

All-Time Highs: Implications For Stock Investors

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Abstract

Many investors hesitate to invest when the stock market reaches all-time highs, driven by the fear that buying at the top will lead to poor future returns. This concern is rooted in the belief that market peaks are often followed by corrections or periods of underperformance, making timing appear crucial to long-term success.

This report examines 75 years of S&P 500 data to assess whether investing at record highs actually poses greater risk to investors, based on varying investment time frames.

The results provide a clearer picture of how investments made at market highs perform over time, offering insights that challenge conventional fears and contribute to a more informed perspective on market timing.

Process

The analysis was conducted using Python, leveraging its robust ecosystem of libraries to efficiently retrieve and analyze financial data. The yfinance library by Yahoo Finance was employed to access 75 years of daily S&P 500 data, ranging from March 1950 to May 2025. This dataset included closing prices, which served as the basis of calculating stock market returns.

Frequency Of All Time Highs

All time highs (ATH) in the stock market are not as rare as one might think.

In the 75 year period ending 8th May 2025, the Standard & Poor's 500 Index (S&P 500) has hit an ATH a total of 1419 times.

Given a 252 trading day year, this means that the S&P 500 has on average hit an ATH in **7.51%** of all trading days. Equivalently, on average, 1 in every 18.9 trading days is an ATH day. However, this does not mean that ATHs occur at a steady rate over time. Market highs tend to cluster - during strong bull markets, new ATHs can be set extremely frequently, sometimes even daily, while in weaker market phases, ATHs may be infrequent or absent for extended periods.

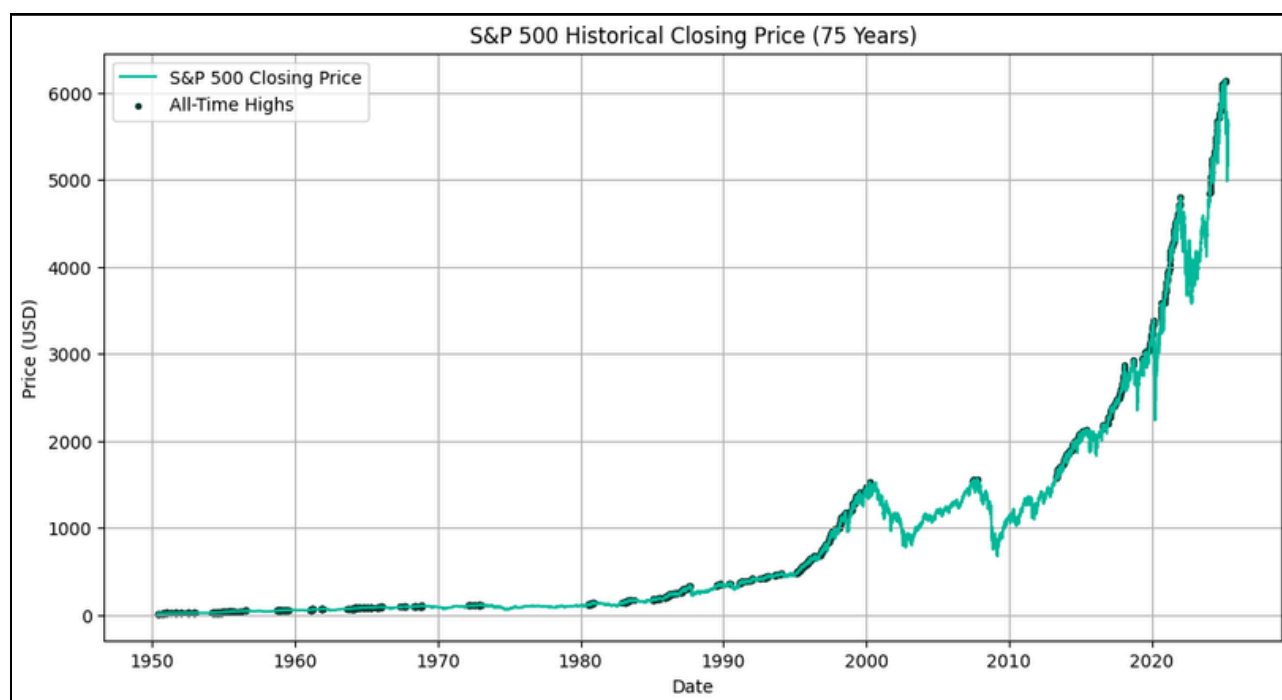


Fig 1. S&P 500 Index performance and ATH days over the past 75 years

Many investors remain uneasy about buying at ATH levels, fearing that entering the market at a peak will lead to disappointing future returns or significant losses. This report aims to explore whether such concerns are justified by examining the subsequent performance of the S&P 500 after reaching all-time highs.

The Basis Of ATH Fears

Investors' fears of investing at ATHs are largely related to the notion that a correction or downturn is likely to ensue shortly after the market hits an ATH. In the graph below, a randomly selected ATH was chosen. In this instance, it turned out to be 8th November 2021, an ATH that occurred just before the prolonged market downturn of 2022.

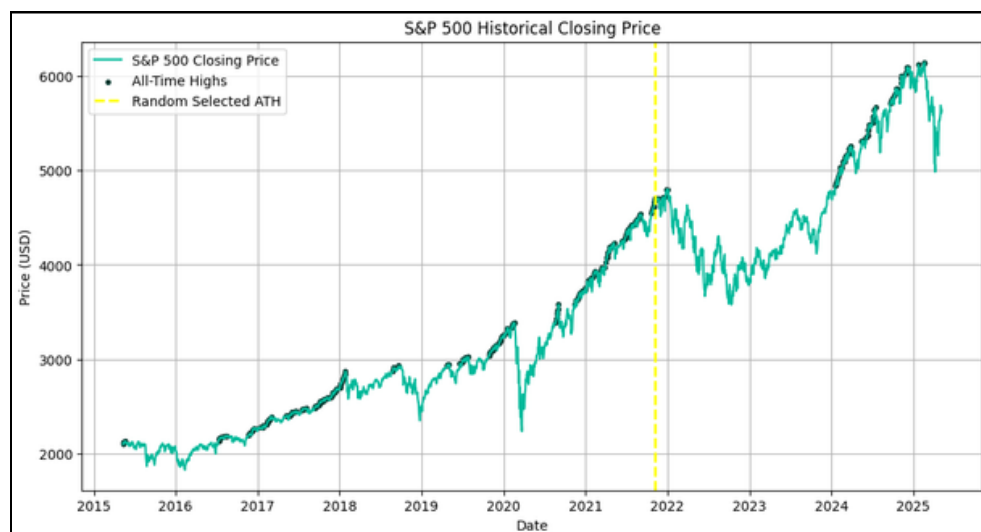


Fig 2. S&P 500 index performance, with a randomly selected ATH date of 8th November 2021

In the 360 day period following this ATH, the S&P 500 index plummeted by 20.88%. Such an instance exemplifies the basis of investors' fears of ATHs - a subsequent downturn.

And Yet,

There are also instances where despite being at ATHs, the market rallies even further in the subsequent period. The graph below shows another random sample of an ATH. In this case, the ATH was on 22nd July 2016. In the 360 days following this ATH, the S&P 500 rose by 13.06%.

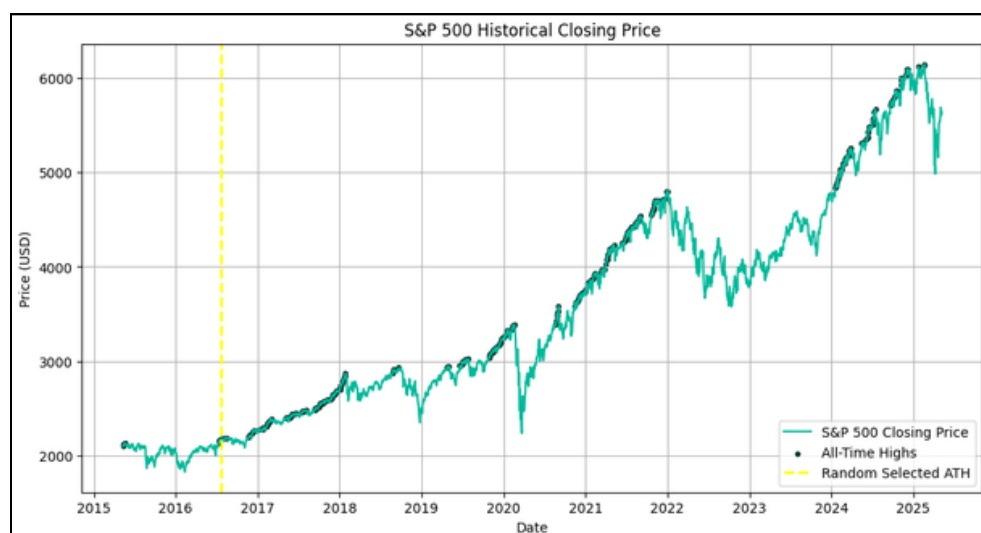


Fig 3. S&P 500 index performance, with a randomly selected ATH date of 22nd July 2016

Likelihood Of Loss

Many investors believe that there is a greater risk of loss in the immediate period following an ATH. The following data reveals the empirical data that relates to this concern.

We calculate the probability of loss (a negative return) in the immediate periods after investing in the S&P 500. This is calculated for both an investment at ATHs, as well as on any random day in general.

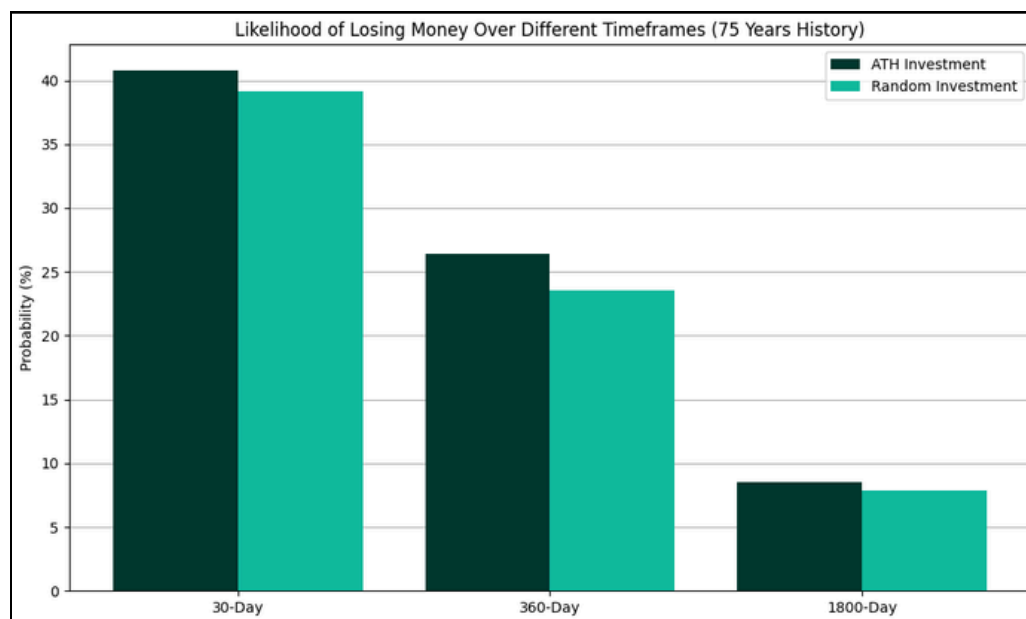


Fig 4. Likelihood of losing money over different investment time horizons when investing at ATHs versus on any random day

Investment Time Frame	Probability of loss after investing on an ATH day (%)	Probability of loss after investing on an any random day (%)
30 days (1 month)	40.76	39.18
360 days (1 year)	26.37	23.53
1800 days (5 years)	8.55	7.88

Fig 5. Distribution of returns of 5000 random samples taken of 10-20 years time frame

In all 3 time frames, there was only a marginal difference in the probability of loss when investing at ATHs, versus on any random day. This suggests that the fear of ATHs being at significantly higher risk of subsequent downturn is largely overblown.

It also implies that market downturns are not confined to periods following strong stock market performance. Declines can occur regardless of whether the market has recently been at an all-time high or not.

Likelihood Of Poor Performance

Even if ATHs do not clearly show a significantly higher risk of downturns, many investors may still fear that investing at ATHs is associated with lower overall returns in the subsequent periods.

To examine whether investing at all-time highs leads to lower returns, we compared the returns of two different approaches - investing at ATHs versus investing on any random date. For each historical sample, we calculated the subsequent returns over different time periods, ranging from short-term movements (30 days) to long-term performance (5 years).

For every time frame, we calculated the return of an investment made at an all-time high and compared it to the return of an investment made on a random day. If the randomly timed investment resulted in a higher return than the all-time high investment, we counted it as a 'win' for the random strategy. This process was repeated over many historical samples to determine the 'win' rate of a random day investment over an investment at ATHs. The graph below visualizes the results.

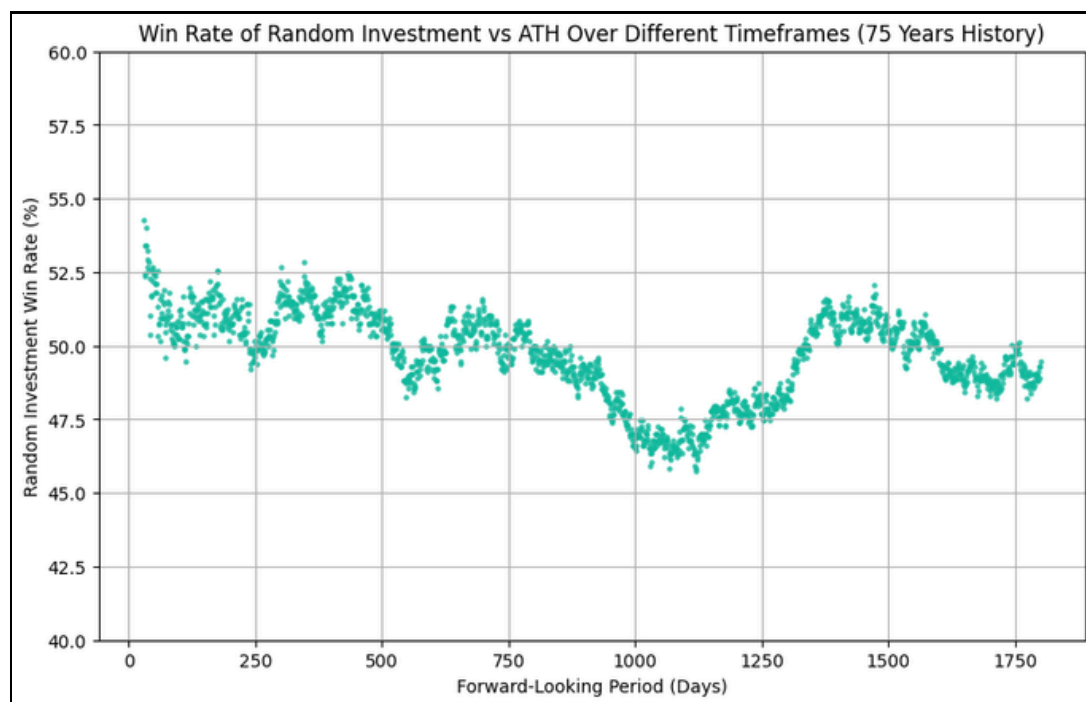


Fig 5. Win rate of investing at a random date versus investing at ATHs, across various investment time frames

The results indicate that there is no substantial disadvantage to investing at ATHs. When comparing the likelihood of randomly timed investments outperforming those made at ATHs, the win rate never strays substantially away from 50%, across all the varying time horizons. If investing at ATHs resulted in consistently weaker returns, we would expect that the random day investment win rate would be significantly higher, suggesting that avoiding ATHs leads to better outcomes. However, since the win rate does not show a clear favor to the random entry points over ATHs, the data suggests investing at ATHs does not significantly impact performance. This challenges the common fear that ATHs are a particularly dangerous moment to invest.

Takeaways

Our analysis shows that historically, investing in the S&P 500 at all-time highs has not led to significantly worse outcomes compared to just investing on any other random day. Across a wide range of forward-looking periods, the probability of a random entry outperforming an ATH entry is relatively insignificant. This suggests that fears about poor returns after investing at market peaks may be overstated.

These findings highlight that fears of ATHs are largely overstated. In fact, avoiding investing out of unease towards ATHs may cause investors to miss out on significant time in the market for compound growth.

References

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