

THE COSTS AND BENEFITS OF WAITING TO INVEST

AN OVERVIEW

Many investors periodically find themselves with a significant sum to invest in the stock market. Such cash might include money from bonuses, profit-sharing distributions, or just accumulated savings. Should the money be invested immediately or should investors wait for a better time to invest? The Schwab Center for Investment Research completed a study that offers some answers.

The best action investors should have taken in this study was to decide on an asset allocation strategy and then fund the equity portion at the first possible moment, given their risk tolerance, needs, objectives, time horizon, etc. Our study also showed that the rewards of timing were not very significant—even for perfect timers. Even badly timed stock market investments were much better than no equity investments.

As you help your clients reach their financial goals, keep this study in mind. While it is tempting to wait for the “best time” to invest—especially in record-breaking market environments—remember that the risk of waiting has been much greater than the potential rewards.

KEY FINDINGS

- **Invest immediately.** *The best course of action for long-term investors is to first decide on the proper amount of equity exposure. Investors should then immediately fund the equity portion of their portfolio, regardless of the level of the market.*
- **Procrastination is often worse than bad timing.** *The worst returns belonged to investors who never invested in stocks at all. It proved much better to invest—even if at the worst time each year.*
- **Consider dollar-cost averaging.** *Dollar-cost averaging lowered returns in most time periods, but is well suited for investors who may regret making a large investment that does poorly in the short term.*

RESEARCH COMMITMENT

The Schwab Center for Investment Research is chartered with expanding the quality of objective fund selection and investment research.

Front row, left to right:
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SCHWAB CENTER FOR INVESTMENT RESEARCH

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Vinay has spent the last six years at Schwab performing research and analysis functions. He not only manages analysis and data production for Schwab's Mutual Fund Select List, he also innovated the methodology for selecting Mutual Fund Select List funds. He received his MBA from the University of San Francisco.

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Robin, Milton and Sylvia support integral research initiatives and a multitude of advice-related platforms being developed at Schwab. They work with different business enterprises to build the foundation for many of Schwab's analytical tools.

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SETTING THE STAGE

Consider the situation of an investor who gets a bonus check at each year-end and wants to invest in stocks for the long term. A natural question is when should the money be invested (i.e., what's the best time to shift cash into the stock market?). Let's consider variations on three options: waiting and trying to buy on a market dip, investing immediately, and dollar-cost averaging.

One way to decide between these options is to consider how each of them would have paid off in the past. With that in mind, we created a study that considered five hypothetical investors.

Each investor received \$2,000 apiece each December 31st during the 20 years through 1998. Since we are assuming these are long-term investors, each one leaves the money in the market once it is invested. Each investor, however, employs a different strategy for putting that money to work described below.

- **Investor A: The Perfect Timer.** He possessed incredible skill—or luck; thus, he was able to place his \$2,000 into the S&P 500 Index¹ every year at the market's lowest monthly close. That is, he placed the money in 30-day T-bills, and invested at the next year's lowest monthly close. As mentioned above, because we wanted to focus on the buying decision, once Investor A (like all the other hypothetical investors) put the money in the market it was left in place. For example, Investor A received \$2,000 to invest at year-end 1978. Rather than placing the money immediately into the stock market, he put the money into 30-day Treasury bills and left it there until month-end February 1979—the monthly low point for the S&P 500 during that year. At year-end 1979, Investor A received another \$2,000. He invested the money at the end of March 1980, the low point for the S&P 500 for that year. He continued to time his investments perfectly every year until 1998.
- **Investor B: Invests Immediately.** Each year, she immediately invested her \$2,000 in the S&P at the earliest possible moment once she received her cash (December 31st). No decisions; just a simple, consistent approach. Like Investor A, once the index was purchased, no selling took place.
- **Investor C: The Bad Timer.** She possessed incredibly poor timing—or perhaps terribly bad luck: Each year she initially invested her \$2,000 in 30-day T-bills and only invested in the S&P 500 at the market's highest monthly close. For example, Investor C invested her first \$2,000 at the end of December 1979—that year's high point for the S&P 500.

¹ Investors cannot invest directly in an index. Indexes are unmanaged and do not incur fees and expenses.

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- **Investor D: Never Invests.** He left his money in Treasury bills² every year and never got around to investing in stocks at all. He was always convinced that lower stock prices—and therefore better opportunities to invest his money—were just around the corner.
- **Investor E: Dollar-Cost Average (DCA).** He divided his annual \$2,000 allotment into 12 equal parcels which he invested in the S&P 500 Index at the end of each month. The uninvested balance was invested in T-bills.

THE RESULTS

Table 1 (see page 5) shows how much wealth each investor accumulated at the end of the 20 years. Naturally, the best results belonged to Investor A, who waited and timed his annual investment perfectly: He accumulated roughly \$370,000.

But the study's most surprising findings concern Investor B, who came in second with \$350,000—only \$20,000 less than Investor A. This relatively small difference is especially surprising considering that Investor B had simply put her money to work as soon as she received it each year—without any guesswork or timing at all.

Investor C's results also proved very encouraging. While her poor timing left her with around \$37,000 less than Investor B, who did not try to time her investments at all, Investor C still earned significantly more—approximately \$234,000 more—than she would have had she not invested in the S&P 500 at all. This result is driven by the fact that Investor C at least invested once per year and left the money in the market once it was invested.

And what of Investor D, the procrastinator who kept waiting for a better opportunity to buy stocks—and then did not buy at all? He fared worst of all, garnering only \$79,000. His biggest worry had been investing at the market high. Ironically, even if he had done this each year, he could have earned nearly four times as much over the 20-year period—even if he invested at poor times each year.

Investor E, who used a DCA approach, earned \$340,000 in the 20-year period, resulting in a third place ranking in our simulation.

Are these results driven by the time period studied?

No, we also analyzed all 54 rolling 20-year periods dating back to 1926 (e.g., 1926-1945, 1927-1946, etc.). In 44 of the 54 periods studied, the rankings were exactly the same; that is, Investor A (perfect timer) was first, Investor B (invest immediately) was second, Investor E (DCA) was third, Investor C (bad timing) was fourth, and Investor D (never invest) was fifth. Table 2 (see page 5) lists the periods when the results were not as expected. Note that investing immediately never did worse than third.

² Equity investments generally include a higher degree of risk than Treasury bills, which are generally considered to be a more secure investment.

Upside vs. Downside

Another way of analyzing this problem is to compute the value added and value destroyed by perfect timing vs. bad timing relative to investing immediately. Over the 1979-1998 time period Investor A outperformed Investor B by \$20,740. Investor C underperformed Investor B by \$36,855. If we accept the premise that an investor is just as likely to time his purchase perfectly as he is to time it at the worst possible moment, investing immediately looks even more attractive. Why? Well, what would you do if you were offered a chance to flip a coin and if it came up heads, you won \$20,740 and if it came up tails you lost \$36,855?

Were these results unique to the last 20 years? Not particularly. Using the 20-year results, the perfect timer, on average, added \$14,265 in value relative to the immediate investor. The bad timer trailed the immediate investor, on average, by \$21,674. Furthermore, the bad timer destroyed more than the perfect timer added in 69 percent of the 20-year periods studied.

What about longer periods of time?

We also looked at all possible 30-, 40-, and 50-year periods starting in 1926. Unlike the 20-year periods where there were occasionally some exceptions to the expected rankings, there were none over any of these time periods. That is, in every 30-, 40-, and 50-year period, perfect timing was first, followed by invest immediately, DCA, bad timing, and never invest.

DOLLAR-COST AVERAGING

The results above indicate that the DCA approach has reduced returns relative to investing immediately. This is driven by the fact that the U.S. stock market has tended to rise over long holding periods and strategies that tend to delay purchases (e.g., DCA) will hurt returns. Does this mean DCA is a bad strategy? Not necessarily, as DCA has other attractive properties.

- **Prevents procrastination.** Some investors just have a hard time getting started. They may know they should be investing, but they never quite get around to it. Engaging in dollar-cost averaging is an easy way to provide discipline for investors.
- **Avoids market timing.** Dollar-cost averaging ensures participation in the stock market regardless of current conditions. This eliminates the temptation to engage in market timing strategies at which many individual investors may be ill equipped to succeed. It also eliminates the sense that an immediate investment *is* a form of market timing.
- **Minimizes regret.** Even the most even-tempered stock trader probably feels at least a tinge of regret when an investment proves to be ill timed. Worse, such regret may cause you to disrupt your investment strategy in an attempt to make up for your setback. Dollar-cost averaging can minimize this regret since you make multiple investments, with none of them being particularly large.

CONCLUSION

The best realistic action investors should have taken, based on our study, was to decide on their asset allocation and then fund the equity portion at the first possible moment, regardless of the level of the market.

If you are tempted to try to wait for the best time to invest in the stock market, the results of our study suggest that the rewards of doing this were not very significant. Remember, even the perfect timer amassed only \$20,000 more than the investor who put her cash to work right away.

Even badly timed stock market investments were much better than not investing in the stock market at all. Our study suggests that investors who procrastinate are likely to miss out on the stock market's potential growth. By perpetually waiting for the "right time," Investor D sacrificed approximately \$234,000 compared to the worst market timer who invested in the S&P 500 at each year's high.

As you help your clients reach their financial goals, bear these results in mind. While it is tempting to wait for the "best time" to invest, keep in mind that the risk of waiting appears to be much greater than the potential rewards.

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TABLE 1: ENDING WEALTH FOR EACH INVESTOR 1979-1998

Investor	Strategy	Ending Wealth
A	Perfect Timing	\$370,435
B	Invest Immediately	\$349,695
C	Bad Timing	\$312,840
D	Never Invest	\$79,123
E	Dollar-Cost Averaging	\$339,560

Note: Each hypothetical investor made a \$2,000 investment per year with no transaction costs or taxes. It also assumed that Investors A, C, and E invested their funds in 30-day Treasury bills while waiting to invest the money in stocks. Investor B put her cash to work in stocks as she received it each year (on December 31st). Investor D kept his in 30-day Treasury bills for the entire period. Stocks are represented by the S&P 500 Index. Past performance is not indicative of any future results.

TABLE 2: 20-YEAR PERIODS IN WHICH RANKINGS WERE NOT AS EXPECTED

Period	Rank of Investors A-E				
	First	Second	Third	Fourth	Fifth
1955-1974	D	A	B	E	C
1958-1977	A	B	E	D	C
1959-1978	A	B	E	D	C
1960-1979	A	B	E	D	C
1962-1981	A	D	E	B	C
1963-1982	A	B	E	D	C
1965-1984	A	E	B	C	D
1966-1985	A	E	B	C	D
1968-1987	A	E	B	C	D
1969-1988	A	E	B	C	D
Expected	A	B	E	C	D

Note: A=Perfect timer, B=invest immediately, C=bad timing, D=never invest, and E=dollar-cost averaging. Ranking based on amount of wealth at end of 20-year period.

NOTES

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