Key Wealth

Key Wealth Institute

Cash is Not Trash, but How Long Will it Last?

George Mateyo, Chief Investment Officer
Dan Fiedler, CFA,® Senior Portfolio Manager
Thomas Jarecki, CFP,® National Director, Wealth Planning
Rajeev Sharma, Managing Director, Fixed Income Investments

After keeping the federal funds target interest rate at 5.25% – 5.50% since July 2023, the Federal Reserve (Fed) recently began the process of lowering interest rates. Investors with excess cash balances should take note.

The Fed had raised interest rates by 525 basis points since March 2022, trying to reduce inflation to its target goal of 2%. In doing so, Treasury yields moved higher along the curve, and particularly in front-end maturities. Money market funds have been yielding 5% on an annualized basis, which has enticed investors to participate in these funds that invest in high-quality cash-equivalent debt instruments such as commercial paper, Treasury bills, and repurchase agreements, among others.

With minimal opportunity costs and expectations that short-term rates will remain high, money market funds reached a record of $6.2 trillion in July. However, the Fed's shift to lower interest rates may make money market funds less attractive to investors as short-term rates fall.

Framing the issue

With interest rates falling, cash-equivalent yields are expected to decline, too. This situation presents a conundrum for cash-heavy investors: When do you increase allocations to asset classes with higher expected long-term returns such as stocks and bonds?

Goals-based financial planning tailors a systematic long-term investment strategy around each client's personal situation. Key Wealth Management strongly supports this process. Cash plays an important role in all goals-based financial plans. Cash typically is held to maintain an emergency fund and to meet near-term liquidity needs such as short-term projects.

That said, holding cash over the long term comes at a cost. According to UBS, from 1900 to 2023, real (inflation-adjusted) annualized returns were:

- 6.5% per year for stocks
- 1.7% per year for bonds
- Only 0.5% per year for Treasury bills (cash equivalents)

UBS also examined a more recent time period of 2004 – 23. It found that real (inflation-adjusted) annualized returns during this period were:

- 6.6% for U.S. stocks
- 1.5% for bonds
- -1.2% for Treasury bills

In other words, after adjusting for inflation, investors' allocations to cash over the 2004–23 period equated to a loss in purchasing power.

Clearly, holding cash for an extended period has not been a winning investment proposition.

Despite attractive current yields on cash, it is important to remember that cash yields are high because inflation rose sharply in 2022. After peaking in mid-2022, inflation has begun to recede and the labor market has begun to slow. As inflation continues to normalize toward the Fed's long-term target of 2%, the Fed has begun cutting interest rates to support economic growth.

As of early November 2024, the Fed's rate-cutting cycle was just beginning. From an initial level of 5.25% to 5.50%, the federal funds rate had been reduced by 75 basis points (bps) -50 (0.50%) in September and another 25 bps in November, with more cuts expected soon. As the Fed cuts rates, the yield on cash equivalents will decrease quickly. At Key Wealth, our capital market assumptions anticipate long-term returns on cash of about 3.5% in nominal terms (not adjusted for inflation).

Holding cash not an all-or-nothing proposition

Assuming our projections of an equilibrium cash yield of about 3.5% are in the ballpark, does holding an outsized cash position still makes sense? After all, 3.5% yield on cash is much higher than the 0% returns on cash we saw in the decade after the Great Financial Crisis of 2008–09.

To illustrate why holding a very large cash position does not generally make long-term sense, we have included a basic financial planning scenario, along with four sample asset allocations. Each scenario estimates an ending plan value and a probability of success, obtained by running a Monte Carlo simulation with 1,000 different potential market outcomes. This study is included as a full appendix to this paper.

Typically, if a financial plan succeeds in 800 out of 1,000 Monte Carlo simulations, it is said to have an 80% probability of success. The moral of the story: In our sample planning scenario, a 100% cash portfolio has zero probability of success while a balanced portfolio of diversified assets has the highest probability of success.

See appendix for case study.

What do I do about it?

The bottom line is that even partial investment of excess cash can have a strong impact on end-of-plan portfolio values. Cash-heavy investors should reassess their liquidity needs and consider diversifying into a broad basket of high-quality assets.

In particular, high-quality bonds may be a good option for risk-averse investors. Bond yields have increased from the very low levels reached during the 2020 COVID-19 pandemic. Owning bonds allows investors to lock in yield with the potential for price appreciation should interest rates fall.

Falling benchmark rates help boost the broader bond market. A look at Fed rate-cutting cycles since the 1990s reveals that the average return on cash-like debt instruments (i.e., Treasury bills that mature in a year or earlier) was 3.65% in the year after the first interest rate cut in an easing cycle. In contrast, the Bloomberg US Aggregate Bond Index (the Agg), a proxy for the broader bond market, returned an average 5.5% during those periods. The Agg comprises a diverse range of longer-term securities, including government Treasury securities, corporate bonds, mortgage-backed securities (MBS), and asset-backed securities (ABS).

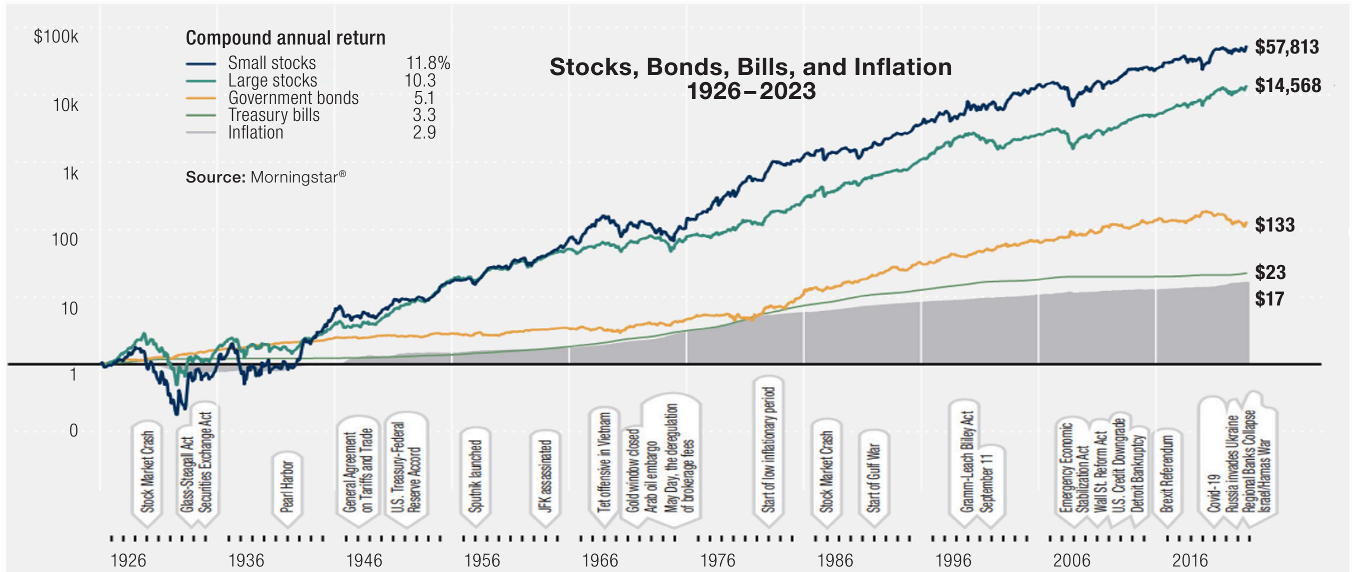
Equities remain a central part of balanced portfolios to help meet growth for longer-term needs. Alternative investment strategies and real assets, where appropriate, can provide additional diversification and portfolio resilience if inflation remains stickier than expected. These strategies should also help improve portfolio returns in different market regimes. Private assets and hedge funds fall into this bucket of portfolio diversifiers.

In summary, historical data shows that high-quality, fixed-income assets have outperformed cash equivalents during rate-cutting cycles. Additional diversification in the form of high-quality equities, alternatives and real assets improves projected returns and bolsters the resilience of financial plans across a variety of scenarios. Please see the appendix for our sample financial planning scenarios that support these assertions.

The following charts and scenarios highlight that time in the market, not market timing, is an investor's best friend.

Cash is Not Trash, but How Long Will it Last?

Treasury bills (cash equivalents) have barely outpaced inflation over time.



Past performance is no guarantee of future results

Past performance is no guarantee of future results. Hypothetical value of $1 invested at the beginning of 1926. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index.

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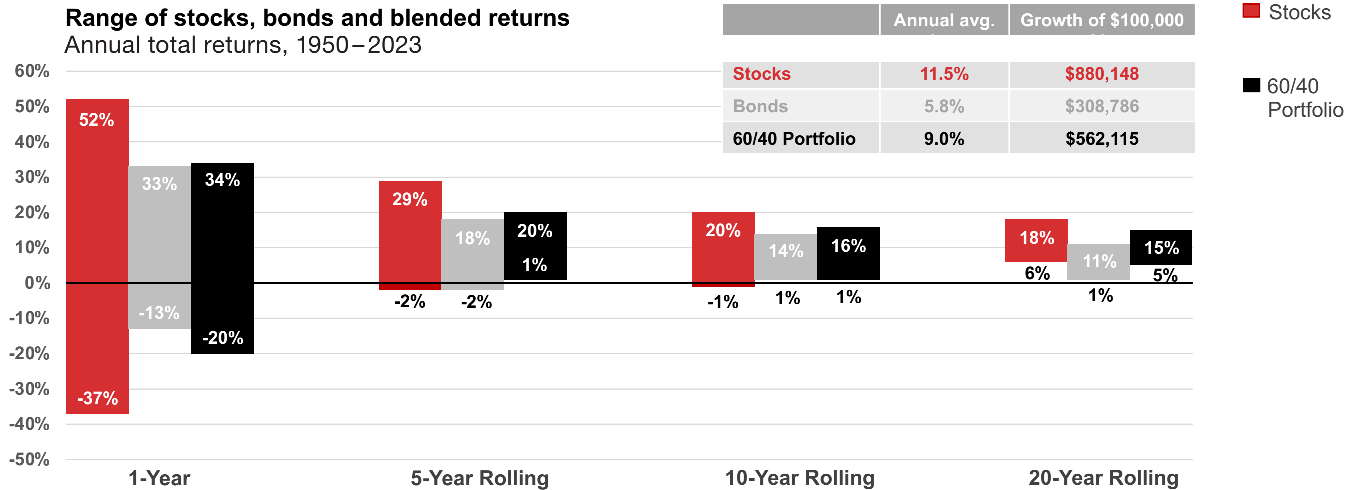
Cash is Not Trash, but How Long Will it Last?

Returns can vary over shorter time horizons, but the range of outcomes tends to decrease over longer periods.

Time, Diversification and the Volatility of Returns



Sources: Bloomberg, FactSet, Federal Reserve, Robert Shiller, Standard & Poor's, Strategas/Ibbotson, J.P. Morgan Asset Management

Returns shown are based on calendar year returns from 1950 to 2023. Stocks represent the S&P 500 Shiller Composite for periods prior to 1936 and the S&P 500 thereafter. Bonds represent Strategas/Ibbotson for periods prior to 1976 and the Bloomberg Aggregate thereafter. Growth of $100,000 is based on annual average total returns from 1950 to 2023.

U.S. Data as of August 31, 2024.

Cash is Not Trash, but How Long Will it Last?

Even through periods of stress such as 2000 or 2008–09, patient investing is usually rewarded, with outcomes skewed positively.

Asset Allocation — Risk and Reward

Ten Year Returns
January 1950 — June 2024

Worst Return / Best Return / Average Return	Portfolio Mix	Period Ending 6/24	Worst Return	Average Loss	Average Return	Average Gain	Best Return	Percent Negative	Standard Deviation	Returns Exceeding Inflation
10.1% / 18.0% / -2.8%	Stocks 90% No Bonds Cash 10%	11.7%	-2.8%	-1.0%	10.1%	10.4%	18.0%	3%	4.5	84%
9.6% / 17.2% / -1.9%	Stocks 80% Bonds 10% Cash 10%	10.6%	-1.9%	-0.9%	9.6%	9.7%	17.2%	1%	4.1	84%
9.1% / 16.4% / -1.0%	Stocks 70% Bonds 20% Cash 10%	9.4%	-1.0%	-0.5%	9.1%	9.2%	16.4%	1%	3.8	84%
8.6% / 15.7% / -0.1%	Stocks 60% Bonds 30% Cash 10%	8.2%	-0.1%	-0.1%	8.6%	8.6%	15.7%	0%*	3.4	84%
8.1% / 15.0% / 0.8%	Stocks 50% Bonds 40% Cash 10%	7.0%	0.8%	—	8.1%	8.1%	15.0%	0%	3.2	84%
7.7% / 14.2% / 1.7%	Stocks 40% Bonds 50% Cash 10%	5.9%	1.7%	—	7.7%	7.7%	14.2%	0%	2.9	86%
7.2% / 13.7% / 2.6%	Stocks 30% Bonds 60% Cash 10%	4.7%	2.6%	—	7.2%	7.2%	13.7%	0%	2.8	87%
6.7% / 13.2% / 2.6%	Stocks 20% Bonds 70% Cash 10%	3.5%	2.8%	—	6.7%	6.7%	13.2%	0%	2.7	87%
6.2% / 12.7% / 1.7%	Stocks 10% Bonds 80% Cash 10%	2.3%	1.7%	—	6.2%	6.2%	12.7%	0%	2.8	85%
5.7% / 12.3% / 1.7%	No Stocks Bonds 90% Cash 10%	1.2%	0.6%	—	5.7%	5.7%	12.3%	0%	2.9	84%

The Consumer Price Index for June 2024 is preliminary.

Data: Rolling 10 year returns using monthly data (774 Observations)

Stocks: Standard & Poor's 500 Stock Index • Bonds: Intermediate Treasury Bonds • Cash: 90-Day Treasury Bills • Inflation: Consumer Price Index

Sources: Standard & Poor's Corporation; Merrill Lynch, Pierce, Fenner & Smith Inc.; Bloomberg Finance L.P.; Bureau of Labor Statistics

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About the Authors

George Mateyo

As Chief Investment Officer, George Mateyo is responsible for establishing sound investment strategies for private and institutional clients, expanding internal and external research capabilities, and managing the delivery of solid risk-adjusted investment performance. In previous roles, George spent more than 15 years in investment management and investment consulting, where he acquired firsthand knowledge and insights into the capital markets and the stewardship of investment portfolios for institutional and high-net-worth investors. George received his MBA from the Weatherhead School of Management at Case Western Reserve University and completed additional studies at the London School of Economics.

Daniel Fiedler

Dan offers sophisticated financial solutions to his clients, which include foundations, individuals, and families. A highly experienced professional, Dan helps his clients develop and implement innovative investment and risk management strategies customized for their unique situations.

Prior to joining Key, Dan served as a Director for Robert W. Baird & Co., where he traded Commercial Mortgage-Backed Securities for institutional clients. Dan has also worked at Janney Montgomery Scott, C.L. King & Associates, and First Albany Corporation. Dan began his finance-industry career in 1999 and has enjoyed working on behalf of clients ever since.

Dan earned a degree in History from the University of Rochester. He also holds the Chartered Financial Analyst (CFA) designation, having successfully completed the program in 2009. Dan is a member of the CFA Institute as well as the CFA Society of New York.

Thomas Jarecki

About the Authors

Tom serves as the National Director of Wealth Planning at Key Wealth Management, where he is at the forefront of engagement, education, and delivery of comprehensive wealth planning strategies across the firm. In addition, he leads the Key Wealth Institute, producing insightful thought leadership articles and papers on wealth management topics. With a dedication to helping clients make well-informed financial decisions, Tom's team emphasizes aligning wealth with intent and promoting improved financial outcomes.

Before his tenure at KeyBank, Tom held a significant role at JPMorgan Wealth Management as the head of Goals-Based Planning. His experience also includes advising families, business owners, and corporate executives at JPMorgan Private Bank. With over two decades in the wealth management sector, Tom brings unparalleled expertise and insight.

Tom holds a B.A. degree in International Economics from DePaul University in Chicago, and proudly earned his Certified Financial Planner (CFP®) designation in 2005. An active contributor to industry initiatives, he collaborates with the CFP® Board, firms, and academic institutions.

Rajeev Sharma

Rajeev Sharma is Managing Director of Fixed Income Investments at Key Wealth. In this role, Rajeev is responsible for overseeing and managing Taxable and Tax-Exempt Fixed Income investments, including common trust funds, institutional model strategies, and individual fixed-income portfolios for both institutional and high-net-worth clients. Rajeev has 20 years of Fixed Income experience.

Prior to joining KeyBank, he was head of fixed income at Foresters Investment Management Company. He served as the chief corporate bond strategist and lead portfolio manager responsible for all corporate bond exposure across the mutual fund and life insurance suite of products. As Director of Fixed Income, he oversaw managed fixed-income and money market funds. He was instrumental in launching a short-duration bond strategy and was co-manager on the Limited Duration Bond Fund and the Total Return Fund, a mixed asset allocation fund. Rajeev also brings previous experience as senior credit analyst at Lazard Asset Management and associate director of corporate ratings at Standard & Poor's Rating Services.

Rajeev received his Bachelor of Science degree in Electrical Engineering from Drexel University, a Master of Science degree in Electrical Engineering from the University of Pennsylvania, and an MBA from Cornell University.

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Appendix

Case study: Assumptions

Client and her/his spouse are 60 years old. Their primary objective is to live a comfortable lifestyle, generating $100,000 in annual income, net of taxes, and adjusted upward annually at 2.5% to adjust for inflation. Client is planning for 30 years' life expectancy.

Client's investment portfolio value is $2.5 million and $1.5 million of the total is held in non-retirement (taxable) accounts. The rest, $1 million, is held in retirement accounts.

All calculations are based on Key Wealth's Chief Investment Office 2023 Long-Term Capital Market Assumptions. For the purposes of this case study, assume no additional assets or income sources.

Now, assume Client can choose from four investment options:

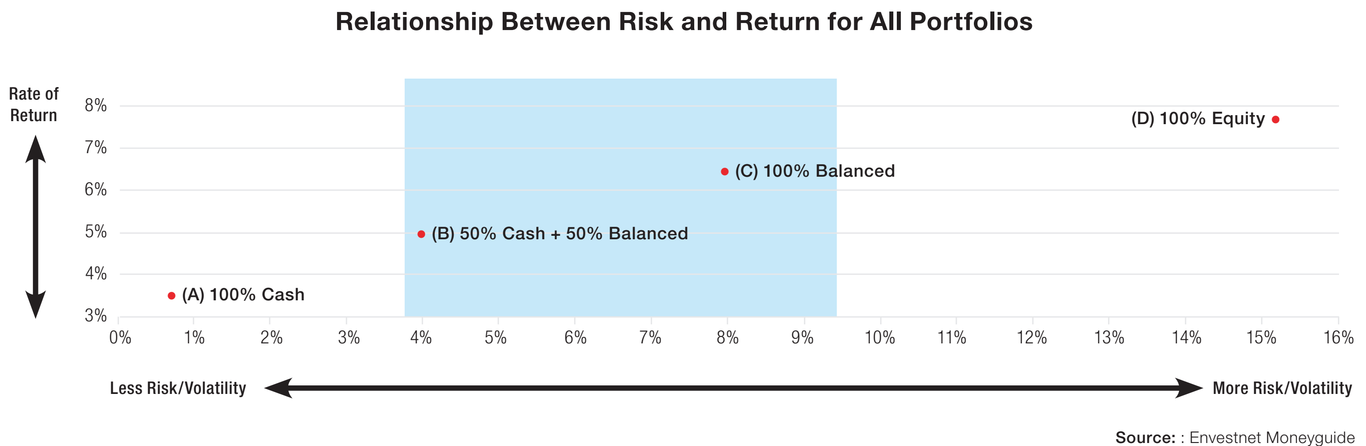
Portfolio A
100% is invested in cash, with assumed annual average return of 3.50% for the 30-year investment period.

Portfolio B
50% is invested in cash, while the other 50% is invested in a diversified, balanced portfolio made up of nearly equal allocations to bond and equity asset classes.

Portfolio C
100% is invested in a diversified, balanced portfolio.

Portfolio D
100% is invested in a diversified, all-equity portfolio.

Exhibit 1



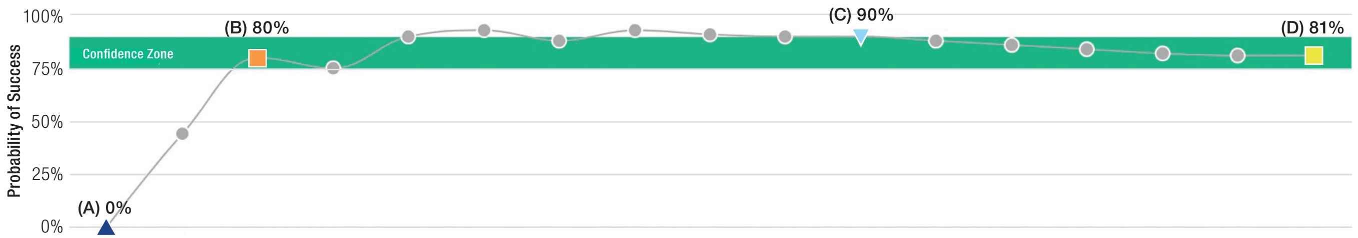
Source: : Envestnet Moneyguide

As shown in Exhibit 1, if we plot Client's four investment options, we can visualize the relationship between the selected portfolio and its projected annual average rate of return and expected risk/volatility. Portfolio A (100% cash) has the lowest risk but also the lowest return. Conversely, Portfolio D (100% equity) has the highest projected return, but is also the most volatile (riskiest). We will come back to the blue shaded area later.

This is a typical relationship in portfolio theory:
lower risk = lower return, while higher risk = higher reward.

Case study: Assumptions

Exhibit 2 **Percentage Probability of Success for All Four Portfolios, Based on Case Study Assumptions**



Source: : Envestnet Moneyguide

Let's step back for a minute and recall this hypothetical client's objective. Goal is to spend $100,000, each year, for 30 years, net of taxes and adjusted for inflation. Since we do not know how markets will perform in the future, we use a simulation to determine the likelihood (or probability) that the client can successfully achieve their spending goals. The higher the probability of success, the greater the odds that Client can navigate through the ups/downs of the markets and fully fund their needs for the next 30 years.

To determine plan probability of success, we run 1,000 unique "trials" (various combinations of risk, return, timing of market ups and downs) to assess which percentage of the 1,000 possibilities are successful. For example, Portfolio C (Balanced), has a 90% probability of success. This percentage translates to a positive outcome in ~900 of 1,000 scenarios at plan end. Only 100 trials failed. These simulations will include bull markets, bear markets, and everything in between. In general, we prefer to see a probability of at least 75% to have confidence in the plan's success.

Refer to Exhibit 2. If the client chooses the "safest" option — Portfolio A (100% cash) — their likelihood of successfully funding their spending needs is 0%. Why? While it is the least volatile option, when considering the cash flow needed, time horizon, and impact of inflation, projected cash returns of 3.5% annually are insufficient. Portfolios B, C, and D all point to successful outcomes (green area of the graph indicates the "confidence zone"), meaning that any of these investment options would result in client having enough money at the end of the plan to have fully funded their 30-year spending plan.

All results assume Client stayed invested through ups/downs in the market, and portfolios rebalance/reset allocations each year.

Based on the probability of success shown in Exhibit 2, we can reach a definitive conclusion — Portfolio A (100% cash) is not a viable option. We also know that based on this metric alone, Portfolio C (Balanced) yields the best outcome, providing the highest probability of success of the four portfolio options. Finally, note that Portfolio D (100% equity), while successful with 81% probability, is not the best option for this client to consider. Even though Portfolio D has the highest average rate of return, it also has the highest risk. And based on Client's spending goal, Portfolio D is not the optimal solution.

Exhibit 3

Plan Values at the End of Plan Based on Various Market Environments and Applied Across All Portfolios

Portfolio and Probability of Success	75th percentile markets/returns better than expected	50th percentile markets/returns normal, as expected	25th percentile markets/returns worse than expected
Portfolio A (0%)	$0	$0	$0
Portfolio B (80%)	$2,124,333	$1,108,320	$203,680
Portfolio C (90%)	$6,677,523	$4,124,680	$1,807,149
Portfolio D (81%)	$12,671,426	$5,717,705	$1,165,746

Source: Envestnet Moneyguide

Before we apply the final test and reach our conclusion in this case, let's revisit the blue shaded area in Exhibit 1. Portfolios in that blue area indicate best combination of risk/return for this client based on their spending goals. When measuring this client's ability to reach their goal, we must consider (i) minimum risk needed to successfully achieve the goal and (ii) maximum risk the client can afford to take to achieve the goal. Note that Portfolios A and D fall outside of the blue zone. Portfolio A (100% cash) returns are too low to achieve the final goal, while Portfolio D (100% equity) may contain too much risk for many clients.

So, we are down to Portfolio B and Portfolio C. Recall that with Portfolio B, Client kept 50% in cash and invested the other half in a diversified portfolio. Portfolio C assumes all money is invested in a diversified, balanced portfolio. Refer to the table in Exhibit 3. Values shown in each column indicate Client's safety margin, or amount remaining at the end of plan.

Let's start with the dark gray middle column (labeled 50th percentile). If we assume that markets behave normally, with cyclical ups and downs, how much money would this client have at the end of their 30-year plan, while spending $100,000 annually? As mentioned earlier, Portfolio A will not work, showing $0 final balance. Portfolio D has the highest final expected value of $5.7 million. Portfolios B and C each have a healthy cushion.

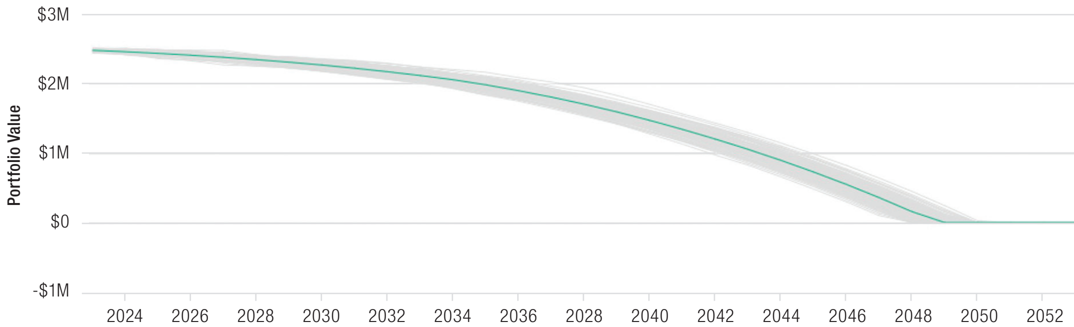
The green shaded column (left, labeled 75th percentile) assumes markets perform better than expected. And while investors would welcome such an outcome, for this client, as they begin a 30-year spending plan, hoping for a better outcome is not a good strategy. It is usually prudent to "plan for the worst and hope for the best."

That brings us to the most important set of values in this test — red shaded column (right, labeled 25th percentile). What if markets underperform? Which investment option offers the highest remainder value under worse-than-expected conditions? Which portfolio would provide the return needed while offering some peace of mind? Portfolio C, with $1.8 million end of plan value, is the best choice. While Portfolio D did better under normal and favorable market conditions, Portfolio C would be the best option for this client — providing more than sufficient cushion under any market conditions.

Case study: Assumptions

Exhibit 4a

Portfolio A (100% Cash) Portfolio Values Over Time

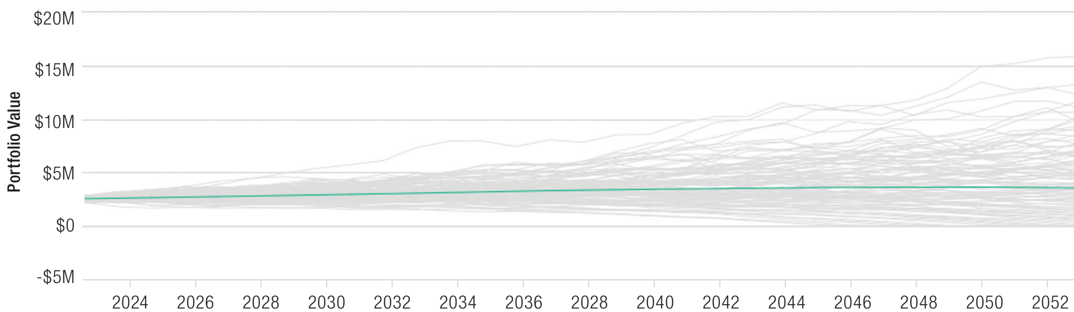


Prior Trials
Average Return

Source:
Envestnet Moneyguide

Exhibit 4b

Portfolio C (100% Balanced) Portfolio Values Over Time



Prior Trials
Average Return

Source:
Envestnet Moneyguide

In conclusion, the hypothetical client in our case study should strongly consider a diversified portfolio. Cash may feel good to hold when markets experience declines and volatility. But one of the biggest mistakes investors make is trying to time the market.

The consequences of timing in and out of cash can be devastating. This is especially true for investors approaching or already in retirement. In our case study, if choosing a Balanced portfolio still feels uncomfortable, our hypothetical client can take a step in that direction with Portfolio B (50% stays in cash and 50% is invested in a diversified balanced portfolio).

What is beyond dispute, based on assumptions in this case, is that 100% cash is not a viable option, regardless of market performance over the next three decades. In fact, based on this analysis, cash is the "riskiest" option. And for our hypothetical 60-year-old investors, that's not a risk worth taking.

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