What makes long-term investing a wonder of the world?

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Key Takeaways

- Compounding gains over long periods can result in startling numbers.
- Diversification is key, given the failure rate of stocks over long periods.
- Emotions can get in the way, resulting in suboptimal outcomes.

If allowed to deliver its potential, long-term investing can yield astonishing results. But it isn't always straightforward…

There is a famous mathematical parable called the "Wheat and chessboard problem". It goes like this: A king, pleased with the invention of the game of chess, offered to reward the inventor. The inventor humbly asked for one grain of wheat on the first square of a chessboard, two on the second, four on the third, and so on, doubling the number of grains for each of the 64 squares. The king, thinking it a modest request, agreed. However, as the numbers grew exponentially, by the 64th square, the total number of grains reached 18,446,744,073,709,551,615, or 18.45 quintillion – a quantity far greater than all the wheat in the kingdom, leaving the king bewildered and clearly unable to grant the reward.

Most people with some mathematical background understand the principle of compounding, yet our behaviour doesn't always reflect an appreciation of its true power. A recent study by esteemed academic Hendrik Bessembinder from Arizona State University highlights, much like the wheat and chessboard parable, the extraordinary long-term returns of stocks[1].

The study analyses 29,078 publicly listed US stocks from the Centre for Research in Security Prices (CRSP) database, calculating compound returns over 98 years, from 31 December 1925 to 31 December 2023. These returns reflect a buy-and-hold strategy with dividends reinvested, covering the duration from a stock's inclusion in the database until delisting or the end of the sample period.

The table below shows the top five stocks in this analysis and their numbers:

Name	Years	Cumulative gross wealth per dollar	Cumulative compound return	Annualised compound return
Altria Group Inc	98	2,655,290	265.53 million %	16.29%

Vulcan Materials Co	98	393,492	39.34 million %	14.05%
Kansas City Southern	95.95	361,757	36.17 million %	14.27%
General Dynamics Corp	97.92	220,850	22.08 million %	13.39%
Boeing Co	89.31	212,206	21.22 million %	14.72%

Source: Bessembinder, Hendrik (Hank), Which U.S. Stocks Generated the Highest Long-Term Returns? (16 July 2024). Available at SSRN: https://ssrn.com/abstract=4897069 or http://dx.doi.org/10.2139/ssrn.4897069. Historical performance is not an indication of future performance and any investments may go down in value.

What can we learn from these astounding numbers as well as some of the other results from the paper?

1. Stay invested, remain patient

In other words, let the miracle of compounding work its wonders. Yes, you read the table correctly – $1 invested in Altria Group grew to $2.65 million over 98 years. An annualised compound return of 16.29% translated into a staggering cumulative return of 265.53 million %. Small steps truly add up. Just like starting with a single grain on the chessboard, you can still achieve a great outcome if you're willing to traverse all 64 squares patiently.

2. Diversify, of course

It goes without saying: don't put all your eggs in one basket. Bessembinder's study shows that the median cumulative compound return across all stocks was -7.41%, with 51.64% of stocks delivering negative compound returns over their lifetimes. This demonstrates that simply staying invested isn't enough – you could still end up in the wrong stocks and lose your entire investment chasing massive returns.

But here's the key takeaway: the mean compound return was 22,840%, meaning a $1 investment could grow to $229.4. While this is far lower than Altria Group's staggering 265.53 million %, it's still an incredible outcome, especially given the significantly reduced risk compared to betting on a single stock or even a handful of stocks. Moreover, the median outcome being negative and mean being strongly positive emphasises that the winners can lift the entire portfolio even if there are plenty of laggards.

3. Don't waiver

Our emotions can easily get in the way. We get caught up in hype cycles, and our fear of missing out (FOMO) kicks in, causing us to make poor decisions. This often leads to the trap of buying high and selling low – the exact opposite of what any investor intends.

Did Altria Group deliver a steady 16.29% return every year for 98 years? Certainly not. There were times when anyone would have been tempted to sell. But remember, the temptation to sell is a luxury only

available to those who still have something to sell. If your strategy has pushed you out of the market, there's nothing left to decide. As noted earlier, most stocks in the analysis delivered negative returns over their lifetimes.

Conclusion

These three lessons are interconnected. The takeaway from the data is clear: if you stick to a well-diversified strategy in a market you believe will grow in aggregate and don't let emotions steer you off course, the long-term results can be truly remarkable.

Additional resource:

In addition to the full paper, I encourage people to check out the FT Unhedged podcast episode, "The World's Greatest Stocks", which inspired this blog piece and offers a very engaging listening experience.

[1] Bessembinder, Hendrik (Hank), Which U.S. Stocks Generated the Highest Long-Term Returns? (July 16, 2024). Available at SSRN: https://ssrn.com/abstract=4897069 or http://dx.doi.org/10.2139/ssrn.4897069.

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