

Turning to machines for advice

Computer-driven quantitative strategies are coming into their own in this low-yield world but one has to be mindful of the risks. **BY KUANGWEI TAN**

THE current narrative is the "new normal" low-yield environment that we find ourselves in. In the wake of the financial crisis, monetary policy has continued to evolve, venturing into unconventional policies using balance sheet tools and even negative interest rates

in an attempt to pull forward demand.

Imagine a world in which there is only one casino. Everyone heads there because it has produced a lot of winners in the past. Lately, the casino's entrance fees have risen because the owners are finding it hard to balance the books, having borrowed from future projected earnings to finance paying the winners. The games themselves have higher house advantages

now, so there are fewer and fewer winners. Now imagine being able to walk into that casino with your own card-counting robot.

In this low-yield environment, computer-driven quantitative strategies which may have been a bit of a niche in the past have become more mainstream as a result of the competitive landscape in the search for yield. The outperformance in returns that some of these strategies de-

livered in recent years has also placed them in the spotlight.

The use of quantitative techniques in the investment arena is not new. But it is only in recent times, especially with the buzz on robo-investing, artificial intelligence and the low-yield environment, that focus on it is returning with a vengeance.

Now in thinking about how these techniques can be used effectively in the current market environment, it is

paramount to understand how some of them are meant to work, and more importantly, to fully comprehend their limitations.

Take the risk parity approach, for example. This is an approach which focuses on allocation in risk units or volatility rather than in notional terms. It relies on the observation that volatility is not the same across different assets, and the risk reward profiles of a portfolio can be im-

proved by diversification. It is, in essence, a cross-asset portfolio allocation model that assigns weights inversely proportional to volatility and typically prescribes being overweight fixed income assets and underweight equities.

Different managers approach the technique differently, most notably on how the risk gets allocated, whether it is across economic environments or factor-like risks including equity or interest rate risks, but the intellectual underpinnings are broadly similar. Risk parity has a very successful longer-term track record and has gained popularity among asset managers.

So you show up at the game table smug about your card-counting robot, but a lot of the other players have their own robots with them. Nevertheless, you sit down to play, with your robot telling you where to place your bets. It doesn't escape your observation, though, that a lot of the other players are putting their bets in a lot of the same places.

To be mindful of the risks of using these techniques, you need to recognise when and why risk-parity strategies may come under significant pressure, while also keeping in mind that risk parity as an approach is not supposed to completely protect people from risk. This is especially so when there are times of heightened volatility tied to selloffs in equity markets combined with a muted diversification benefit from fixed income.

Uncharted territory

The past instances have been somewhat and arguably "atypical", the most recent being China's decision to let its currency weaken which also caused weakness in bond values. The real risk, however, is one that will be structural in nature.

You ante up along with the rest of the players and your bets start paying off. After some time, however, the croupier announces that he is changing some of the rules.

What is compounding the low-yield environment is that global central banks are in uncharted territory with regard to monetary policy and in trying to remain accommodative in the face of lacklustre growth.

The foray into negative rates by some central banks has not been without some negative consequences. They, along with the rest of us, are also tacitly recognising that a non-reserve currency central bank easing via unconventional methods impacts the local currency versus the reserve currency, i.e. the US dollar.

As a result, it imposes a tightening effect on financial conditions in the US which can also be deflationary in nature given that commodities are priced in dollars. The Federal Reserve then has to take that into account in its own analysis on how its monetary policy path should evolve. But reflexively, this also impacts the efficacy of the non-reserve currency central banks' original intent to ease local monetary conditions in the first place, given that nominal rates are already low and the transmission mechanism is being channelled via the currency space. This then perpetuates a rate environment skewed always to the downside.

The challenge will come when this circuitous dynamic is broken, for example, when non-reserve currency central banks need to reduce or stop the implementation of unconventional monetary policy, the skew could then potentially reverse. Welcome to life at the zero bound.

The human factor

This environment in which competitive accommodation sets up the dynamic of low for longer policy rates is still extremely fluid as policymakers figure out the right levers to maintain supportive policies in the face of anaemic growth. The ultimate outcome of all of this is far from clear and might not be for some time to come.

But what is clear is the need for a framework to diversify quantitative factor risks – perhaps with a multi-strategy approach coupled with a volatility target overlay, and picking strategies that rely on different philosophies and are suitably uncorrelated.

In today's eagerness to embrace quantitative techniques to get an edge in the market, it's critical to keep in mind that even the most advanced algorithms will not be able to think as ingeniously as a human mind, especially in times when it is difficult to find exact parallels in history.

While information management, rational analysis and speed play to a machine's strength, there are market conditions and government interventions that even supercomputers cannot predict. The need for a human to understand the inherent and structural regime risks and to be there for the client is ever more pressing.

After all, there is nothing normal about the "new normal".

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