CAPTRUST

APPLYING BEHAVIORAL FINANCE TO YOUR PORTFOLIO (PART 1)

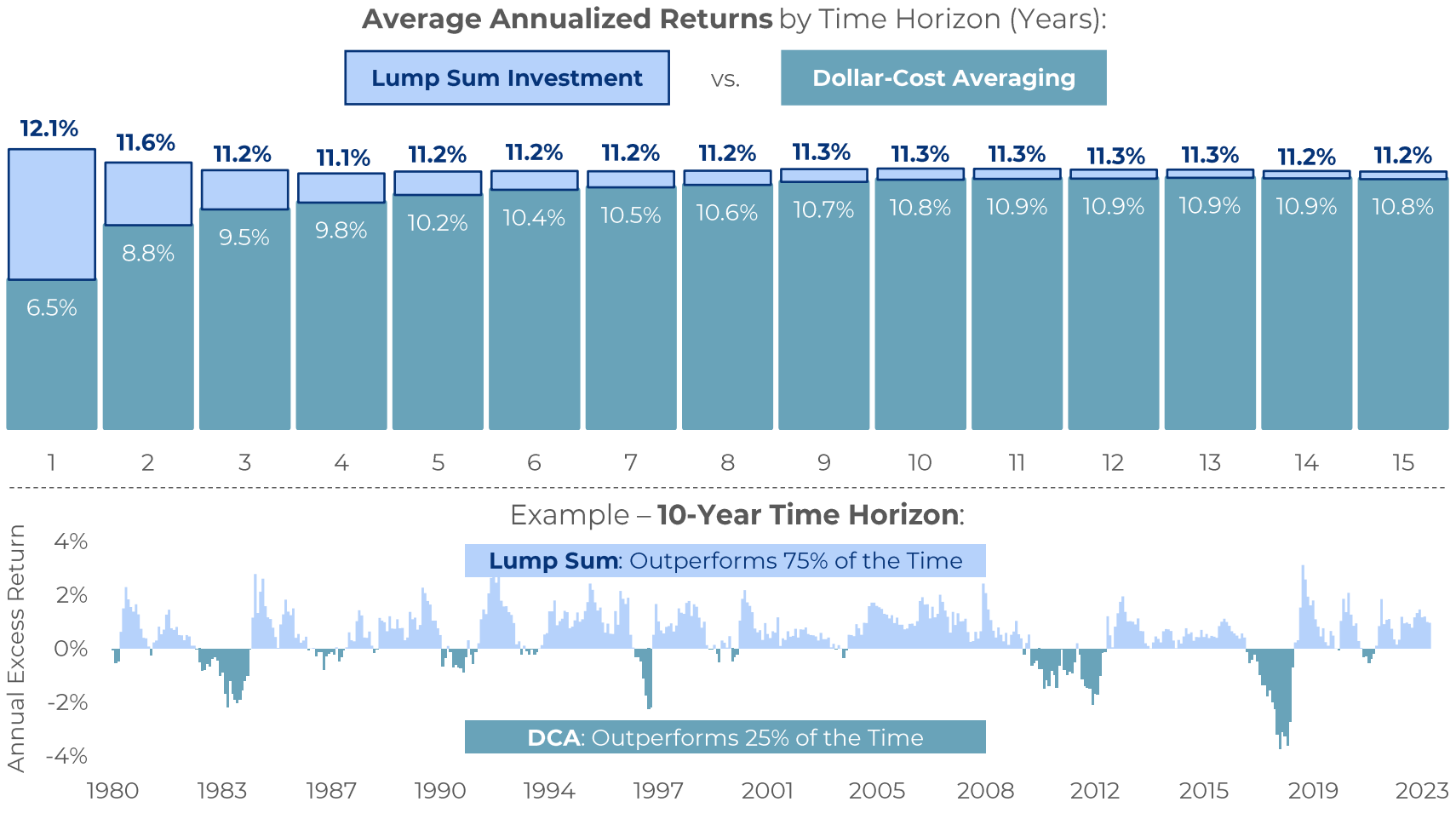
(Lump Sum Investment vs. Dollar-Cost Averaging—1970 to 2023)

Market Intelligence:

Dollar-cost averaging (DCA) is a popular investment strategy for deploying cash into risk assets, such as stocks, by buying in over a predefined time period. Of course, another route an investor can take is to invest cash immediately with a single lump sum investment.

Since 1970, stocks have recorded positive returns in nearly 80% of all trailing one-year time periods. Further, the data shows, on average, a lump sum investment provides a slightly higher average return compared to a DCA approach, regardless of time horizon (top half of slide). As an example, for an investor with a 10-year time horizon, a lump sum investment historically provided more return than DCA for 75% of all trailing time periods (bottom half of slide).

However, higher absolute returns favoring a lump sum investment do not tell the whole story—the concept of DCA is more a behavioral finance-oriented strategy that aims to protect against the "loss aversion" notion with investor psychology.



Sources: Morningstar Direct; CAPTRUST Research. S&P 500 Index total returns (price changes + dividends) represent monthly returns from January 1970 through May 2023. Dollar-cost averaging illustration represents equally weighted monthly contributions for the first 12 months of the time period, followed by monthly compounded returns after being fully invested. Past performance is not a guarantee of future results.

CAPTRUST

APPLYING BEHAVIORAL FINANCE TO YOUR PORTFOLIO (PART 2)

(Lump Sum Investment vs. Dollar-Cost Averaging—1970 to 2023)

Market Intelligence:

While the comparison of a single lump sum investment vs. a DCA approach is inherently subjective, it's important to note that neither strategy guarantees a profit on investments. However, DCA can be a helpful strategy for risk-averse investors during volatile markets.

The investment thesis for DCA centers around reducing the likelihood of a poorly timed entry point into stocks. For example, in the first year of a new investment from cash into stocks, DCA helps achieve nearly a 58% probability of a more stable single-digit return (whether a gain or loss), compared to just a 29% probability with an immediate lump sum, as detailed here. Additionally, average annual volatility is reduced by about 40% with DCA compared to lump sum in the first year of investing.

Historically, DCA has reduced volatility, but at the expense of potential return. Therefore, investors should assess the trade-offs between expected risk and return potential when developing their optimal investment strategy.

Example – **Year One Initial Investment**:
Return Frequency Distributions and Volatility

Lump Sum Investment:
Higher Volatility

Dollar-Cost Averaging:
Lower Volatility

Average Annual Volatility:

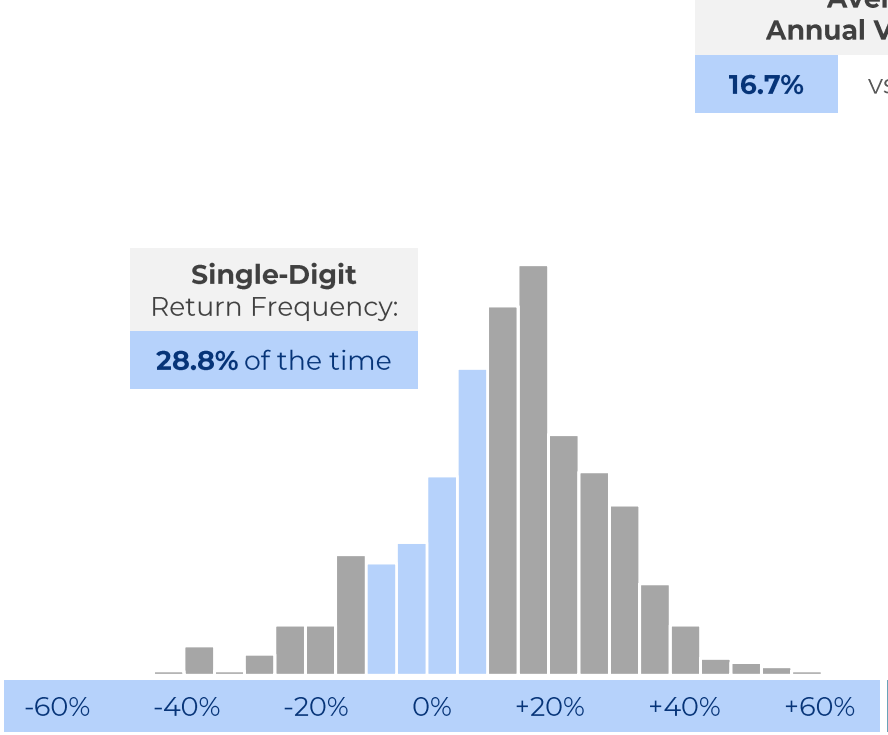
16.7% vs. **9.8%**

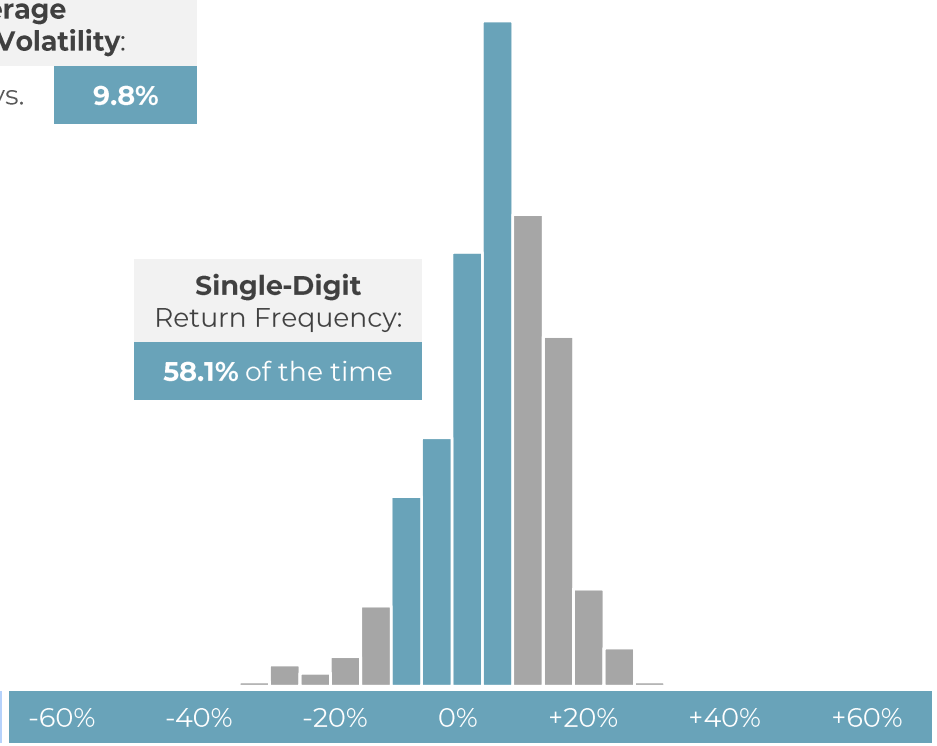
Single-Digit Return Frequency:

28.8% of the time

Single-Digit Return Frequency:

58.1% of the time





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