
Patience as An Alpha Source

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Central Issue of the Paper

“Patience Premium,” by Igor Yelnik from ADG Capital Management introduces the notion of a patience premium, which is based on the concept of ambiguity aversion and ultimately can be defined as an ambiguity premium. The paper identifies three reasons for the existence of the patience premium: **Certainty preferences**: perceived confidence in the expected performance; **Comparison with peers**: desire to outperform the competition drives the focus towards short-term outcomes; **Loss aversion**: intolerance to negative performance leads to the use of sub-optimal trading strategies. These reasons are driven by the behavior of market participants and are interconnected. The phenomenon of the patience premium helps explain why the performance of investment strategies may benefit from having longer holding periods.

Approach Employed by Paper

From our everyday experience, we know that performance uncertainty is often lower over the long-term than over the short-term. This effect is immediately explained by the well-known fact that expected return is proportional to time while its standard deviation is proportional to square root of time (under the assumption that the returns are independent and identically distributed). Hence, the ratio of accumulated returns to their standard deviation should increase for longer horizons. This implies that having a reliable forecast for the mean expected return the investor will be better off by investing over the long-term and absorbing volatility around that mean. In other words, the patient investor will earn a patience premium.

In practice, investors’ real-world utility functions are not only about return optimization over the long term but are also influenced by other concerns and constraints specific to their situation. One example is that a typical investor’s perception of losses and gains is asymmetric, and they will often be judged over a time frame which is shorter than the one needed to statistically prove a concept. Following on from this, out of two equally volatile investments with equal estimates of expected returns and different levels of confidence in them, a typical investor will naturally choose the investment with a higher confidence. In other words, a higher certainty about expected return is preferred, all else being equal. Out of the two investors with equal ambiguity aversion, one with better knowledge of the expected distribution can afford greater patience, and out of two investors with equal knowledge of the expected distribution, the one with the greater patience should be able to collect the premium due to non-participation of the other investor. Shleifer, Vishny (1997) use the glamour/value anomaly as an example of high uncertainty that prevents many investors from taking advantage of it. They make an important general conclusion that market anomalies must have a high degree of uncertainty to persist over the long term.

The difference between volatility and uncertainty is fundamental for the understanding of risk; volatility shows variability of performance around the mean return while uncertainty indicates how trustworthy the estimate of the mean return is. An investor who knows the true expected return should only be interested in the volatility. However, in the real world this is rarely the case, which is why investors should take a much more meaningful look at the uncertainty.

Where does this fit in with their concept of the patience premium? It is well known that statistical significance of the mean return estimate depends on the sample size; the larger the sample, the lower the uncertainty, all else being equal. However, it is not the nominal sample size, e.g. the number of days in the sample, that matters. One needs to use a measure of the effective sample size that reflects the portfolio diversity over time. Faster strategies usually have a larger effective sample size versus slower strategies, all else being equal (see, for example, Gnedenko, Yelnik (2016)). As investors search for lower uncertainty, they are drawn towards faster strategies.

Additionally, there's an argument to be made that (successful/ profitable) faster strategies play a role in markets being non-stationary. Such strategies are often based on lower capacity anomalies that are identified and traded on by a growing number of managers until they are no longer persistent and can no longer be exploited. At first, investors discover a market anomaly or a risk premium which appears to be statistically significant under the stationarity assumption, then they try to exploit it, and by exploiting it they eliminate the effect they are chasing.

Furthermore, for any given investor, there may exist a faster investor. That faster investor will try to use information the slower investor will omit. Therefore, the faster investor will use more information per unit time, which may increase statistical confidence in his realized expected returns and supposedly give him a competitive advantage. This drives many investors towards higher frequency. This in turn leads to the herding effect and to a lower predictability of usefulness of information. As a result, the share of the false positives in the investors' used information subset may swell and the uncertainty of expected returns, increase. Speaking more formally, while the ambiguity about the realized distribution may decrease as the speed increases, the same may not necessarily be true about the expected distribution.

The loss aversion and the certainty preference often force investors to take actions that result in negative expected returns. A classic example would be stop-loss rules applied in a strategy with negative autocorrelation of returns. In other words, investors do not only avoid strategies with higher uncertainty, but in the foray to reduce uncertainty they reduce expected returns.

Findings of the Paper

The core reason for the existence of the patience premium is investors' aversion to ambiguity (or uncertainty). In other words, the patience premium is an ambiguity premium.

Due to certainty preferences, the average investor may have been drifting into an area of increasing information processing speed and shorter holding periods. This move has involved the use of information never used before. For such strategies, making assumptions about expected performance and its uncertainty may be even more challenging than for more traditionally exploited slower signals, in particular because of the ever-increasing competition in the area. This competition calls stationarity and hence forecastability of the return distribution into question.

Patience must build on confidence; since statistical tools are less helpful in identifying slow investment strategies with positive expected return, discretion of a human investor plays an important role in forming the ultimate evaluation of certainty of such strategies.
