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Financial Serendipity

In the financial world, to say ‘I just don’t know’ is not very commercial. The wheels of finance are greased by people willing to pay soothsayers for insight into what the future might hold. Be it sporting events, weather, politics, or the future of the Euro, people want to know what will happen before it does.

The fascination with the future and the relentless search for those with the ability to foresee it, has endured through the centuries. As Cicero wrote in 45 BC *“There is no nation whatever, however polished and learned, or however barbarous and uncivilized which does not believe it possible that future events may be indicated, and understood, and predicted by certain persons.”*

Though there are plenty willing to proffer a view on the future, the evidence would suggest there are few with a genuine ability to foresee it. This paper endeavours to research the evidence for the positive persistence of successful financial market predictions; why is it that we search for insight into the future; what role luck (serendipity) plays in this; and the implications of the findings in terms of the investment decisions we make.

Demand for Prescience

When we buy a property, we’re essentially predicting that the real estate market is on a sound footing; when we fix the interest rate on our mortgage with the bank, we’re predicting that interest rates are going to rise; and when we pray to God we are predicting the existence of a higher power. Predicting is essential to modern life. And it is big business.

Whether in the entertainment world or that of finance, successfully predicting that something will become a big hit is impressive. A profile on the front cover of business magazines lies in wait for the entrepreneurs and company CEOs who have made successful predictions and backed it with money.

So why do we actively seek out experts with the ability to predict? According to Nobel laureate in economics, Daniel Khaneman¹, it largely relates to a desire to feel that we are in control. It’s more than a little uncomfortable to think that that people who make predictions — the television experts, the conference pundits, the advisers to the Government and businesses — are no better and possibly worse than the rest of us. But as we will see in the next section, in certain realms this is actually the case. Randomness plays a far greater role in our lives than we assume. We are not in control and this is extremely uncomfortable.



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Faced with randomness, we attempt to explain events after the fact as being related to or caused by some event. As soon as something happens that we did not expect to happen, we seek to understand why it happened. This innate need to try to understand events after the fact causes us to become less surprised. We therefore create an illusion of the world as much more ordinary (and predictable) than it actually is. This gives us a much better sense of control, however false it may be. Faced with randomness, and attempting to explain it away, we end up being fooled by randomness, as Nassim Taleb so brilliantly describes in his seminal book of the same title.

We would actually be much better off accepting the role chance plays in financial markets, and more broadly in our lives. While this is easy to articulate, it is much more difficult to accept, given our innate desire to be in control.

Predicting Success

In pursuits where outcomes are governed by adaptive and multiple variables, experts struggle with predicting the future. The stock market is a large and complex interconnected system made up of the interactions of millions of individual investors. Yet we actively seek out experts to provide us with guidance on what to expect.

An interesting paper produced by NYU's Stern business school² tracked the Wall Street Journal's *Economic Forecast Survey* to find out how accurate economists' forecasts were when significant sums were at stake.

To find the answer, authors Denrell and Fang took predictions from July 2002 to July 2005 and calculated which economists had the best record of correctly predicting 'extreme' outcomes, defined for the study as either 20 percent higher or 20 percent lower than the average prediction. They compared those to figures on the economists' overall accuracy. What they found was striking. Economists who had a better record at calling extreme events had a worse record in general. *"The analyst with the largest number as well as the highest proportion of accurate and extreme forecasts, had, by far, the worst forecasting record."*

Denrell and Fang conclude that rather than being an indication of good judgment, accurately forecasting a rare event, such as business success, may in fact be an indication of poor judgment. The explanation is that because extreme outcomes are very rare, managers who take into account all the available information are less likely to make such extreme predictions; whereas those who rely on intuition are more likely to make extreme predictions. Reliance on intuition is unlikely to produce consistent success over a wide range of forecasts.

In an extremely comprehensive study³ conducted over a fifteen-year period, Philip Tetlock discovered largely similar findings. Tetlock scored the accuracy of about 28,000 forecasts from 300 experts covering political and economic trends in 60 countries from 1988 to 2003. Tetlock asked experts to place subjective possibilities on well-specified sets of possible outcomes.

Tetlock claims that the better-known and more frequently quoted forecasters are, the less reliable their guesses about the future are likely to be. The accuracy of an expert's predictions actually has an inverse relationship with their self-confidence, renown and, beyond a certain point, depth of knowledge. *"We reach the point of diminishing marginal predictive returns for knowledge disconcertingly quickly."*

Tetlock concedes that this result is not unusual and many other studies have found experts in certain fields (particularly social, economic and political ones) to have very poor forecasting ability. But he does believe that he discovered something about why some people make better forecasters than others; *"How people think trumps what people think"*. The important thing is not *what* the experts believe but the way they think and arrive at their conclusions.

To illustrate this he uses Isaiah Berlin's metaphor from his essay on Tolstoy *"The Hedgehog and the Fox"* to highlight the difference. According to Tetlock, poor forecasters are like hedgehogs: thinkers who know 'one big thing'. The hedgehog believes that he or she has achieved some form of cognitive mastery of the causal structure of the universe. The explanatory reach of that one big thing is extended into many domains. Hedgehogs impatiently dismiss those who 'do not get it' and express considerable confidence in their forecasting ability. Hedgehogs are extremely self-confident, to the point that when presented with evidence of failure, they explain this away as merely 'off on timing' or that the forecast was 'almost right', derailed by an unforeseeable accident.

Better, but by no means great forecasters, look like foxes: thinkers who know many small things. Foxes are sceptical of grand theories. They see explanation and prediction not as deductive exercises, but rather they try to stitch together the best ideas from diverse sources. In many ways are dependent on hedgehogs for ideas. Foxes, recognising the complex nature of the world, are rather diffident about their own forecasting prowess making them less likely to offer firm predictions.

In Tetlock's study, the foxes performed better. Hedgehogs routinely over-predicted: twenty per cent of the outcomes that hedgehogs claimed were impossible or nearly impossible came to pass, versus ten per cent for the foxes. More than thirty per cent of the outcomes that hedgehogs thought were certain or near certain did not, against twenty per cent for foxes. Both however, underperformed a very simple algorithmic model, which Tetlock refers to as the *"mindless competition"*.

This research suggests that those that successfully predicted 'rare' events are not likely to repeat their success very often. Their overall capability is unlikely to be as impressive as their apparent success seems to be.

Nassim Taleb, in defence of hedgehogs makes a valid point. Assuming bigger payoffs from predicting rare events than common events, the expected value of the hedgehog strategy passes that of the fox strategy when the ratios hit about seven to one. During periods of turbulence when rare events tend to cluster, hedgehogs catch up quicker still.

To the extent that the implications of these studies are not well understood, consider the

recent credit crisis. Economists were widely criticised for their inability to predict the disaster.

What is not generally appreciated is the fact that most models which underpin financial market forecasts are derived from the world of physics, the subject matter of which is neutrons and electrons. In this domain, forecasting is so precise, the movement of a particle within an atom can be predicted to within several decimal places of accuracy. The subject matter of finance is Homo Sapiens. The difficulties faced by economists in making predictions in this realm should be relatively obvious. As, Irwin Stelzer, an economist with the Hudson Institute, facetiously observed, *“economists only use decimal points in their estimates to show they have a sense of humour”*.

It should come as no surprise that very few analysts predicted the credit crisis. The physics world has three laws that explain 99% of physical phenomena. As MIT professor Andrew Lo acknowledges, *“In finance we have 99 laws that explain 3% of economic phenomena”*.

Globally, one economist at least had a ‘good’ crisis. The Kim Kardashian of the economics profession, so famous now that he appears regularly in business publications, attracts long queues at speaking events and is a television regular. Nouriel Roubini has been lauded for his prescience. Beware! A fascinating aspect to Philip Tetlock’s study is the way we treat foxes and hedgehogs, and the potential lessons to be learned from this.

Hedgehogs are far more interesting than foxes. Typically charismatic and with an abundance of confidence, they normally have a great story to tell however wrong it may be. They’re the ones offering the most outrageous predictions. Their commercial appeal is almost without limit. Yet they’re also the ones who are the worst predictors over time.

Foxes that couch their predictions in ‘could be this, or possibly that’ are more likely right about what’s going to happen. However, commercial demand for diffidence is limited. It’s very important to bear this in mind when listening to pundits on radio or television.

It would be a great disservice to discredit Roubini’s predictions as merely the result of serendipity. But Denrell & Fang are pretty clear about the ramifications of their report: *“It is possible that we may end up awarding ‘forecasters of the year’ awards to a procession of cranks, seek to learn from entrepreneurs with extreme convictions and poor judgment, and promote managers who overconfidently made a series of extreme predictions relying on intuition but neglecting available data on base rates.”*

To truly claim that the successful prognosticators have a special ability to foresee the future, we would need to take into account all their incorrect predictions before making a judgment. When we try to predict what’s next, we seem to rely heavily on information close at hand (a recent correct prediction, a new piece of data) and ignore the overall extent of the data and percentage of blown calls.

There is as much to be learned, if not more, in failure as there is in success. However, much like the media fascination with the hedgehogs as opposed to foxes, the demand for books on business failures by publishers is limited.

Tetlock makes the point that rarely do we hold forecasters to account. We are thereby incentivising forecasting cranks. Financial forecasters that are not held accountable for their incorrect predictions get more out of making extreme predictions. Wild predictions pay because the downside of being wrong is limited, but the upside is potential lifelong fame.

Tetlock recommends that we properly measure forecasting ability and monitor their forecasting performance. It's not clear how this can be practically achieved, but at least being aware of our biases in overweighting recent and available information should limit the extent to which we may otherwise laud 'forecasting cranks'.

The role of social influence in making predicting success difficult

Success in social realms is a 'noisy signal'. It's unreliable, fickle, and composed of so many moving parts. Predicting success is a combination of interpreting individual preferences but also predicting how our preferences are influenced by others. This latter aspect is referred to as social influence.

Conventional marketing wisdom holds that predicting success in cultural markets is mostly a matter of anticipating the preferences of the audience. It should be easy to replicate the success of Lady Ga Ga if the experts could only figure out what it was about the music and packaging that appealed to her fans.

That of course is what Simon Cowell and his ilk try to do. That they fail so frequently implies that they are misinterpreting the audiences' preferences. Or maybe there is a heavy dose of luck involved in the music industry and the difference between a Michael Bubl  and an equally-talented but not so famous crooner, is some small chance event.

The common sense view, that studying the preferences of an audience will yield insight into what will succeed and what won't, makes a big assumption: that when people make decisions about what they like, they do so independently of one another. But people rarely make decisions independently. What we often want is not so much to experience the 'best' of everything, rather it is to experience the same things as other people – sharing is caring! Do you ever find it more appealing to watch a film that you like when it is on regular television than watching it on the DVD you bought? In addition, when there are so many choices, making decisions independently becomes difficult, so we look for social proof.

Ultimately, we're all social beings, relying on each other to varying extents. Yet our mutual dependence has unexpected consequences, one of which is that if people do not make decisions independently — if even in part they like things because other people like them — then predicting success (i.e. the next Lady Ga Ga) is not only difficult but actually impossible, no matter how much you know about individual tastes.

Predicting success involves interpreting how individual preferences will play out when everyone is paying attention to what other people are doing. This is extremely difficult to test experimentally.

If we were to replay the world over, would the Harry Potter series of books be equally successful next time around? In a fascinating study⁴ conducted by Princeton University on the influence of social behaviour, we get some kind of insight into the potential answer to this question. The study attempted to explain why experts routinely fail to predict which products will succeed. They investigated the role of social influence on the nature of success for music.

The Princeton study controlled for social influence by setting up separate groups. They did this by creating an artificial “music market” in which 14,341 participants downloaded previously unknown songs with one group having no knowledge of previous participants’ choices and other groups having access to this information. The results were fascinating. The authors noted that *“increasing the strength of social influence increased both inequality and unpredictability of success.”*

In the groups which had access to the choices made by others, success was also only partly determined by quality: *“The best songs rarely did poorly, and the worst rarely did well, but any other result was possible.”*

The conclusion to the study was that the difference between a Britney Spears and a Carly Hennessy (a teen phenomenon with a massive recording contract whose first album sold 378 copies and was never heard of again) is down to chancy, fickle and ultimately unpredictable factors.

People do not operate in a vacuum and are highly influenced by the preferences of others, particularly in cultural markets. Predicting this is inherently difficult. Are financial markets any different?

Interestingly, Philip Tetlock is currently conducting a study, a much more comprehensive study than the one conducted for his 2005 book, in which he specifically controls for social influence by splitting forecasters into three groups. One condition has forecasters working completely anonymously and alone. In another experimental condition, forecasters have information about the forecasts other forecasters are making, but they’re not given the reasons or rationales. In the third condition, they’re given both the forecast and the rationales. One suspects he could already write the conclusion!

The role of chance

Throughout history, great and terrible events have often hinged on chance. It’s sobering to think what might have happened if major world events had gone differently. How different would our world be but for a supreme court decision to award the 2000 US presidential election to George W Bush; if the Japanese had not bombed Pearl Harbor, or if the Brighton bomb succeeded in killing Margaret Thatcher. How different would the 20th century have been without a Hitler, Stalin or Mao? A recent talk by Daniel Kahneman¹ shows the role that luck played in this outcome:

“Think of Adolf Hitler and his role in the history of the 20th century. Now, that was an important figure in the history of the 20th century. Now, at the moment of conception, it could

have been Ms. Hitler. There was a fifty-fifty chance that fertilized egg would be female. Looking back there is a one-eighth probability of a 20th century that doesn't have Hitler in it, or Stalin, or Mao. That wouldn't be the same 20th century".

These parallel universes offer some insight into how differently things might have turned out, but for the role of chance.

Most people go by what happened, not taking into account what could well have happened (Taleb uses the term 'alternative histories' to describe the latter possibilities). These are the hidden risks in life we don't consider.

It is not that the successful are just randomly so. Lady Ga Ga is clearly very talented. But luck plays a role, and you have to be prepared to seize it when it does arrive, something which some people are clearly more adept at than others.

There is some merit to Gary Player's idea that "*the harder we try the luckier we seem to get*"⁵. It doesn't mean that predicting it gets any easier though. And ultimately that is the point of this paper. Predicting success where luck plays a role is like predicting coin tosses.

Conclusion

There are a number of problems facing investors and economists when they try to predict markets and future investment performance. The first problem is any prediction formula that is valid for one context is not necessarily valid for another. Formulas and models must be updated with changing environments.

The second problem with prediction is that even if you get the model right, your prediction results are dependent on so many uncontrollable variables (nature, geopolitical events, new regulations and changing relationships) that affect the prices of the assets in question. Chance plays a part – and in certain activities, quite a big part. Think of all the outcomes we have observed. Now consider all of the outcomes we never observed. History is but one outcome in a long list of alternate possibilities.

The final problem is related to social influence. It is impossible to predict how something will turn out if the outcome is influenced by the collective action of others. Predicting preferences which are malleable and influenced by outside forces is nigh on impossible.

This paper has endeavoured to answer the question; why do so many financial and economic experts predict so poorly? The conclusion is that they haven't failed at all. The world is simply too complex; too incomprehensible.

It is not that the pundits make mistakes. As Daniel Khaneman says, "*It's not the analysts' fault, it's the world's fault*"¹.

The implications of this are potentially profound. One possible conclusion, supported by Daniel Khaneman, would be to dismiss active investing in its entirety.

We are drawn to a somewhat different conclusion. This paper has highlighted a number of studies which show that predicting success is extremely difficult in fields where luck plays a large role. Where on the luck-skill continuum does the stock market reside?

If you consider slot machines/roulette to be at the complete luck end of the spectrum and chess to be at the complete skill end, then the stock market probably resides somewhere in between. Michael Mauboussin, chief investment strategist at Legg Mason offers some help in trying to determine whether an activity contains skill: can you lose on purpose⁶? Think slot machines. Now think chess. If you can't lose on purpose, then there is no skill involved. Accepting that financial and economic predictions are largely a waste of time, there is scope for active investing so long as forecasting is not a critical aspect of it.

The one area of investment management that endeavours to avoid explicit predictions and which limits assumptions about the future, is value investing. Sure, the luck issue abounds and truly distinguishing this from skill is not easy, some would argue impossible. It will ever be thus. But maybe we can adapt the old saying 'The harder I try, the luckier I seem to get' for the world of investment and record it as 'The more I focus on value, the luckier I seem to get'.

If this is taking the evidence produced in this paper too far, then at the very minimum, if you find yourself being seduced by the predictions of some financial forecaster, take a cold shower and stray far from the trade button.

Yes, to say 'I just don't know' is not very commercial. But it's the truth. To listen to anyone else that says otherwise is folly. More fool the listener, than the predictor. At least they are making a living out of it.

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