

Reframing the “Long-Term”

What Does That Even Mean?

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Introduction

Like many others, I have always claimed to be a “long-term” investor. Lately, I’ve spent time thinking about our process and what this really means. After plenty of reading and reflection (this series is named *Reflections on Investing*, after all), this is roughly what I have come up with: the real meaning of being a long-term investor seems to be elusive, and *it should be* elusive.

I would argue that because the idea of being a long-term investor is so widely held, it should not have any actual meaning. Does it suggest that the investor’s portfolio has a lower turnover? Does it infer anything regarding the investor’s analytical process? Does it imply some level of patience (or stubbornness)? What about the way performance is measured? Each investor claiming to be long-term would have a different opinion on each of these points. There is no blueprint that exists. The identity is widely held, but its definition is not.

Frankly, I do not have the authority to determine the definition of “long-term”, nor do I want to. Instead, *framing* the long-term and its effects on the investment process provides better insights than arguing over semantics. Understanding what we (as investors) aim to accomplish is a better foundation to build upon.

Holding Periods

Take a moment to imagine the holding period spectrum for both traders and investors. On one end, you have High-Frequency Trading firms (HFTs) who hold inventory for a fraction of a second. The tick-to-tick fluctuations in price are largely determined by the liquidity in the market at any given time. Consequently, HFTs analyze the liquidity and market microstructure for an asset, rather than the fundamentals. On the other end of the spectrum is a devout “buy-and-hold” investor who will never sell. Their realized return will be solely determined by the distributions received by their ownership of the asset, and liquidity does not impact their decision at all.

In between these two lie the remaining 99% of investors. These investors will realize a return equal to the difference between their purchase price and their sale price, along with any distributions received in the meantime. This equation stays the same, but the relative importance of each component changes depending on the holding period.

As a very simple model, we can express an asset’s price as a multiple of its earnings. That is to say an asset with \$2 of earnings and a multiple of 10x will have a market price of \$20. As earnings grow, the price of the asset increases, all else equal. As the multiple expands, the price of the asset also increases, all else equal.

$$\text{investment profit} = \text{distributions} + (\Delta \text{ expected earnings} \times \Delta \text{ earnings multiple})$$

The proper earnings multiple is determined by the expectations for risk, earnings growth and returns on invested capital. Riskier assets have lower multiples. Assets with higher expected earnings growth should have higher multiples, so long as the investments pursued to achieve this growth generate returns greater than the cost of capital. Without diving too far into the minutiae, multiples reflect the expectations of market participants and their impact on the valuation of the business, which can change

quickly.¹ The logical continuation here is that short-term swings in the asset price are actually caused by changes in long-term expectations.

However, as the holding period lengthens, the returns of an investment are increasingly driven by the development in earnings rather than changes in expectations. In other words, the magnitude of changes in earnings grows over time, while the magnitude of the change in the multiple should not. For example, it could be reasonable to assume that an asset's earnings grow 2% per year in perpetuity. It is probably not reasonable to assume that the appropriate multiple of these earnings should grow 2% per year in perpetuity. The multiple will fluctuate from period to period dependent on the expectations and needs of market participants. The results of the business relative to today's expectations drive investment returns over the long-term.

This idea is consistent with the historical decomposition of stock market returns. Ibbotson and Chen (2002) show that from 1926 – 2000, the overwhelming majority of market returns could be attributed to dividend payments and nominal earnings growth.² Changes in the P/E ratio only accounted for 1.25% of the total 10.70% annualized return. To be clear, this was a decomposition of total market returns. Individual securities may have much wider variations in their multiples, which can make it more worthwhile to stay disciplined on their respective valuations.

I say all of this to show that investors with shorter holding periods (and higher turnover) are increasingly subject to changes in sentiment surrounding the fundamentals of an asset, rather than the actual development of the fundamentals. There is nothing inherently wrong with this; however, the investment process should reflect this. Otherwise, a superficial focus on qualitative aspects such as an issuer's culture, capital allocation, or management may not provide much insight that is relevant to the holding period. An investor's holding period has dramatic influences on the rest of their efforts. It is, in my opinion, one of the most foundational aspects of an investor's process.

Measuring Performance

Taking a short-term or long-term view of performance also has significant impacts on portfolio construction. For example, a manager who benchmarks portfolio performance each year against the S&P 500 will be heavily incentivized to deviate as little as possible from the index. If the portfolio has too much variation from the index, there is too great a risk that returns fall behind the index for the immediate year (and consequently too much career risk for the manager). On the other hand, if an

investor takes a longer-term view, such as outperforming the S&P 500 over a 10-year period, closet indexing is not emphasized to the same extent. Deviating significantly from the benchmark in any given year has less of an effect on the objective at hand when the measurement period is extended. Better yet, if there are significant concerns of succumbing to the temptations of closet indexing, investors may choose to not benchmark in real-time altogether.

Even still, the long-term is not only important to the influences of benchmarking. Behavioral Economists Daniel Kahneman and Amos Tversky studied people and their natural reactions to gains and losses. From their studies, they developed Prospect Theory, which suggests that people experience at least twice as much pain when faced with losses than the pleasure they experience from similar gains.³ The implications of this idea are very interesting when you consider investor behavior, and the frequency of which performance is measured.

Here is an interesting scenario:

Suppose there are three weighted coins. You can choose to wager on a flip of one of the coins for \$1. If the coin lands on heads, you win an additional dollar. If the coin lands on tails, you lose your wagered dollar. You can continue to play and flip this coin for as long as you would like.

You do not know the exact weightings of each coin. However, you do have the following information for a large group of prior players for each coin (pay close attention):

- For Coin A, all players in the data flipped the coin just once. Approximately 52% walked away with a positive return.
- For Coin B, all players in the data flipped the coin exactly ten times. Approximately 67% walked away with a positive return.
- For Coin C, all players in the data flipped the coin exactly one thousand times. Approximately 90% walked away with a positive return.

Figure 1: Prior Game Results

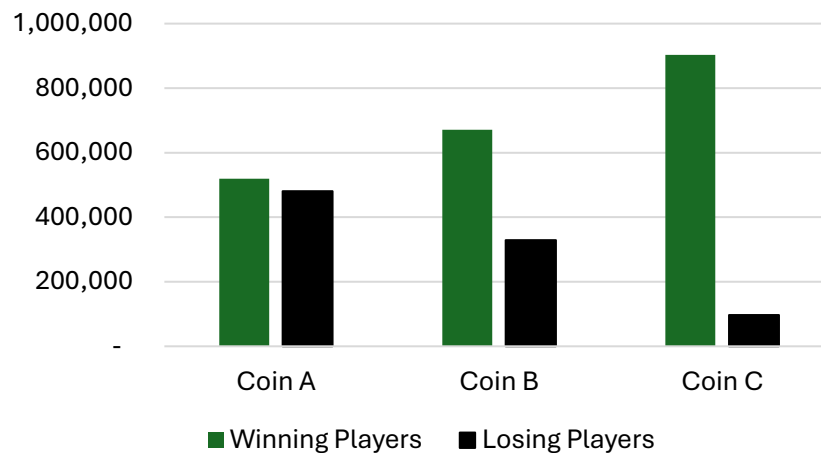


Figure 1: 1,000,000 Simulated Game Results from Appalaches Capital

Which coin should you choose? Which coin appears the riskiest?

I'll admit that it is a strange scenario, but bear with me. Without much thought given, it is easy to declare that Coin C is the best, while Coin A is the riskiest and worst of the options. Yet, the kicker is that Coins A, B, and C are not actually different! Each coin has a 52% chance of landing on heads. It was the number of times that players flipped the coin that determined their odds of success. The expected value for each flip of the coin is positive: taking a larger sample of flips for each trial results in a higher probability of a positive outcome. However, this isn't immediately clear by just looking at the chart provided.⁴

This idea applies to investing as well. **On any given day, the S&P 500 has had only a 54% chance of being positive, historically speaking.**⁵ An investor who checks their portfolio too often will experience significantly more stress than one who checks more seldomly. The former will perceive the portfolio to have more risk, *which may also incentivize excessive risk aversion*. However, the portfolio has not been changed! Only the frequency at which its value is checked has led to this potential divergence in the perception of its risk. Combine this with Prospect Theory, and the takeaway is fairly simple: if there is only a coin flip's chance of your portfolio being higher in value each time you check it, you will likely hate your portfolio. But the problem is not your portfolio, it's the rate at which you are checking it.

Investors who wish to own stocks typically do so with the understanding that they carry more risk in the capital structure, and therefore come with higher expected returns. Not measuring performance over a long enough period will be counterproductive to this goal. Research has shown that among funds that deviate significantly from their benchmarks, those that additionally have a lower turnover outperform those with higher turnover by over 2% per year (Cremers and Pareek, 2016).⁶ Standing out from the crowd while having the patience and fortitude to do so has produced favorable results.

Strategies that seek to profit from short-term movements in security prices due to some orthogonal risk factor may not share the same goal, and a more frequent measure of performance may be better. Framing the long-term is not only a determining factor of which strategy an investor may choose to pursue but is also necessary to *stick with it*. These data and ideas suggest that investors cannot pursue long-term strategies while simultaneously judging their returns over short time frames. There is simply too much noise present in the short-term.

Opportunity Costs

In college, I had the opportunity to act as a teaching assistant for a first-year seminar in finance. My responsibility was to introduce simple programming concepts to the group that they may use in their work or studies, and understandably so, not many of the freshmen were all that interested to learn about computer science.

Instead, I would begin these classes with a question or game that was more agreeable to the interests of the group. (I would later walk the class through writing scripts to find the answer or facilitate the game.) During one class, I posed something similar to the following scenario:

Each student is a professional investment manager tasked with outperforming their peers to retain their jobs. Students may choose one of two simulated strategies to run for their clients and/or funds:

Strategy A generates a randomized return between -10% and +20% each year.

Strategy B has a 90% chance of generating a randomized return between +20% and +30%, but additionally has a 10% chance of generating a return of -100% (“blowing up”) each year.

The bottom performing half of firms at the end of each period will be fired by their clients. Students may not change their strategies once chosen or risk being fired due to “style drift”. Students are also not allowed to split assets between the two strategies.

The students quickly grasped the idea that Strategy B *eventually* leads to ruin, however, the odds of this ruin occurring in the short-term are still low. The “greater” risk is that by not going with Strategy B, they are fired after just one year for choosing the path that is *actually* better in the long run. And when the measured period was just each year, that’s exactly what happened. After five years of weeding out 30 or so players, Strategy B has a 59% chance of outperforming Strategy A, and just a 41% chance of blowing up. (So long as Strategy B does not blow up, it is guaranteed to outperform Strategy A in any given year.)

After the results of the first game were shown, a different iteration was played. Instead of measuring performance each year, we would instead measure performance and narrow the field every ten years. Despite the results of the first game, the proportion of students choosing Strategy A greatly increased. With a longer-term view of performance, the risk and reward of the two options is more effectively weighed without the influence of external factors. Extending the time period over which performance is measured quite literally changes the rules of the game. Strategy B now had a 65% chance of blowing up in any given 10-year period, and only a 1% chance of lasting until the end of 50 years.⁷

Now, I will admit that this is not necessarily a perfect example for several reasons. Investors generally have much more uncertainty over the range of outcomes for any given investment. Investors are also generally free to pursue other opportunities as they become available. However, the insights drawn from the game have applications to the opportunity costs faced by investors. Opportunity costs are perceived differently depending on an investor’s timeframe. If near-term performance is emphasized, tail risks are de-emphasized and the opportunity cost of pursuing a more “boring” return profile is too great to bear. If long-term performance is instead emphasized, tail risk is demonstrably more pertinent, and the opportunity cost of pursuing a strategy with risks of ruin is clearly calculated differently. Investors and allocators should think heavily about the quality of returns they wish to pursue and the best way to measure these returns.

This is not just a hypothetical dilemma, either. Here are some intriguing headlines from this year:

“Why the Short Volatility Trade Is Back and Bigger Than Ever” – Bloomberg (Jan 29, 2024)

“The Short-Volatility Trade Roars Back on Wall Street” – Bloomberg (Mar 11, 2024)

“The Short-Vol Trade is Back” – The Wall Street Journal (Mar 25, 2024)

Followed by:

“Traders Lose Billions on Big Volatility Short After Stocks Rout” – Reuters (Aug 7, 2024)

“The ‘Short Volatility’ Trade Has Finally Blown Up” – MarketWatch (Aug 7, 2024)

The “short volatility” trade is not new. In essence, it involves selling tail-end-outcome derivatives (stock options, index options, VIX futures, etc.) on the bet that the tail-end (low probability outcomes) will not materialize. It is highly difficult to implement successfully and has blown up several times throughout history. Yet, in markets such as today, where indices are difficult to keep pace with, many managers who are judged on short timeframes feel the need to juice returns by taking on excessive tail risks. Generally speaking, volatility is not likely to flare up dramatically in any given year, but given enough time, it eventually does.

The pressure to pursue these kinds of risks is not new, nor is it limited to the “short vol” trade. In fact, this mismatch between the calculated opportunity cost of an institutional imperative and long-term investing has long been an argument in favor of strategies pursued by successful practitioners such as Warren Buffett, Seth Klarman, and Howard Marks. These practitioners all detail their pursuits of value investing strategies that may lag bull markets in the short term but capitalize on the opportunities presented in bear markets over the long run. Patience is not only a factor of behavior but is also built into a process by the design of appropriate expectations.

Conclusion

The consequences of the long-term have dramatic effects on how we think about different aspects of the investment process. The holding period of an investment emphasizes different components of a security's return. Our perspective of time also influences how frequently we should measure our performance. Not doing so at an appropriate rate can have tangible effects on investor attitudes towards risk. Additionally, the conclusions drawn from opportunity costs of the same investment options can appear to be at odds with one another when judged under different timeframes.

The "long-term" will have different meanings to everyone. However, it's clear that the actions we choose to take each day determine future outcomes. Fully understanding our intended destination and the actions that need to be taken to get there should determine our process, not cliché platitudes.

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Endnotes

- 1** Just to be clear, the earnings multiple of an asset/stock is only a byproduct of valuation. Stating that an asset should trade at 10x or 30x is only meaningful if consideration is given to capital intensity, growth, and risk (such as in a DCF). The simple model provided is to express a basic way to think about asset pricing and not necessarily intrinsic value.
- 2** Ibbotson, Roger G. and Chen, Peng. “Stock Market Returns in the Long Run: Participating in the Real Economy” (March 2002). <http://dx.doi.org/10.2139/ssrn.274150>
- 3** Both have written about Prospect Theory quite a bit, however, their first paper detailing their findings would be: Kahneman, Daniel, and Amos Tversky. “Prospect Theory: An Analysis of Decision under Risk.” *Econometrica* 47, no. 2 (1979): 263–91. <https://doi.org/10.2307/1914185>.
- 4** For the essence of clarity, the coin game detailed does not represent any real security, investment, or strategy. The results of the game and accompanying chart were produced from fictional simulations conducted by Appalaches Capital using Python.
- 5** As calculated by Appalaches Capital using data pulled from Yahoo Finance. Not a recommendation to buy or sell any security or investment.
- 6** Martijn Cremers, Ankur Pareek. “Patient capital outperformance: The investment skill of high active share managers who trade infrequently” *Journal of Financial Economics* Volume 122, Issue 2 (2016): 288–306, <https://doi.org/10.1016/j.jfineco.2016.08.003>.
- 7** For the essence of clarity, the hypothetical strategies detailed do not represent any real security, investment, or strategy. The returns are entirely fictional and not representative of any offering of Appalaches Capital.