

# A practical guide to managing your cash

Managing your cash wisely is a foundational part of your financial plan. It gives you flexibility when your income or expenses change, helps you handle unexpected costs, and supports progress toward your long-term goals. Done well, cash management also provides something that's harder to quantify but just as important: peace of mind.

A clear cash strategy starts with the three simple questions below. Having clear answers to these questions will help you meet everyday money needs with confidence and build long-term financial resilience.

## Why should you hold cash?

Cash can help you manage the natural ups and downs of your income and expenses, protect you in emergencies, and help you meet large one-time spending needs.

## How much cash do you need?

A good starting point is to hold enough cash to cover three months of typical expenses. The right amount for you may be higher or lower, depending on your situation.

## Where should you keep your cash?

Choose accounts that give you easy access while still earning a competitive return.

## Why should you hold cash?

Cash plays an important role in your everyday financial life. You may think of it mainly as the money you use for groceries, gas, and bills. Its role, however, goes beyond routine expenses. Cash provides flexibility and protection. It helps you manage changes in your income and expenses and gives you a buffer when the unexpected occurs.

Cash is appropriate for today's expenses.

Cash can take many forms, including physical currency, money held in bank accounts, brokerage cash management accounts, and short-term financial instruments such as money market funds. For the purposes of this paper, cash is defined as a readily available short-term financial instrument with high liquidity, minimal or negligible market risk, and a maturity period of less than three months.<sup>1</sup>

One useful way to think about how to manage your money is by grouping expenses based on when you expect them to occur:

- 1. "Today" expenses** are those you expect to pay within the next year. Because you may need this money on short notice, it should be easy to access and protected from market swings.
- 2. "Someday" expenses** are ones that may occur in the future but are unlikely to happen within the next year. These needs generally fall into two broad categories:
  - The first includes potential income or large expense shocks, such as a job loss, that are uncertain in timing but would require quick access to funds if they occur.
  - The second includes unplanned but positive spending opportunities that are not emergencies, such as attending a friend's destination wedding in the future. Because the expected time horizon for these expenses is longer, you should be willing to accept some investment risk while still keeping the money accessible so it can support future needs when they materialize.
- 3. "Later" expenses** are ones you do not expect to encounter for many years, such as retirement or education savings. For these goals, you may be willing to give up short-term access in exchange for tax benefits or to assume more investment risk for potentially higher returns. For example, employer retirement plans restrict withdrawals but offer tax advantages and often employer contributions.

<sup>1</sup> Our definition of "a maturity period of less than three months" is consistent with the definition we used in Aliaga-Díaz et al. (2024).

**Cash is best used for "today" expenses.** This is money you rely on to meet near-term needs and keep your financial life running smoothly. Because you may need it quickly, it is important that this money is easy to access and protected from market fluctuations.

Most people hold cash for three primary purposes:

- everyday spending;
- unexpected emergency expenses; and
- short-term goals, which are planned expenses within the next year.

Each of these uses serves a distinct purpose. Together, they help you handle short-term needs without disrupting your longer-term investment strategy. **Figure 1** shows how these uses for cash align with other financial planning needs.

Hold cash for everyday spending, emergencies, and planned expenses within the next year.

**FIGURE 1**  
**Use cash for the expenses you expect in the next year**

Cash	Investments	
<p style="text-align: center;"><b>Today</b></p> <p style="text-align: center;">Expenses that need to be paid within the next year</p> <div style="background-color: #d9ead3; padding: 5px; margin-bottom: 5px;">Everyday spending</div> <div style="background-color: #d9ead3; padding: 5px; margin-bottom: 5px;">Unexpected emergency expenses</div> <div style="background-color: #d9ead3; padding: 5px;">Short-term goals</div>	<p style="text-align: center;"><b>Someday</b></p> <p style="text-align: center;">Expenses that can be paid using easily accessed accounts</p> <div style="background-color: #fff2cc; padding: 5px; margin-bottom: 5px;">Major unexpected events such as the loss of a job</div> <div style="background-color: #fff2cc; padding: 5px;">Future spending opportunities</div>	<p style="text-align: center;"><b>Later</b></p> <p style="text-align: center;">Expenses that can be paid using restricted account types</p> <div style="background-color: #fff2cc; padding: 5px; text-align: center;">Long-term goals</div>

Source: Vanguard.

## **Everyday spending**

Most households need some cash set aside to cover regular bills and manage normal month-to-month changes in income and expenses. Even when your finances feel steady, variation is common. In some months your costs are higher than expected, while in other months your income may be lower.

Keeping a cushion of spending cash helps you pay bills on time, avoid late fees, and reduce reliance on credit cards or other high-interest debt. When expenses are lower or income is higher, you can rebuild that cushion.

Income and expenses often vary more than people expect. In the United States, a majority of workers are paid hourly, and their paychecks typically change from month to month by about 15%, or roughly \$800 (Goodman, Hahn, and Greig, 2025). Household spending also fluctuates. The typical family sees monthly expenses change by nearly 30% (Farrell and Greig, 2015). Understanding how predictable your income and expenses are can help you decide how much spending cash to keep on hand.

Retirees often need more spending cash than working households do. Because their expenses often exceed their income, they typically move money from investments into cash to cover the difference. Holding more spending cash can reduce the need to frequently sell long-term investments.

On the other hand, some households regularly end the month with extra cash or have assets that can easily be converted to cash when needed. In these situations, running temporarily low on spending cash may be less disruptive. A short-term cash shortfall may be an inconvenience rather than a serious problem and thus may allow you to keep a smaller spending buffer.

## **Unexpected emergency expenses**

Most people should also keep some extra cash set aside for emergencies, such as car repairs, medical bills, or legal fees. These surprise costs are often called expense shocks. About 75% of U.S. households experience at least one such shock in a given year, and many experience more than one (Fulford and Low, 2024). Research from The Pew Charitable Trusts shows that, for the typical household, the cost of an emergency shock is roughly equal to half a month of expenses (The Pew Charitable Trusts, 2015).

Having emergency cash available helps you cover these costs without missing bill payments or turning to high-interest debt. Because you could face at least one expense shock in a year, it makes sense to keep some cash readily available for this purpose.

Holding adequate cash for normal spending and unexpected expenses allows you to help avoid going into high-interest debt or being forced to sell long-term investments.

## Not all emergency savings should be held in cash

Large disruptions, such as a major medical expense or an income shock such as a job loss, tend to last longer and require a larger contingency reserve. For these situations, we generally suggest having three to six months of living expenses in accessible investment accounts.

This contingency reserve can be thought of as money for "someday" expenses. You may never need it, and if you do, the timing is uncertain. Because this money may sit unused for long periods, it makes sense to invest it in a mix of stocks and bonds held in an account that remains easy to access, such as a taxable brokerage account. This approach allows your money to potentially earn higher returns while it is not being used.

Roth IRAs can also serve as a place to hold part of this reserve, as contributions can generally be withdrawn without taxes or penalties. By contrast, withdrawals of earnings are subject to additional rules and may incur income taxes, a 10% penalty, or both if taken before age 59½ or before applicable five-year requirements are met.<sup>2</sup>

## Short-term goals

Cash also plays an important role when you're planning for a known expense in the near future. If you expect a large cost within the next year, such as a vacation or a wedding, keeping that money in cash can help you avoid market risk and feel confident that the funds will be there when you need them.

When a goal is less than a year away, protecting the value of that money is usually more important than seeking higher returns. Market movements over short periods can be unpredictable, and even a temporary decline can create stress or force you to change your plans. Holding cash for near-term goals allows you to focus on the timing and purpose of the expense rather than on short-term market movements.

If your goal is more than a year away, a different approach often makes sense. In those cases, you may want an investment plan that includes a mix of stocks, bonds, and cash rather than relying on cash alone. This can help balance growth potential with stability while keeping funds accessible as the goal approaches.<sup>3</sup>



**Key takeaway:** Cash provides flexibility and protection.

It helps you manage everyday spending, cover smaller emergencies, and prepare for planned expenses. It's your "today" money that helps keep your financial life running smoothly.

<sup>2</sup> Although Roth contributions can be withdrawn if needed, it's important to note that they can't be recontributed, so withdrawing them should usually be thought of as a last resort. Also, earnings on contributed amounts may be subject to penalties in some circumstances.

<sup>3</sup> See Aliaga-Díaz et al. (2024) for a discussion of the role of cash in longer-term investment portfolios.

## How much cash do you need?

When deciding how much cash to hold, a good starting point is to **set aside about three months of typical expenses**. For many people, this amount is enough to cover spending and common emergency expenses. From there, the right amount depends on your personal circumstances.

If your income and expenses are consistent and predictable, and you have easy access to additional funds when needed, you may be comfortable holding less cash. If your income or expenses vary more from month to month, or if you regularly rely on cash to supplement income, you may prefer to hold more. If you're saving for a specific short-term goal, you'll also want to set aside additional cash to cover that need.

Retirees often hold larger cash balances than working households do. Because many retirees rely on their investments to fund a significant share of their expenses, they may choose to keep more cash available to reduce how often they need to sell investments. In some cases, this means holding enough cash to cover up to 12 months of expenses. Some retirees may choose to hold more for additional peace of mind, while remaining mindful of the opportunity cost of larger cash balances.

**Figure 2** shows how income stability, expense variability, and whether you tend to have money left over each month can influence how much cash you may want to hold. People with steadier income and expenses may be able to operate with a smaller reserve. Those with more uncertainty or ongoing cash shortfalls generally benefit from holding a larger buffer.

Our guideline reserve of enough cash to cover three months of expenses would apply to a person who over time has expenses and income that break even, but still faces typical income and expense variation. If, instead, your income is more variable—such as income dependent on seasonal or commission-based work—you might want to increase that reserve by an additional month or more of expenses.

Start with three months of expenses in cash, then adjust based on your income and expense variability.

**FIGURE 2**

**If you have more income and expense volatility, you may need a bigger cash reserve**

		Estimated months' worth of cash reserves required to cover expenses		
		Stable	Normal variation	Unpredictable
<b>Net saver</b> "I usually have 10% of my income left over after paying bills."	Very stable income	1 month	1 month	2 months
	Somewhat stable income	1 month	2 months	2 months
	Variable income	2 months	2 months	3 months
<b>Stable spender</b> "Over time, my net income and my expenses equal out."	Very stable income	2 months	3 months	4 months
	Somewhat stable income	3 months	3 months	4 months
	Variable income	3 months	4 months	4 months
<b>Net spender</b> "My net income meets only 90% of my normal expenses."	Very stable income	5 months	6 months	7 months
	Somewhat stable income	5 months	6 months	8 months
	Variable income	6 months	7 months	8 months

**Notes:** The required amounts shown are based on having a 95% chance of not running out of cash after two years with no additional cash added beyond normal income and expense variation. Emergency expenses are assumed to equal half a month of expenses and to occur at a 6.25% monthly probability. Excess income, when it occurs, is reinvested into cash. Expenses are assumed to vary randomly each month, up to a maximum of plus or minus 10% for stable expenses, 30% for normal expense variation, and 50% for unpredictable expenses. Very stable income is assumed to not change month to month. Somewhat stable income varies by up to 15%, and variable income varies by up to 30%.


**Source:** Vanguard.

**Figure 3** highlights additional factors that may influence how comfortable you feel with different cash balances. If your income and expenses tend to even out over time, three months' worth of expenses can be a reasonable starting point. If your expenses or income vary more widely, or if emergency expenses are more likely, holding additional cash can provide greater security.

Peace of mind also matters. Some people feel more comfortable knowing they have extra cash available, even if it is not strictly necessary. Research has shown that larger cash balances are often associated with greater financial well-being, regardless of total wealth (Ruberton, Gladstone, and Lyubomirsky, 2016; Bialowolski, Xiao, and Weziak-Bialowolska, 2023).

The goal is to hold enough cash to meet your needs and help you feel secure, without allowing excess cash to slow your progress toward your long-term goals. Holding additional cash comes with an opportunity cost, which becomes more important over time.

**FIGURE 3**  
**Personal characteristics influence how much cash you might hold**



	Consider less cash	3 months' expenses	Consider more cash
<b>Expense predictability</b> How much do your expenses typically change from month to month?	Stable expenses	Somewhat predictable expenses	Volatile expenses
<b>Income predictability</b> How much does your income typically change from month to month?	Stable monthly income (e.g., salaried)	Somewhat stable monthly income	Volatile monthly income (e.g., seasonal, commission-based)
<b>Emergency expense frequency</b> Does your lifestyle lend itself to a lot of unexpected expenses (e.g., children, old house, old car, low insurance deductibles)?	Fewer emergency expenses	One emergency expense every 12–16 months	More emergency expenses
<b>Income vs. expense balance</b> Do you often have money left at the end of the month, or do you need extra cash to meet expenses?	Your income outweighs your typical expenses	Your income and expenses are balanced	Your expenses outweigh your typical income
<b>Peace of mind</b> Are you financially and psychologically OK with adding more to your cash account when needed, or do you need reassurance that your cash will almost always be enough?	Your cash balance is not important to your peace of mind	Some cash helps you feel secure	You have more peace of mind when you have a large cash balance

Source: Vanguard.

## **The cost of too much cash**

While cash is essential for flexibility and emergencies, holding more than you need can work against your long-term goals. Cash tends to grow slowly and often does not keep pace with inflation. As a result, excess cash can lose purchasing power.

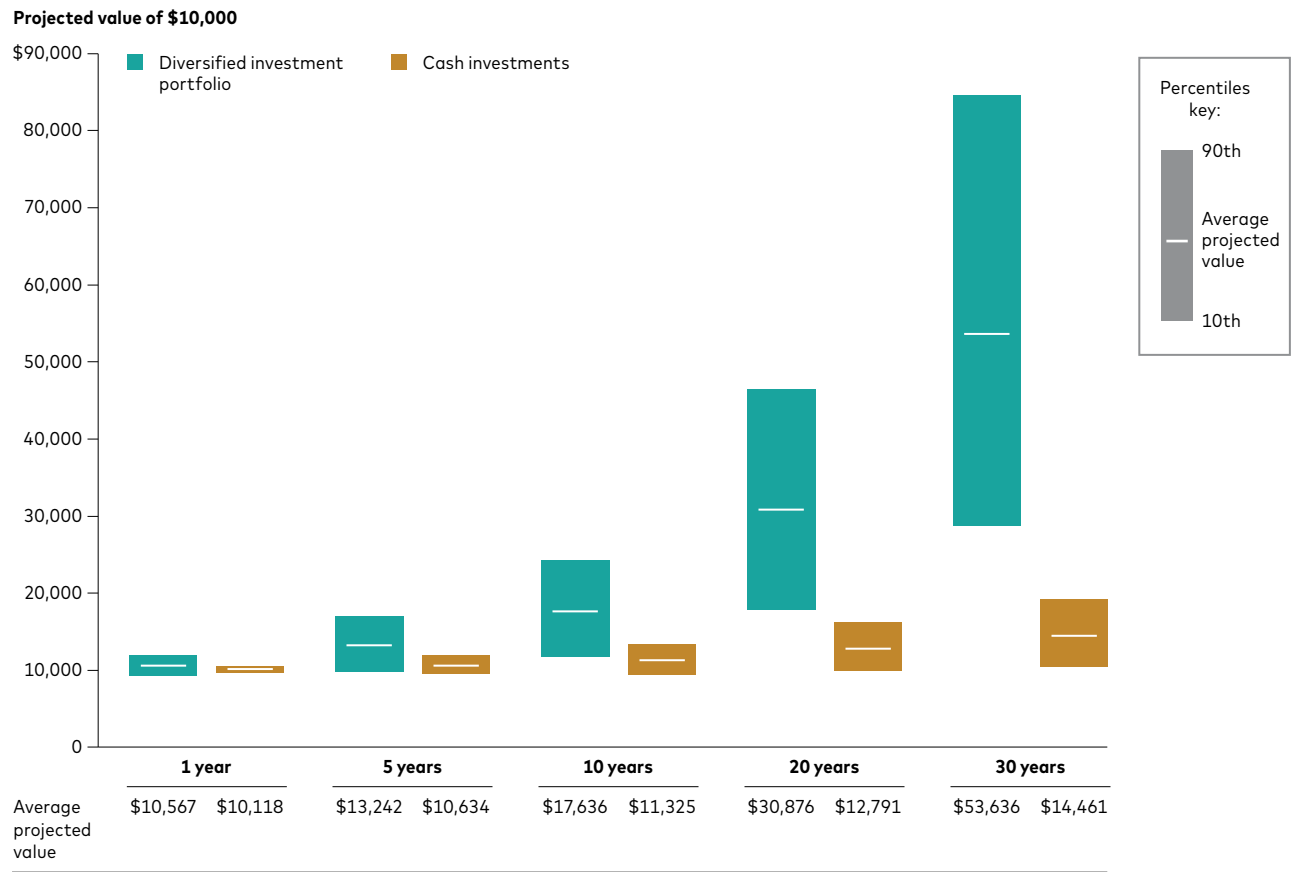
Because of these potentially expected lower returns in the long run, cash is generally not well-suited for long-term goals such as retirement, education, or health care costs. These goals are better supported by a diversified mix of stocks and bonds with higher expected returns over long time horizons.

Money set aside for long-term goals can be thought of as "later" money, since it is not expected to be used for many years. The challenge is finding the right balance. You want enough cash to support day-to-day needs and prepare for unexpected expenses, but not so much that it slows progress toward future growth.

**Figure 4** illustrates how a balanced investment portfolio compares with an all-cash portfolio over time. The difference in expected outcomes grows larger the longer the money remains invested. Holding an extra \$10,000 in cash instead of investing it can result in tens of thousands of dollars in forgone growth over several decades.

This is why it is important to review your cash holdings regularly to confirm that they still align with your goals and time horizon. Cash should support your financial plan rather than quietly limiting its long-term potential.

**FIGURE 4**  
**Cash likely won't keep up with stocks and bonds over time**



**Notes:** Amounts are shown in today's dollars. The balanced portfolio consists of 60% stocks and 40% bonds, with a mix of domestic and international investments. Balances reflect projected outcomes across 10,000 scenarios using Vanguard Capital Markets Model® (VCMM) steady-state conditions. The bars represent the range between the 10th and 90th percentile projections.

**Source:** Vanguard.

**IMPORTANT:** The projections and other information generated by the VCMM regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as of December 2025. Results from the model may vary with each use and over time. For more information, please see the Appendix on page 17.



**Key takeaway:** Cash is essential for flexibility and peace of mind, but holding more than you need can slow progress toward long-term goals. The right balance allows cash to support your short-term needs while giving stocks and bonds the opportunity to drive long-term growth.

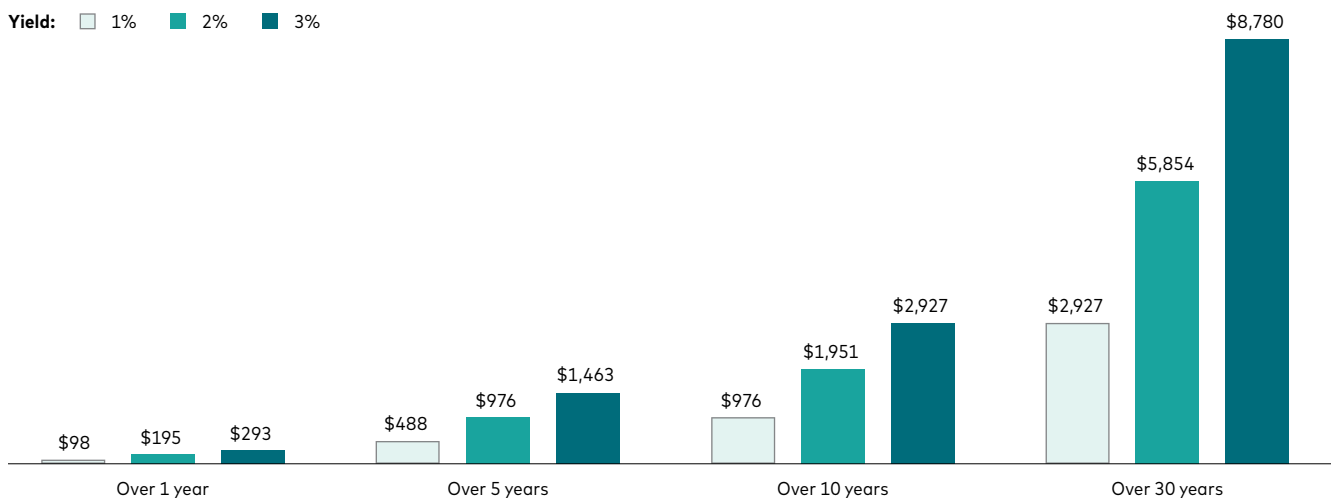
## Where should you keep your cash?

Once you know how much cash you want to hold and why, the next step is deciding where to keep it. Different accounts offer different features, and those features often come with trade-offs. For many years, yield was less important because interest rates were very low. In recent years, higher interest rates have made the choice of account more important.

The return on a higher-yield account can add up over time. For example, if you keep an average balance of \$10,000 in cash and move it to an account that pays three percentage points more in interest each year, you could earn thousands of additional dollars over time, as shown in **Figure 5**. Keeping cash in a low-interest account means giving up that potential return.

**FIGURE 5**  
**Missing out on yield is money out of your pocket**

Estimated value of extra yield on a cash investment that holds an average of \$10,000 per month



**Note:** The figure assumes 2.5% annual inflation along with cash flows that keep the balance at \$10,000 in today's dollars from month to month.

**Source:** Vanguard.

Yield is not the only factor to consider. Convenience also matters, especially for cash you use regularly. When choosing where to keep your cash, it can be helpful to consider the following features:

- **Electronic funds transfers (EFT)**, such as Automatic Clearing House (ACH) transfers, support direct deposits, bill payments, and easy money movement between financial providers.
- **Check writing**, which provides access to paper checks.
- **Debit or ATM access**, which supports everyday spending and quick withdrawals.
- **Instant transactions**, which allow fast payments when timing matters.
- **Deposit insurance**, such as Federal Deposit Insurance Corporation (FDIC) insurance for bank accounts or Securities Investor Protection Corporation (SIPC) coverage for brokerage accounts.
- **In-person services**, such as notary services or cashier's checks.
- **Fees**, including overdraft fees, ATM charges, or minimum balance requirements.
- **Unified account management**, which can simplify your financial life by consolidating accounts in one place.

FDIC insurance covers up to \$250,000 in deposits at a given financial institution. Some cash account structures allow for FDIC insurance beyond that amount. SIPC insurance covers up to \$500,000 of securities at a given brokerage, including up to \$250,000 in cash. SIPC insurance does not protect you from investment loss.

The right mix of features for you depends on how you use your cash. For everyday spending, easy access and payment flexibility are usually the key considerations. For emergency savings or near-term goals, you may be able to give up some convenience in exchange for a higher yield.

Checking and traditional savings accounts are convenient but typically pay very low interest. High-yield savings accounts and money market funds often pay more, though they may offer fewer transaction features. Some brokerage cash management accounts and newer high-yield accounts combine competitive yields with broader access.

Balance convenience with the opportunity cost of lower yields when choosing cash accounts for different needs.

**Figure 6** provides a simple way to think about where to keep money for different needs. Money that you expect to use soon generally belongs in accounts with high liquidity and low risk. Cash set aside for emergencies or planned expenses can often be placed in higher-yielding options. Money that you don't expect to need soon is better kept in accounts that hold stocks and bonds.

A practical approach is to keep only what you need for routine spending in your checking account and move the rest to a higher-yield account. When you need additional cash for bills or expenses, you can transfer it back. Some banks offer tools that automatically move money into checking when balances fall below a set level.

**FIGURE 6**  
**Money for today should be kept in accounts that are accessible and protected from market downturns**

	Time horizon	Objective	Liquidity need	Typical amount	Preferred account types
<b>Cash</b>	<b>Today</b> Expenses in the next year	Managing monthly expenses	Very high	Three months' worth or more of typical expenses	Checking accounts, brokerage cash management accounts
		Protecting against typical emergency expenses	High		High-yield savings accounts, brokerage cash management accounts, money market funds
		Targeted spending need (less than one year away)	Medium	Varies	High-yield savings accounts, brokerage cash management accounts, money market funds, CDs
<b>Investments (stocks and bonds)</b>	<b>Someday</b> Expenses that may occur at any time, but probably not soon	Protecting against an unexpected loss of income and large emergency expenses	High	At least three to six months' worth of essential expenses	General taxable accounts, Roth IRAs, Health Savings Accounts (HSAs, for health shocks)
	<b>Later</b> Targeted goals for a defined time in the future	Medium- and long-term investment goals	Low	Varies	General taxable accounts, traditional and Roth IRAs, employer plans, HSAs, 529 plans

**Notes:** Retirees may want to hold 12 months' worth or more of typical expenses. Money market funds typically maintain a value of \$1.00 per share, but in extreme cases they can lose value. CDs are not typically considered cash but may be appropriate to use when the target spending date is known.

**Source:** Vanguard.



**Key takeaway:** Reviewing where your cash is held, and whether it is earning a competitive return, can be one of the simplest ways to help improve outcomes without taking on additional market risk. Aim to balance convenience and yield by keeping spending cash readily accessible, while placing cash not needed for immediate use into accounts that offer a competitive return.

## Are U.S. households leaving billions of potential dollars on the table?

In today's environment, a typical U.S. household keeps a meaningful amount of cash in checking and savings accounts (Federal Reserve Board of Governors, 2023). However, the typical annual percentage yield is only 0.07% for checking accounts and 0.40% for savings accounts (Federal Deposit Insurance Corporation, 2026). This means many households could earn more money simply by moving some of their cash into higher-yield options.

Figure 7 illustrates how these differences can add up across households. Even modest increases in yield can translate into billions of dollars in additional returns for U.S. savers over time. The opportunity grows as a larger share of cash is held in higher-yield accounts and as the gap between yields widens.

**FIGURE 7**  
**Shifting to higher-yield cash savings could mean billions of dollars yearly in extra returns for U.S. investors**

Total cash opportunity for U.S. households (\$ billion)

		Increase in annual percentage yield (APY)		
		1 percentage point	2 percentage points	3 percentage points
Higher share of cash in high-yield accounts	75%	\$41	\$83	\$124
	50%	\$28	\$55	\$83
	25%	\$14	\$28	\$41

**Notes:** To determine total cash opportunity, we use the aggregated balance of checking and savings accounts combined as the basis of calculation for different scenarios, applying the weights provided in the Survey of Consumer Finances 2022. The aggregation is done by multiplying the average balances of checking and savings accounts by the total number of households respectively owning these accounts. We adjusted the balances for inflation using 2025 dollars.

**Sources:** Vanguard calculations, based on the 2022 survey cited above as published in Federal Reserve Board of Governors (2023).

## Conclusion

Managing your cash wisely is an important part of a resilient financial plan. Holding enough cash for everyday spending, unexpected expenses, and near-term goals gives you flexibility when income or expenses change and helps you meet immediate needs without disrupting your long-term investment strategy.

A practical cash approach comes down to three decisions. You should be clear on why you are holding cash, how much you need given your income and expense patterns, and where that cash is best kept based on how soon you expect to use it. When those choices are aligned, cash supports your plan rather than quietly holding it back.

As a next step, it can be helpful to review your current cash holdings with a few simple questions in mind:

- Does each portion of your cash have a clear purpose, such as spending, emergencies, or a planned expense?
- Is the amount you are holding appropriate for your income stability, expense variability, and comfort level?
- Are your cash balances held in accounts that balance convenience with a competitive return based on when you expect to use the money?

Small adjustments, such as moving cash that is not needed right away into a higher-yield option, can improve outcomes over time without adding market risk. Cash works best when it provides confidence today while allowing you to invest for the long term.

## References

Aliaga-Díaz, Roger A., Anatoly Shtekhman, Garrett Harbron, Daniel Jacobs, and Warwick Bloore, 2024. *A Framework for Allocating to Cash: Risk, Horizon, and Funding Level*. Vanguard. [corporate.vanguard.com/content/dam/corp/research/pdf/a\\_framework\\_for\\_allocating\\_to\\_cash.pdf](https://corporate.vanguard.com/content/dam/corp/research/pdf/a_framework_for_allocating_to_cash.pdf).

Bialowolski, Piotr, Jing Jian Xiao, and Dorota Weziak-Bialowolska, 2023. *Do All Savings Matter Equally? Saving Types and Emotional Well-Being Among Older Adults: Evidence From Panel Data*. *Journal of Family and Economic Issues* 45 (88–105). [link.springer.com/article/10.1007/s10834-023-09891-2](https://link.springer.com/article/10.1007/s10834-023-09891-2).

Costa, Paulo, and Clifford S. Felton, 2024. *Vanguard's Guide to Financial Wellness*. Vanguard. [corporate.vanguard.com/content/dam/corp/research/pdf/vanguards\\_guide\\_to\\_financial\\_wellness.pdf](https://corporate.vanguard.com/content/dam/corp/research/pdf/vanguards_guide_to_financial_wellness.pdf).

Farrell, Diana, and Fiona Greig, 2015. *Weathering Volatility*. JPMorgan Chase Institute. [jpmorganchase.com/institute/all-topics/financial-health-wealth-creation/report-weathering-volatility](https://jpmorganchase.com/institute/all-topics/financial-health-wealth-creation/report-weathering-volatility).

Federal Deposit Insurance Corporation, 2026. *National Rates and Rate Caps*. [fdic.gov/national-rates-and-rate-caps](https://fdic.gov/national-rates-and-rate-caps).

Federal Reserve Board of Governors, 2023. *Changes in U.S. Family Finances From 2019 to 2022: Evidence From the Survey of Consumer Finances*. [federalreserve.gov/publications/files/scf23.pdf](https://federalreserve.gov/publications/files/scf23.pdf).

Felton, Clifford S., 2023. *In Case of Emergency, Break Glass: Managing Household Liquidity*. Vanguard. [corporate.vanguard.com/content/dam/corp/research/pdf/in\\_case\\_of\\_emergency\\_break\\_glass.pdf](https://corporate.vanguard.com/content/dam/corp/research/pdf/in_case_of_emergency_break_glass.pdf).

Fulford, Scott, and David Low, 2024. *Expense Shocks Matter*. Consumer Financial Protection Bureau Office of Research. [ssrn.com/abstract=5035531](https://ssrn.com/abstract=5035531).

Ganong, Peter, Pascal Noel, Christina Patterson, Joseph Vavra, and Alexander Weinberg, 2025. *Earnings Instability*. Working Paper 2025–114. University of Chicago and NBER. [bfi.uchicago.edu/wp-content/uploads/2025/09/BFI\\_WP\\_2025-114-1.pdf](https://bfi.uchicago.edu/wp-content/uploads/2025/09/BFI_WP_2025-114-1.pdf).

Goodman, Aaron, Kelly Hahn, and Fiona Greig, 2025. *Emergency Savings Protect Retirement Savings*. Vanguard. [institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/2025/corporate/emergency\\_savings\\_protect\\_retirement\\_savings.pdf](https://institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/2025/corporate/emergency_savings_protect_retirement_savings.pdf).

Kozlowski, Julian, and Samuel Jordan-Wood, 2024. *Rising Liquidity Among U.S. Households and Its Policy Implications*. Federal Reserve Bank of St. Louis. [stlouisfed.org/on-the-economy/2024/may/rising-liquidity-us-households-policy-implications](https://stlouisfed.org/on-the-economy/2024/may/rising-liquidity-us-households-policy-implications).

The Pew Charitable Trusts, 2015. *How Do Families Cope With Financial Shocks?* [emergency-savings-report-1\\_artfinal.pdf](https://www.pewtrusts.org/-/media/Assets/2015/04/2015-04-emergency-savings-report-1_artfinal.pdf).

Ruberton, Peter M., Joe Gladstone, and Sonja Lyubomirsky, 2016. *How Your Bank Balance Buys Happiness: The Importance of "Cash on Hand" to Life Satisfaction*. *Emotion*. August 16(5): 575–80. [pubmed.ncbi.nlm.nih.gov/27064287/](https://pubmed.ncbi.nlm.nih.gov/27064287/).

U.S. Bureau of Labor Statistics, 2025. *Characteristics of Minimum Wage Workers, 2024*. [bls.gov/opub/reports/minimum-wage/2024/](https://bls.gov/opub/reports/minimum-wage/2024/).

## Appendix

**IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model (VCMM) regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.**

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More importantly, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, U.S. municipal bonds, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over time. Forecasts represent the distribution of geometric returns over different time horizons. Results produced by the tool will vary with each use and over time.

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