



REGRESSION TO THE MEAN: RESPECT SKILL BUT ACKNOWLEDGE LUCK

Investment skill is a key justification behind investment decisions. So why does regression to the mean explain so many results? Dan Miles takes a closer look.

Luck is a dirty word in financial services. But luck is everywhere, and it explains regression to the mean – the tendency for extreme performers to come back to the pack.

Regression to the mean is difficult to understand because it goes against every notion of the way we understand the world.

The correlation coefficient between two measures, which shows the relative weight of the factors they share, is a strong starting point to understanding this strange phenomenon. One is a perfect match and zero shows no predictive relationship.

For example, the correlation between a parent and their child's height is about 0.5, given height is largely

hereditary (you get 50% of your genes from your mum, 50% from your dad). It is a mathematical inevitability that whenever the correlation between two factors is less than 1, there will be regression to the mean. If a child is significantly taller than both their parents' height, their sibling is less likely to be – since the tall child was a far lower probability event to begin with.

In financial services, this leads to some disturbing outcomes.

Investing requires a deep understanding of some of the most complex, inter-related systems ever devised. But there is no perfect correlation between measures of skill and investment outperformance. This means regression to the mean is everywhere, just as it is everywhere in life.

Yet investment performance is (still) the dominant way that most funds sell themselves and how most investors pick their managers. But this year's top investment

performers tend to underperform the following year and vice versa.

Unfortunately, our minds are not structured to interpret this as a statistical fact of life. Instead, we assign causal interpretations, which may sound perfectly plausible even though they are wrong. If these causal interpretations were correct then reversion to the mean wouldn't occur in reverse, but it does – this year's top investment performers also tend to underperform the previous year (and vice versa).

We all have a deep need to understand and control the world, but this ignores the significant role of luck. So how should investors account for regression to the mean when making decisions?

GOALS: SETTING YOUR OWN 'MEAN'

If so many fundamental aspects of investing suffer from regression to the mean, why invest with one group over another? Why invest at all?

Skill still plays an important role in this industry but it's important to understand what you can control and what you can't, to avoid wasting resources at best or selling snake oil at worst.

The financial services system is so complex that regression to the mean is inevitable although not always predictable: it comes in swings and roundabouts. While tail events are rare, they may have excessively large negative impacts on portfolios. When luck plays a significant role, risk management becomes even more crucial.

Counterintuitively, investors should consider selling rather than buying the latest top performing fund managers, rotating into those underperformers (who nonetheless still meet their long-term criteria). It can be uncomfortable to sell yesterday's winner to buy tomorrow's winner but regression to the mean is incontrovertible.

These approaches are both part of our investment process at Innova: we have a stringent focus on risk management and asset allocation.

However, none of this counts for much if not viewed through the prism of investors' personal goals. The mean differs in many ways, whether it's one asset class return compared to another (such as government bonds versus equities) or returns from different investment styles within asset classes (such as growth versus value equities).

This personal 'mean' return must be aligned with an investor's goals, outlining a path to achieve it with the least risk. This is why good financial advice is so important and why Innova has invested in tools to support advisers giving goals-based advice.

Most people don't know why they invest, so they don't know when to sell. If their investments have performed better than expected, they may not need to take as much risk to achieve their goals (and vice versa) but typically behavioural biases kick in and few make this choice.

Regression to the mean can then destroy any outperformance, but it is often ignored because the concept is so alien to the way we interpret the world. But understanding this concept can explain many investment tendencies and allow investors to avoid paying for luck rather than skill.



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Dan Miles is the Managing Director & Co-Chief Investment Officer of Innova Asset Management. Innova is a boutique risk-focused portfolio manager that has been managing client portfolios for 8 years. Innova was founded on the principles of providing robust and research-intensive insights to help investors meet their financial goals. The firm focuses on managing the multi-faceted nature of investment risks for clients.

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