



The test of time

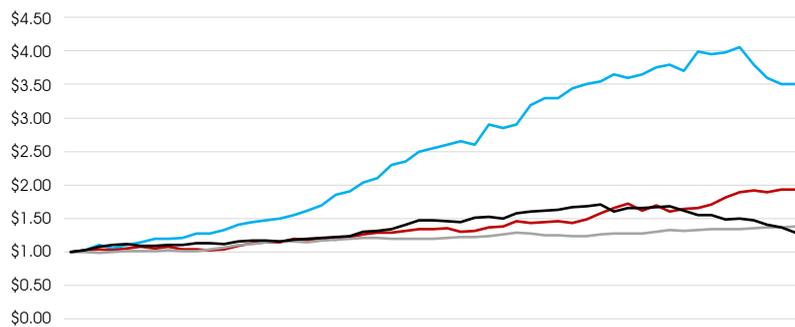
If we assume for a moment that the fears of nuclear war, climate change, and being enslaved by a malevolent AI are overblown, and as a species we are still around in one hundred years... which of the following songs would most likely still be recognised in the year 2117?

- Beethoven - Symphony No. 5**
- Adele - Someone Like You**
- Psy - Gangnam Style**

Whilst it may be true that Adele's 2011 hit has more staying power than the one-hit wonder that is Psy (outside of Korea, that is), it is harder to be certain than in a few generations she will still be as recognised as today, **if at all**. Yet despite being composed way back in 1808, it is most likely that if you heard Beethoven's Symphony No.5 today you would recognise it. And I would wager that of the three, it is the most likely to continue to survive as a significant piece of music a century from now.

Survival is the ability to resist the ravages of time. In the physical world, ageing leads to a lower probability of survival - the older we get, the less time we are expected to continue to live. However there are many things which do not age like humans; non-perishables such as ideas, music, and technology tend to age in reverse. The longer it has been around, the longer it is expected to continue to be around for. This

Chart 1 - Which asset is the most attractive? 3+ years of track record

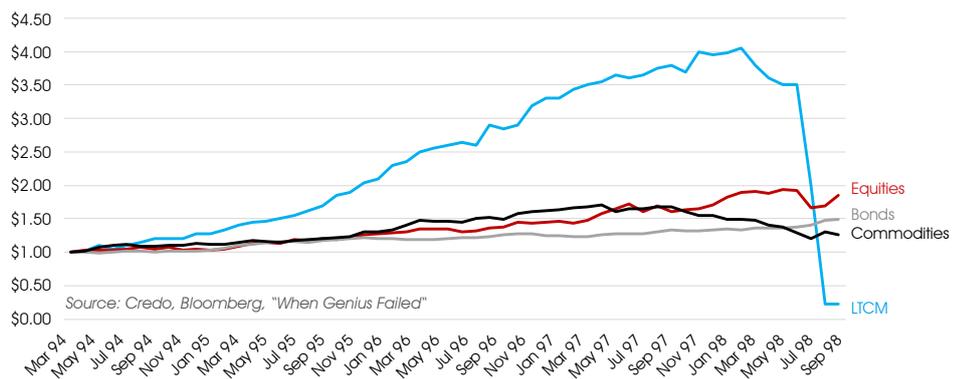


observation has become known as the Lindy Effect (as popularised by Nassim Taleb and Benoit Mandelbrot before him). A song that has survived over 200 years has a longer future life expectancy than one which has only existed through the last 5 years. And if we make the assumption that the investing world is a going concern over our investment horizon (I'd suggest that if you are assuming a nuclear war over your lifetime, then getting returns on your savings shouldn't be on your list of priorities), then we can apply the Lindy effect to asset classes and investment strategies. To illustrate the significance time has on performance

measurement, consider the four assets in the chart above (Chart 1):

The data in Chart 1 happens to be over 52 months, longer than the "3 year track record" rule of thumb many investors seem to use. And without any additional information most readers would choose the asset in **blue** (believe it or not there are many investors who base their investment decisions purely on a chart like this...or maybe after also doing a few minutes of superficial research through Google). But how much time is really required to accurately observe the behaviour of a return stream?

Chart 2 - Long Term Capital Management - Mar 1994 to Sep 1998



If we add an additional two months of data and the dates to the chart (Chart 2), it now paints a very different picture. In August 1998 after a period of stellar returns, the asset in **blue** (the hedge fund Long Term Capital Management) fell to a value of 23 cents on the dollar - and by the end of September that year it had to be rescued by a consortium of banks. Unfortunately for investors, we are unable to observe the true returns distribution of an asset, we can only view samples of it over certain periods of time. And naively using a fixed rule of thumb for how long you need to get a sufficiently large sample can in some cases end in disaster.

Unfortunately there is no hard and fast definition of "Long Term" over which an investor can be guaranteed success either. Investors in value stocks can probably relate to this during recent years. The table below summarises performance of the S&P500 versus a simple long-only value strategy (investing only in the cheapest fifth of US companies) as at the end of 2015. The summary is on 10 years of data, which is a long time even for the most patient investors.

Annualised Returns Summary (%)		
2005 - 2015	Value Strategy	S&P500
1 year	-9.05	1.38
5 years	9.41	12.57
Since Inception	6.36	7.31

An investor in this strategy would feel somewhat frustrated by these numbers – it has failed to outperform the broad index over 1, 5, or 10 years. For anyone with an itchy trigger finger, the poor performance in 2015 might very well lead them to conclude that

"value investing doesn't work". However if the investor had held on for one more year and included the data in their sample then the same summary table would look like this:

Annualised Returns Summary (%)		
2005 - 2016	Value Strategy	S&P500
1 year	24.30	11.96
5 years	18.48	14.66
Since Inception	7.88	7.72

At face value the numbers now paint a very different picture – the same investor looking at the same strategy might now conclude that value investing works, across all the measurement periods.

It is human nature to believe that what you see is all there is... but usually what you don't see can refute everything that you believe.

So which is the correct conclusion for investors to make? The one from the 10 year window? Or that from the 11 years of data?

A more sensible take away is that if 1 year of data can make such a dramatic difference to your beliefs about what works and what doesn't work, then perhaps your investment decision making process is not robust. There are of course many other considerations beyond past performance and **naïve empiricism** without economic rationale carries its own dangers in investing. For an investment strategy to be repeatable in the future, we believe it has to work **both** in theory **and** in practice... but why value investing works in theory is beyond the scope of this article. In practice, the test of time is what differentiates blind performance

chasing from robust long-term evidence that a strategy works. If we look at all the data we have available over 90 years from 1926 to 2016, before Benjamin Graham had even published Security Analysis in 1934, the same simple value strategy above annualised 13.33% vs 9.86% for US equities. Not many other approaches have survived through 16 US Presidents, 15 recessions, and a range of interest rates from 19% to 0.25% (just for comparison, a newer strategy such as buying and holding BitCoin has experienced 1.25 Presidents, 0 recessions, and a high in interest rates of 1.25%). And one additional year won't change the picture much.

There is no guarantee that something which has been around for the last hundred years will continue to be around for the next hundred. But if you're going to bet on Bieber over Beethoven based only on what you've observed over the last decade, then time is not on your side.

"With every new wave of optimism or pessimism, we are ready to abandon history and time-tested principles, but cling tenaciously and unquestioningly to our prejudices."

Benjamin Graham ■