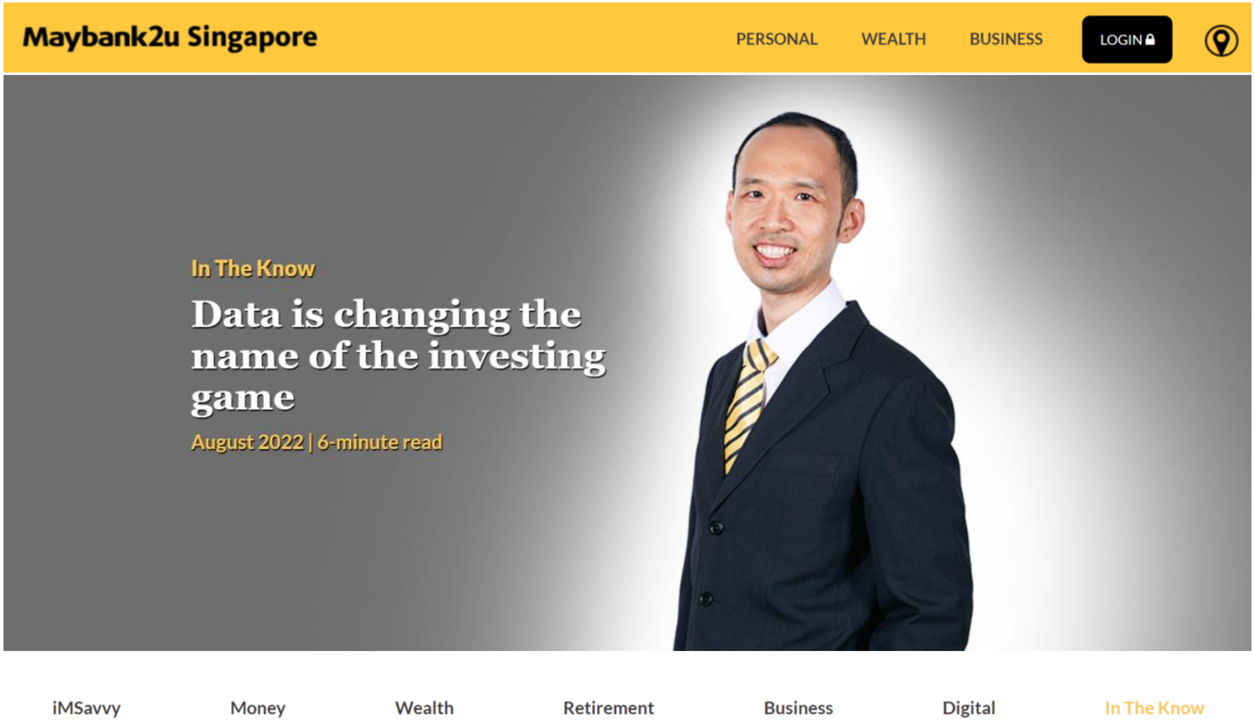

Advances in big data and technology are quickly paving the way for fund managers to make smarter investing decisions.

In a basketball team, the coach's intuition has always played a critical part in reading the opponents, adjusting the game plan, and making split-second decisions that brings about the big wins. In recent times, a new star player has appeared in the investment arena: data.

Specifically, advanced technologies like analytics and machine learning trawl through piles of data to scrutinise how players perform and generate deeper insights. Mr Mark Chua, Maybank Asset Management Singapore's Head of Investment Science, plays exactly within that field - just not on the basketball court, but, instead, a bank.

He shares how the rise of data science and artificial intelligence (AI) are revolutionalising the way we invest and how his team is working to convert intuition into data-driven decisions for that "slam dunk" investment.

Q: How has technology changed investing?

Mr Chua: Financial markets have gotten more efficient over the last 20 years. In the past, fund managers would receive research reports by fax, collate them, and circulate them internally, starting with the Chief Investment Officer. It could be a week later by the time the research analysts get to read the report.

Today, fund managers get hundreds of research reports in their emails every day. It is like drinking from a fire hose; you can say that we are almost drowning from information overload.

We clearly need to keep up with technology to process information more efficiently. When I started work as a business analyst, expertise in Microsoft Excel was sufficient. But today, there is so much data that even Excel struggles at times, so I upgraded my skills and picked up new data science tools like R and Python to process larger datasets. These new skills enabled me to be the first member of the Investment Science team, a group of Quant Portfolio Managers and Data Scientists at Maybank Asset Management that helps the firm digitise and upgrade our investment processes.

Q: How do you use technology to guide whether or not to invest in a specific stock?

Mr Chua: Fund managers are somewhat similar to basketball coaches in that they rely a lot on intuition in their decision-making. Our Investment Science team tries to convert intuition into data-driven decisions, so that investment performance can be more consistent and less dependent on human biases.

For example, we ask our fund managers what they are looking for in their potential investment targets, and we build quantitative models that help them find what they are looking for. Suppose the fund manager wants to invest in growth stocks at a reasonable valuation. Human judgement, and therefore subjectivity, comes in when making the trade-off between growth and valuation. However, our models can help provide an objective second opinion to the fund manager by quantifying the exact trade off between growth and valuation. For example, that he should invest in a particular stock because while its valuation is *slightly* higher than average, it is more than offset by a growth exposure than is *substantially* higher than average.

By using quantitative models, we are able to simulate how this strategy would have performed in particular environments in the past. This helps us replicate the strategy more consistently going forward.

During the COVID-19 lockdown two years ago, our quant models suggested that we invest into the container shipping sector. At that time, our research analysts were puzzled by the recommendation. Markets were selling off on the lockdown news and people were unable to take land transport such as taxis or air transport, so why invest into sea transport? It subsequently turned out that there was a shortage of container capacity and freight rates were going through the roof. This was one example where our models alerted us to an interesting new trend when the environment is changing quickly.

Q: In August 2021, Maybank Asset Management launched Maybank Asia Mixed Assets-I. Tell us more about the fund.

Data science and AI are shaking up the world of investment management. To fully utilise their benefits, our new Investment Science team drives our technology research and integrates new insights into portfolio management.

The Maybank Asia Mixed Assets - I fund is the first Islamic Mixed Asset fund in Singapore and the second Quantitative fund managed by the Investment Science team.

We are excited to take up the opportunity to launch a unique fund at the confluence of Quant investing, Shariah investing and ESG (Environmental, Social and Governance) investing. There aren't many funds like ours currently. Being in a "blue ocean" space gives us more room to deliver better performance. For example, not many people know that the Islamic Asian equities index outperformed its conventional counterpart over the last five years by almost 10%.

Finally, investors in the fund get the best of both worlds - a quant engine driving the stock picks and experienced fund managers overseeing the Islamic bond selection and the overall portfolio construction process.

Q: How can mom-and-pop investors better make use of data science and AI?

Mr Chua: I would encourage all investors to keep an open mind towards fund managers using new technologies like us.

My team likes to challenge the convention. For example, the first quant fund we launched, the Maybank All Weather Quant fund is a very unique equity fund that occasionally sells all equity holdings and sits in cash when the market is too volatile.

When we first marketed the fund, most investors were skeptical and wanted us to show them a three-year track record before investing in the fund. However, those investors who supported us from day one are very happy today because we made money for them and preserved these gains when we took profit and exited our equities holdings in September 2021. The fund subsequently avoided the 2022 market correction associated with the Russia-Ukraine war and US Fed rate hikes.

Of course, all investments have risks and sometimes the new technology may not work out, such as the crash in cryptocurrencies. I totally understand why investors need to be skeptical. It's a fine balance though, as innovation only comes when one is willing to challenge the convention.

Q: What does the future of investing look like?

Mr Chua: The amount of data is exploding every day. Fund managers need to become very good at processing data and extracting investment signals from them. While it used to be sufficient to rely solely on financial data in the past, the industry is moving towards alternative forms of data such as credit card information, geo-spatial datasets, shipping datasets etc.

Alternative data often calls for new tools to process them, often using AI or machine learning. Therefore, fund managers will need to utilise AI and data science to react faster, better and more consistently. According to the CFA Institute, a fifth of analysts and fund managers are undergoing training in AI or data analytics. This suggests significant growth in the field in the coming years.

Significant productivity gains are likely for those who can integrate AI into their work processes. It would not be surprising if investors start asking their asset managers in the future: “How many data scientists do you have in your team?”

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