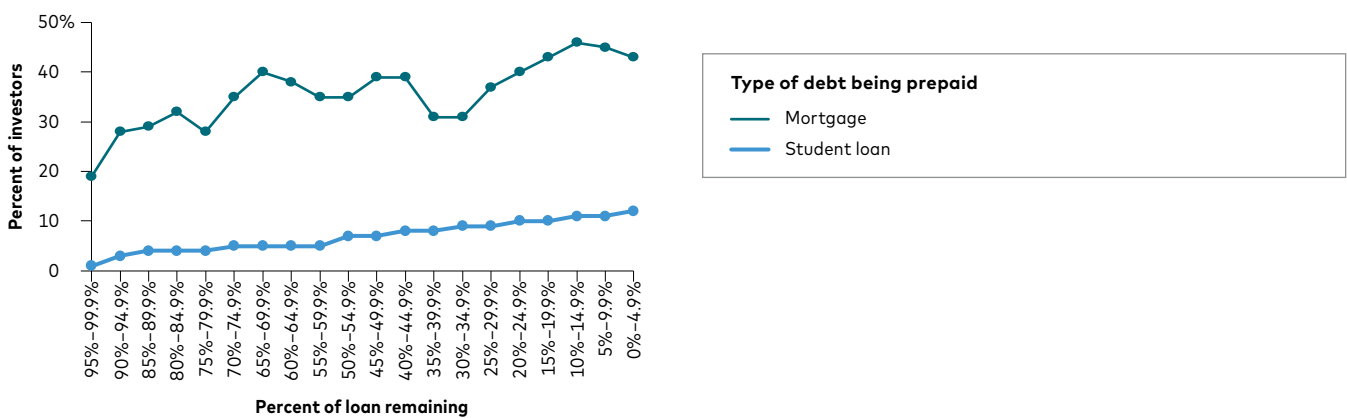
a. By investor age



b. By investor income



c. By percentage of loan left



Notes: We consider 5.5 million Vanguard investors for whom we have quarterly credit bureau data for 2023. We combine these data with Vanguard administrative data that include investor age. For a subset of these investors (1.2 million), we also have Vanguard administrative data on income. We calculate the percentage of this subset who prepay mortgage debt as well as the percentage who prepay student loan debt. We define prepayment as making a payment that is at least \$20 more than the required monthly payment. To calculate the percentage of loan remaining, we divide the current remaining balance of the loan by the original loan amount.

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

Prepayment increases with age until the 50s and 60s. There may be several reasons for this. First, as people age, they have fewer responsibilities such as caring for young children or paying off earlier debts like student loans (see Figure 1a on page 2). Second, given the negative effects of debt in retirement on financial well-being (Lusardi, Mitchell, and Oggero, 2026), households might make a concerted effort to finish paying off big debts before retirement age.




Income is also correlated with increased prepayment. This is likely because households with higher income will have more slack in their budgets to make extra payments (Gomes, Haliassos, and Ramadorai, 2021).

Lastly, prepayment also rises as the end of the loan nears. This likely reflects increased motivation to finish paying off the debt (Hamilton, 2023), as well as increased ability to pay over the life of the loan. It is also easier

to see meaningful progression on the remaining balance near the end of the loan, also possibly increasing motivation (Kettle et al., 2016).

While making extra payments is not a mistake in and of itself, we find that some of these prepayers may be missing opportunities to earn higher returns. We examine a subset of investors who have a 401(k) retirement account at Vanguard and find that 30% of these prepayers have not contributed enough to their 401(k) to maximize their employer match, leaving free money on the table. This occurs across all types of installment debt, with 26% of mortgage loan prepayers, 35% of auto loan prepayers, and 31% of student loan prepayers doing so (see Figure 7). The consequences of this mistake are potentially quite large, with prepayers missing out on almost \$1,100 per year, on average. In the long term, prepaying a debt for 10 years while failing to get the full benefit of the match during that time could lead to an estimated \$120,000 less at retirement age.⁵

FIGURE 7
Many prepayers are not getting their full 401(k) employer match

Type of debt being prepaid	Percent of debt holders prepaying	Percent of prepayers missing their full match	Average match dollars missed
 Mortgage	48%	26%	\$1,200 per year
 Auto loan	36%	35%	\$900 per year
 Student loan	19%	31%	\$700 per year

Notes: We consider eligible employees at Vanguard-administered 401(k) plans in 2023. We define prepayers as those who make a payment at least \$20 larger than the required minimum monthly payment in at least one of the four monthly credit pulls we observe for 2023. For each loan type, we calculate the percentage of prepayers as the share of mortgage, student loan, or auto-loan holders who meet this definition for their respective loan. Because we only observe four monthly credit pulls, we obtain an annual prepayment amount by multiplying each employee's prepayment amount by three. We then compute the additional match dollars each employee would earn by reallocating their annualized debt prepayment to the 401(k) plan, and take the average across all prepayers who do not get their full 401(k) employer match.

Sources: Vanguard calculations, using Vanguard administrative data matched anonymously with data from Equifax.

⁵ For a worker making a median income of \$81,000 (Clark, 2025), we assume a total (employer and employee) contribution rate of 12%. We assume the total contribution rate drops to 9.5% between ages 29 and 40, and that investments grow 6% per year. The outcome is expressed in today's dollars.

Our data show that many Vanguard investors also miss the opportunity to minimize interest paid by choosing the wrong debt to prepay first. There are two widely accepted strategies for debt repayment: the “avalanche” method and the “snowball” method (Hamilton, 2023; Wood and Niederjohn, 2020). The former suggests paying off the highest-interest debts first, while the latter advises paying off the smallest outstanding balance first before moving on to successively larger ones. We find, however, that some investors follow a third strategy. We call this the “glacier” method, whereby investors choose to prepay the largest and lowest-interest (i.e., “slowest-moving”) debts first.

This behavior is particularly evident among households with both mortgage and auto debt. Our data show that 70% of prepayers with both mortgages and car loans prioritize mortgage repayment, although a car loan is both smaller in size and typically higher interest than a mortgage. A car loan may not be as daunting as a mortgage, and it may not be as exciting to finish paying off. Following a glacier strategy, however, increases the overall interest paid and lengthens the timeline to full loan repayment and achieving other financial goals.

Importantly, not all prepayment decisions are this clear-cut. Often, making extra payments on debt becomes a murkier question that varies significantly with individual circumstances. On the one hand, prepaying a 6% mortgage (or a student loan) is a guaranteed return of 6%. On the other hand, for example, some of these loans can be eligible for tax subsidies. The true interest rate is therefore generally lower than 6%.

A second consideration is whether making extra payments on a long-term loan like a mortgage or student loan lowers current liquidity (Adelman,

Cross, and Shrider, 2010). For a mortgage, for example, these extra payments get locked up in the value of the home until the home is sold or refinanced or the owner takes out a home equity loan. Meanwhile, the investor will be expected to keep making regular mortgage payments. If income is uncertain or cash needs are high, investors may choose to invest in the market, which allows for easy access to assets if necessary, rather than allocating their extra cash to illiquid assets like real estate.

For many investors, a mortgage is by far their largest investment. Continuing to allocate most of their dollars to a single real estate investment rather than diversifying across investments could lead to an unbalanced portfolio (Vanguard, 2023). Thus, investors may choose to invest extra cash in multiple different assets rather than solely in their home.

Lastly, some investors may choose to prepay for nonfinancial reasons. In particular, highly risk-averse individuals may place substantial value on the certainty associated with guaranteed returns and the reduced risk of housing loss in case of an income shock, even when those returns are dominated by alternative investment opportunities (Adelman, Cross, and Shrider, 2010; Campbell and Cocco, 2003). Others may be highly debt-averse, perceiving it as a source of stress, loss of control, or moral discomfort (Amromin, Huang, and Sialm, 2007; Prelec and Loewenstein, 1998). For these investors, the emotional value gained from eliminating debt—such as increased peace of mind, reduced anxiety, or a heightened sense of financial security—may outweigh the financial benefits of investing these extra dollars elsewhere.

Conclusion

Savings and investments are only half of a household's financial picture—debts are equally important. And with debt burdens rising, it is crucial that investors consider financial decisions across the whole balance sheet to avoid paying more (in interest) and getting less (in returns), to avoid dragging down their wealth over time, and to maximize their financial well-being.

This paper documents two common mistakes that arise when households fail to coordinate their borrowing, saving, and investing decisions: paying down high-interest debt too slowly while holding or directing cash toward lower-return assets, and paying off low-interest debt too quickly while failing to benefit fully from employer matching contributions. These behaviors are not isolated errors, but systematic patterns that reflect behavioral frictions, institutional features, and the complexity of typical household finances. The result is that investors think separately about "debt" and "saving" when they should think about them in tandem.

The stakes are meaningful. Missing opportunities to optimize across the household balance sheet reduces financial well-being and lifetime wealth and may exacerbate financial stress.

Two groups are uniquely positioned to help individuals take advantage of these opportunities: workplace retirement plan sponsors and financial advisors.

For plan sponsors, a deeper understanding of employees' debt profiles can help optimize benefits by determining which solutions, tools, guidance, and incentives are likely to be most valuable for their workforce. Additionally, framing

debt repayment as a form of saving—and encouraging coordination across the balance sheet—can meaningfully support employee financial health and reduce the misperception that saving and paying down debt are mutually exclusive.

Financial advisors also have an opportunity to help clients seek "credit alpha" through debt management. Despite the centrality of debt to household finances, only 11% of advisors currently offer debt counseling or solutions (Zhang et al., 2025). Expanding advice to explicitly incorporate liabilities would not only differentiate advisors in a competitive market—it would also enable more comprehensive and effective financial planning. Advising on asset allocation without understanding how clients manage debt risks overlooking critical trade-offs that shape long-term outcomes. Reviewing the full financial picture—along with clients' preferences and constraints—allows advisors to personalize guidance in a way that better supports wealth accumulation, reduces financial stress, and aligns financial decisions with clients' broader goals. This can further enhance the value of personalized advice to clients (Costa, Martino, and de la Fuente, 2025a).

More broadly, understanding household financial well-being requires treating assets and liabilities as two sides of the same decision problem. Simple rules of thumb that integrate both can go a long way toward helping investors reach their goals and achieve better outcomes on both sides of the balance sheet.

References

- Adelman, Saul, Mark Cross, and David Shrider, 2010. *Why Do Homeowners Make Mortgage Curtailment Payments?* Journal of Housing Research. ideas.repec.org/a/taf/rjrhxx/v19y2010i2p195-212.html.
- Amromin, Gene, Jennifer Huang, and Clemens Sialm, 2007. *The Tradeoff Between Mortgage Prepayments and Tax-Deferred Retirement Savings*. Journal of Public Economics. faculty.mcombs.utexas.edu/Clemens.Sialm/amromin_huang_sialm07.pdf.
- Campbell, John Y., and João F. Cocco, 2003. *Household Risk Management and Optimal Mortgage Choice*. The Quarterly Journal of Economics. academic.oup.com/qje/article-abstract/118/4/1449/1925116.
- Clark, Jeffrey W., 2025. *How America Saves 2025*. Vanguard. corporate.vanguard.com/content/dam/corp/research/pdf/how_america_saves_report_2025.pdf.
- Consumer Financial Protection Bureau, 2025. *The Consumer Credit Card Market*. files.consumerfinance.gov/f/documents/cfpb_consumer-credit-card-market-report_2025.pdf.
- Costa, Paulo, Marsella Martino, and Malena de la Fuente, 2025a. *The Emotional and Time Value of Advice*. Vanguard. corporate.vanguard.com/content/dam/corp/research/pdf/the_emotional_and_time_value_of_advice.pdf.
- Costa, Paulo, Marsella Martino, and Malena de la Fuente, 2025b. *The Relationship Between Emergency Savings, Financial Well-Being, and Financial Stress*. Vanguard. corporate.vanguard.com/content/dam/corp/research/pdf/relationship_between_emergency_savings_financial_well_being_financial_stress.pdf.
- Federal Home Loan Mortgage Corporation, 2026. *Primary Mortgage Market Survey®*. freddiemac.com/pmms.
- Federal Housing Finance Agency, 2025. *Annual Housing Report: January 1, 2024–December 31, 2024*. fhfa.gov/document/annual-housing-report-2025.
- Federal Reserve Bank of New York, 2026. *Quarterly Report on Household Debt and Credit: 2025 Q4*. newyorkfed.org/medialibrary/interactives/householdcredit/data/pdf/HHDC_2025Q4.
- Federal Reserve Bank of St. Louis, 2026. *Household Debt Service Payments as a Percent of Disposable Personal Income (TDSP)*. fred.stlouisfed.org/series/TDSP.
- Federal Reserve Board, 2026. *Consumer Credit—G.19*. federalreserve.gov/releases/g19/current/default.htm.
- Federal Reserve Board, 2023. *Survey of Consumer Finances, 1989–2022*. <https://www.federalreserve.gov/econres/scf/dataviz/scf/chart/#series:Debt;demographic:all;population:1;units:have>.
- Federal Student Aid, 2026a. *Interest Rates and Fees for Federal Student Loans*. studentaid.gov/understand-aid/types/loans/interest-rates.
- Federal Student Aid, 2026b. *Standard Repayment Plan*. studentaid.gov/manage-loans/repayment/plans/standard.
- Gathergood, John, and Jörg Weber, 2014. *Self-Control, Financial Literacy, & the Co-Holding Puzzle*. Journal of Economic Behavior & Organization. sciencedirect.com/science/article/pii/S0167268114001231.
- Gibbs, Christa, Benedict Guttman-Kenney, Donghoon Lee, Scott Nelson, Wilbert van der Klaauw, and Jialan Wang, 2025. *Consumer Credit Reporting Data*. Journal of Economic Literature 63(2): 598–636.
- Gomes, Francisco, Michael Haliassos, and Tarun Ramadorai, 2021. *Household Finance*. Journal of Economic Literature. aeweb.org/articles?id=10.1257/jel.20201461.
- Gross, David B., and Nicholas S. Souleles, 2002. *Do Liquidity Constraints and Interest Rates Matter for Consumer Behavior? Evidence From Credit Card Data*. The Quarterly Journal of Economics. academic.oup.com/qje/article-abstract/117/1/149/1851757.

- Hamilton, Ben, 2023. *Two Steps Forward, One Step Back? Quantifying the Pecuniary Costs of Debt Account Aversion and the Debt Snowball*. Southern Economic Journal. onlinelibrary.wiley.com/doi/pdf/10.1002/soej.12612.
- Kettle, Keri L., Remi Trudel, Simon J. Blanchard, and Gerald Häubl, 2016. *Repayment Concentration and Consumer Motivation to Get Out of Debt*. Journal of Consumer Research. academic.oup.com/jcr/article-abstract/43/3/460/2200459.
- Liebersohn, Jack, Michael Fitzpatrick, and Vikram Jambulapati, 2025. *Debt Aversion and Household Borrowing: Evidence From Mortgage Repayment*. Working paper. bpb-us-w2.wpmucdn.com/u.osu.edu/dist/6/129544/files/2025/09/Liebersohn_mortgage_prepayment-1.pdf.
- Lusardi, Annamaria, Olivia S. Mitchell, and Noemi Oggero, 2026. *Understanding Debt in the Older Population*. Journal of Pension Economics and Finance 25(1): 25–42.
- Luthi, Ben, 2025. *Auto Loan Rates and Financing for 2025*. Experian. experian.com/blogs/ask-experian/auto-loan-rates-financing.
- Madamba, Anna, and Andy Reed, 2025. *Stress, Debt, and the Power of Planning*. Vanguard. corporate.vanguard.com/content/corporatesite/us/en/corp/articles/stress-debt-power-planning.html.
- Medina, Paolina C., and Michaela Pagel, 2025. *Does Saving Cause Borrowing? Implications for the Coholding Puzzle*. The Journal of Finance. econpapers.repec.org/RePEc:bla:jfinan:v:80:y:2025:i:5:p:2689-2738.
- McCollum, Meagan, Hong Lee, and R. Kelley Pace, 2015. *Deleveraging and Mortgage Curtailment*. Journal of Banking & Finance. econpapers.repec.org/RePEc:eee:jbfin:v:60:y:2015:i:c:p:60-75.
- Prelec, Drazen, and George Loewenstein, 1998. *The Red and the Black: Mental Accounting of Savings and Debt*. Marketing Science. econpapers.repec.org/RePEc:inm:ormksc:v:17:y:1998:i:1:p:4-28.
- Vanguard, 2023. *Vanguard's Principles for Investing Success*. Vanguard. corporate.vanguard.com/content/dam/corp/research/pdf/vanguards_principles_for_investing_success.pdf.
- Wood, William C., and Scott Niederjohn, 2020. *Dave Ramsey's Personal Finance: A Primer and Critique*. Journal of Economics and Finance Education 19(2): 37–47.
- Zhang, Nicky, Fiona Greig, Andy Reed, Paulo Costa, and Malena de la Fuente, 2025. *Financial Advice Economics: What SEC Filings Reveal About Costs and Services*. Vanguard. corporate.vanguard.com/content/dam/corp/research/pdf/financial_advice_economics_what_sec_filings_reveal_about_costs_and_services.pdf.

Connect with Vanguard®
vanguard.com

All investing is subject to risk, including possible loss of principal.
Diversification does not ensure a profit or protect against a loss.

Vanguard®

© 2026 The Vanguard Group, Inc.
All rights reserved. Vanguard Marketing
Corporation, Distributor.

ISGBDS 042026