Dollar cost averaging

Insights

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Executive summary

Investing a lump-sum of cash into volatile capital markets is challenging for both first-time and seasoned investors. Migrating from an investment whose value is unchanged daily to one with significant up and downs triggers several behavioral biases. These biases include loss and volatility aversion and anchoring. In this paper, we explain each of these behaviors, discuss how they may affect investing and offer multiple solutions to best fit different investor types. You are likely unique from other investors and may have differing emotions related to the uncertainty of navigating global capital markets.

Our research shows that investing the entire amount of your money immediately has produced the highest average historical returns. While this may be the optimal strategy purely from a returns perspective, it may not be the ideal strategy for every investor. Another option, a traditional dollar cost averaging approach, offered the lowest amount of investor regret, which we define as the average number of months the portfolio spent below its initial value. Investor regret is greatest when investing a lump sum right before a substantial market downturn.

In choosing between these two approaches — lump sum and dollar cost averaging investing — we believe it is important for you to work with an advisor to walk through the concepts of "return" and "regret" when developing a strategic plan for investing cash and to help you understand the various emotions that could possibly surface.

What should I do with all this money?

The sale of a business or company stock, or an inheritance or insurance policy proceeds due to the untimely death of a loved one provides a sudden cash infusion and often a new investing challenge. While this transition may be difficult it also creates a wonderful opportunity to invest your new wealth toward achieving your long-term financial goals.

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In e tment p od c and e ice a e:

Similar to other investors' experiences, you may find that navigating the myriad of available investment choices can be overwhelming. For this reason, it may be valuable to work with an advisor to develop a strategic plan tailored to your unique situation. Before investing, we recommend starting with a planning process:

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- Volatility-based dollar cost averaging strategies: We based the initial investment amount on the same monthly investment over two years, but varied the amount each month.
  - Value-based strategy: After a declining month for the target portfolio, we increased the target investment amount by 50 percent. After a rising month for the target portfolio, we decreased the target investment amount by 50 percent. In a portfolio with no price changes, we reached full investment in two years, sooner if we saw declines (just 16 months to full investment), and longer in steadily rising markets (four years to full investment). Again, we assumed the cash awaiting investment in the target portfolio is held in a very low risk and low or zero return asset, such as cash, while awaiting investment.
  - Momentum-based strategy: We followed a similar methodology to the value strategy, but increased investment after a rising month for the target portfolio and decreased investment after a declining month for the target portfolio. The opposite is true for the time frame to be fully invested. In a portfolio with no price changes, we reached full investment in two years, sooner if we only saw increases and longer in steadily declining markets.
- We held cash awaiting investment in the target portfolio in very low risk and low or zero return asset, such as a money market fund, while awaiting investment.
- We measured results over a five-year period, starting from initial investment.

In summary, we found that lump sum investing provided the highest average five-year investment performance for all portfolios: the all-equity portfolio, the 70 percent equity/30 percent fixed income balanced portfolio, and the globally diversified portfolio. Meanwhile, there was no clear difference in the amount of time each method spent below the initial investment value. Over five year periods the portfolios averaged six to eleven months below their initial value.

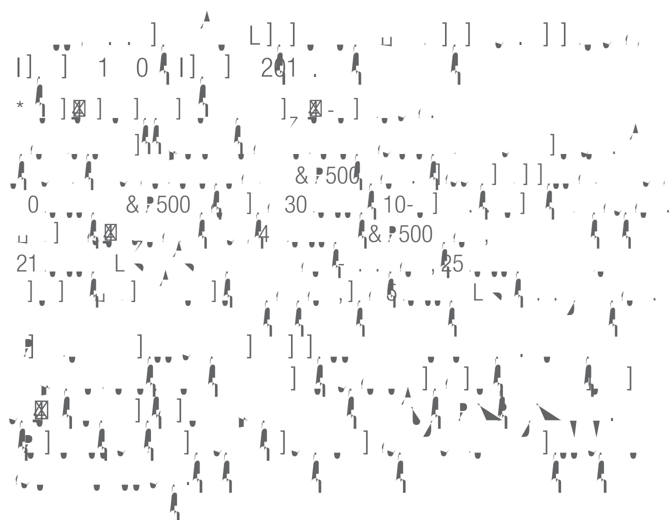
Lump sum investment, on average, generated annualized returns 2 percent to 3 percent greater than strategies invested over time. Opportunity for investor regret was consistent on average portfolios spend six to nine months below the portfolios initial value.

Performance comparison

Results for all three portfolios tended to be consistent looking at rolling five-year averages. Lump sum investing, on average, delivered 9 percent to 11 percent annual returns, with returns falling between 6 percent to 8 percent, on average, for traditional dollar cost averaging, and for the two volatility-based strategies. In summary, our performance analysis favored lump sum investing.

Consistent performance seen across portfolios

	Average 5-year forward return*	% of time below beginning value
All equity portfolio		
[illegible]	.5%	1 . %
[illegible]	. %	14.1%
[illegible]	.1%	1 .1%
[illegible]	11.0%	14.4%
70/30 U.S. portfolio		
[illegible]	.5%	15. %
[illegible]	. %	10.2%
[illegible]	.4%	13. %
[illegible]	10.1%	10.2%
Globally diversified portfolio		
[illegible]	.4%	1 .4%
[illegible]	.3%	1 .2%
[illegible]	.0%	1 . %
[illegible]	. %	21.2%



Loss aversion

On average, the all equity portfolio spent the most time below the initial investment value, from nine months to 11 months across all investing approaches. The 70/30 U.S. portfolio generated the widest diverging outcomes, ranging from six months for the lump sum strategy to almost 11 months for the traditional dollar cost averaging strategy.

Risks of regret

One concern if you happen to be a performance-oriented lump sum investor might be investing at or near a market peak. In reviewing four recent stock market peaks, we see investors can take quite some time to recover their initial investment value in these simple portfolios. Investing at the August 1987 market peak meant investors had to wait almost two years to see full recovery. Investing just before the 2007 financial crisis took from at least three years to nearly five years to recover the initial portfolio value. Finally, from the height of the dot com bubble in 2000, the lump sum investor would have waited until 2004 or 2006 to recover to the initial investment value. On average, time rewarded the patient investor.

Recovery time (# of months) for substantial U.S. market corrections

Market top:	1987	2000	2007	2020
All equity portfolio	21	4	53	
70/30 U.S. portfolio	1	52	3	

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