

# Will you let robots pick your stocks?

BY TAN ZHAI YUN

**M**ore quant strategies powered by artificial intelligence (AI) are coming to Malaysia, and they are increasingly accessible to retail investors.

These strategies, which rely on advanced mathematical modelling, computer systems and data analysis to make investment decisions, have been the domain of hedge funds in the US and mainly available to institutional investors.

"Quant investing is computationally intensive. These systems tend to be expensive and hence, only large institutional investors and hedge funds were able to afford the technology needed to deploy quantitative strategies," says Mark Chua, fund manager and lead data scientist at Maybank Asset Management Singapore.

"As computers have become more powerful, the cost of quant investing has declined. This makes it possible for more investors to access the enhanced computing power of quant investing."

In August, Maybank Asset Management Sdn Bhd launched Maybank Asia Mixed Assets-I, a retail fund that uses data science and AI-powered quant investing technology to complement the work of fund managers. Its target fund is Maybank Asian Growth and Income-I, managed by Maybank Asset Management Singapore.

Meanwhile, HSBC Amanah Malaysia launched the AI-powered US Equity 5 Index (AIPEX5) last September. The structured product uses IBM Watson, an AI product for businesses, to pick up data from millions of sources, turn it into insights and select the stocks that go into the index every month.

Kenanga Investors Bhd went into this area by launching its first AI-powered wholesale quant fund in 2017, which feeds into the TCM Global Index Fund managed by Singapore-based Taaffe Capital Management.

New AI-powered products are being introduced on the trading side as well. Kenanga Investment Bank Bhd has a quant and AI trading solutions team working on an AI trading product, and Malacca Securities Sdn Bhd is heading in a similar direction.

## A TIMELY SOLUTION FOR THE INFORMATION AGE?

The main advantage of using AI-powered quant strategies is the ability to increase the breadth of coverage easily.

"At its core, investing is interpreting and applying information to generate returns. However, the sheer amount of data available now to investors is staggering, and the gap between what is available and what humans can comprehend is wide and will only continue to grow," says Alvin Kong, head of markets and securities



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services at HSBC Malaysia.

"For instance, 90% of the world's data was created over the past two years and we will say the same thing two years from now. Much of the new data is unstructured, which could come from social media posts, satellite imagery and website trading patterns, all of which need to be analysed and organised to be useful."

Successful investment strategies of the future, he believes, will need to have the ability to keep up with the growing amount of data being generated each day. AI-driven investment processes will thus play a vital role.

Chua shares a similar view. A typical fund manager can cover up to 200 stocks on his own, and perhaps 500 stocks with a team of analysts, he says. A quant strategy can cover up to 4,000 stocks.

He gives an example of how its quant models invested in container shipping companies in the second half of 2020. Fundamentally, the team found it difficult to justify this decision as most transport companies such as airlines and taxis were badly affected by the lockdown measures.

"But we now know that a shortage of containers and port congestion caused shipping rates to surge and stock prices [of these companies] have doubled or tripled since. This is an example where the quant model was able to predict and react faster than active fund managers. It is able to find opportunities amid disruptive change because it was able to pick up small signals across a large basket of stocks," says Chua.

The use of AI in quant strategies is still in its early days. He believes that more time is needed for asset managers to adopt these technologies in financial markets. However, early movers who can successfully harness the potential of AI will be able to gain an advantage, he points out.

## HOW DOES IT WORK?

AIPEX 5 evaluates the largest 1,000 US companies based on three scores: financial health, news and information, and management.

Between 17 and 34 daily signals are monitored for each score.

"The AIPEX 5 strategy also takes in signals from social media channels like Reddit and Twitter. However, these sentiment signals are weighed against fundamentals. So, if a stock displays strong sentiment but does not have the fundamentals, it would not be in the portfolio," says Kong.

AIPEX 5 relies on IBM Watson to continuously analyse and learn from these data, and uses those insights to select 250 stocks that go into the index monthly. A daily volatility control mechanism is in place to reduce exposure to equities when markets are unstable.

According to the fact sheet on HSBC's website, the performance of the index over the past three years has been flat, with annualised returns underperforming the S&P 500. Kong explains that a more accurate benchmark is actually the S&P 500 with 5% risk control (SPXT5UE).

"Looking at a longer time horizon (5 to 10 years) would be more reflective of how the strategy works across different economic cycles. We've seen that the index still outperforms the adjusted SPXT5UE," he says.

The Maybank fund uses AI to advise fund managers on the asset allocation between equities and sukuk. The AI-powered models also analyse economic data and classify economic conditions into four states: expansion, slowdown, recession and recovery. The fund managers will revise their asset allocation according to how the asset classes perform under each state.

In essence, the company relies on both technology and the fund man-



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ager to make investment decisions.

"Some people advocate strictly relying on the robot [to make investment decisions] as rigorous testing has been done during the development of the robot, and human intervention is viewed as injecting human bias into the quantitative strategy. On the other hand, some people advocate for active human supervision over the robot as it may not function well when market conditions change. But this introduces more subjectivity," says Chua.

Maybank opted for the second strategy because the fund managers noticed that some quant funds that used the first approach did not perform as well, he says, and yet the fund managers couldn't intervene and change the investment strategy. They also do not use sentiment data (analysing whether the text is positive, negative or neutral) as it tends to generate noise (meaningless information in data).

Since the fund only commenced on Sept 6, the performance data is unavailable.

## CAN IT WORK IN THE CURRENT MARKET?

In recent years, volatility caused by events such as the pandemic, natural disasters, China's regulatory clampdown and US-China tensions, has been a regular feature in markets. How well can a quant strategy handle such events?

"We generally recognise that humans are more adaptable to unforeseen circumstances than robots. We designed the governance process of this fund accordingly, where we have human fund managers supervise the algorithm. We have identified several trigger points and scenarios where the fund manager will be prompted to review the appropriateness of the current quantitative model and replace it, if necessary," says Chua.

The fund manager can also override the quant model in case of unexpected events, such as the failure of a large bank, and move to a temporary defensive position.

This hybrid model could be useful in Asia, where markets are more fragmented and inefficient, he adds. Data quality there is less desirable than in developed markets.

"This makes it harder for pure quant firms to execute quant strategies in emerging Asia. However, it creates opportunities for us because we are able to combine our fundamental experience of investing in Asian markets with the new quant investing technology," he says.

Going forward, Chua is excited about the prospects of direct investing strategies that use quant investing to create customised portfolios for individual clients at scale.

"We're also excited about investment data science as it can help fund managers respond faster and better. For instance, it can help summarise and extract insights from transcripts, reports and emails. We think it is an exciting time for investors as we journey towards data-driven decision-making," he says.

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