

Talking Heads podcast with Ram Rasaratnam

Chris Iggo: Hello, and welcome to this week's BNP Paribas Asset Management's Talking Heads podcast. Every week, Talking Heads will bring you in-depth insights and analysis on topics that really matter to investors. In this episode, we'll be focusing on AI (Artificial Intelligence), and how AI and machine learning and other technologies are contributing to the investment process, with a particular emphasis on quantitative equity strategies.

I'm Chris Iggo, Chief Investment Officer, AXA IM Core, part of BNP Paribas Asset Management, and today, I'm joined by Ram Rasaratnam, who is the CIO for Quant Equity Strategies at AXA IM Core, part of BNP Paribas Asset Management. Welcome, Ram, and thanks for joining me today.

Ram Rasaratnam: Hi, Chris. Thanks for having me.

CI: AI has become core to all investment thinking at the moment. Semiconductor and computing hardware companies are generating billions of dollars in revenue, as we've seen in the latest round of earnings. And in turn, they're investing billions of dollars to expand the computing infrastructure necessary to support the growth in AI applications.

And it's a technology that also threatens to have significant macroeconomic implications in the future – on jobs, on the composition of employment, on productivity, and potentially even on things like inflation and interest rates. It's also challenging business models, as we've seen recently with investors questioning the long-term value offered by certain software companies.

But at its core, it offers new tools and the ability to use AI to perform tasks that have so far not really been possible. And the investment industry is a fruitful place to see how this is working. Now, Ram, you've been using quant techniques for a number of years. Your team has been recognised in the industry.

I know that just in the last year you've received several awards, for Best Emerging Markets Equity Manager, Best Quantitative Solutions Manager, and [have been] recognised as one of the best users of AI in asset management. Maybe you could just briefly introduce yourself and give us a bit of background to your team and the main strategies that you manage.

RR: Thanks, Chris. I've been with AXA, and now BNP, for 20 years, working the whole time within quant equity. When I joined, it was called AXA Rosenberg and I'm part of the team that's the legacy business started by Barr Rosenberg. We celebrated our fortieth year of running equity money last year, so we're in our forty-first year this year.

We run equity strategies for US large cap, small cap, emerging markets, large and small. And we have track records going back 35 years in some of those cases – for example, US small cap – using the same investment philosophy that Barr founded for us 40 years ago.

But we've updated it with new data sources – obviously machine learning and AI. We've really had to keep ahead of the game and make sure our models continue to add value and we can continue to outperform behalf of our clients.

CI: It's certainly rich heritage and track record, and today you've got the opportunity to use new techniques in your investment process. Could you maybe give us some examples of how the team is using AI and machine learning in the investment process?

RR: We've always tried to adopt new technologies when we see that they've come to fruition and maturity. When it comes to machine learning, our first modern machine learning model was a neural network we put into production about nine years ago. It was trying to forecast the probability of a stock having an increase in its short-term volatility over the next month. So, we used a neural network to try and find the nonlinear relationships between some of the factors that we'd built to try and forecast this.

It was an exciting project when we worked on it ten years ago when we were building it, and it took us quite a few months to work through the process of doing the research, putting it into production and then building a lot of safeguards around how we sign that off and how we can understand model importance and be able to sign off the trades that would be generated by that model.

That model's worked really well. We've had it in production continuously for nine years now, and it really paid dividends in Q1 2023 when we had the US regional banking crisis, a mini-crisis where Silicon Valley Bank and Signature Bank became illiquid. This model was able to identify both of those stocks the year before and remove them from our portfolio.

So that was our first kind of foray into this kind of more mature space. Machine learning and AI have also opened up the toolbox of factors that the team can look at to try and get insight about stocks.

We don't go and meet management and speak to CEOs and CFOs, but we can listen to the earnings calls and take the transcripts and then machine-read them and try and build models that give us some insight into what being said.

So, we've built models around sentiment models to see how positive or negative company management are, and models around how precise[ly] they're talking, how their language is changing from one call to another, to try and give us insight to help scaffold our still fundamentally driven view around a stock, which is around its valuation, quality and future earnings trajectory.

CI: Working with you over the years I'm aware of how you've refined your own definitions of things like growth and value, which are widely-used terms in the quant industry. Is AI something that's helping that process and making those more powerful signals, improving the information content that you can glean from looking at stock behaviour?

RR: Yes, absolutely. In my 20 years of doing this and overall forty years of history, what we've seen to stay competitive and keep an edge is really about marginal gains. It's about improving our signals. But the improvements we make are not revolutionary. We're not changing fundamentally our approach. We're just trying to find these new data sets to create those marginal gains. And for sure, these techniques are helping. So, the natural language processing model signal that I spoke about earlier, that's going into our quality signal.

We're still looking at the balance sheet of the company, at its earnings variability, but then bringing in these extra ideas of how the management is speaking and what they're saying to help refine that model and get more information out of the existing data that we have.

CI: Yours is a very research-intensive process. How is kind of generative AI, such as open code, for example, transforming the research process and the model development?

RR: We're at the cutting edge of the platform now when we get to open code. This is something we installed a few months ago. [To explain] for the audience out there, open code is effectively like a ChatGPT-type large language model (LLM) that we host internally on our own CPUs. It's an open code, an open-source tool, and within it we effectively expose all of our code, all of the code that goes into our models to that LLM, and we can then query it in natural language.

Number one, it's great for knowledge sharing and for developers to be able to see and understand what kind of signals are being worked on, what's in production right now, and also look at previous versions of the model. But to be able to query that in natural language and be able to get the answers out in [a] really concise format is a game-changer. It's really saving time.

The other aspect of open code is that it can write code into our repository, which again, we're still testing out at the early stages, but it's powerful. And it's not just that it writes code. What's key is that it writes code to the standard that we have set for how we want to write code.

It's obeying the naming conventions, the structure of the code. It's able to use the functions that we've built to do the transformations that we have. It's able to call all of the functions that we've built in within our ecosystem and do it in a way that we would write it ourselves, but it's saving time for us.

We're already seeing the benefits, and I think as we start to adopt and become more familiar with this, how I see it playing out is that it will really save time for researchers and portfolio managers. It will mean that their time is better spent on the work where they can add value, which is around interpreting the output, thinking about model design and improving the models as opposed to doing some of the heavy lifting around writing and working with the code itself.

CI: It's probably early days and a difficult question, but have you been able to observe anything surprising about what this new technology suggests in terms of stock selection, for example?

RR: I would say that it's still very much a human at the wheel, which is a term I don't like because it's a bit blasé. But I think what we can see is that, certainly for the current generation of models, not just the one that we've hosted, but even the more sophisticated ones available on the internet – Claude, for example – is that they're not capable of model design, at least not yet.

Equity markets are incredibly complex, they're not stationary. If you go back 20 or 30 years, the drivers of equity markets aren't the same as they are today, and that non-stationarity makes it a challenge for just throwing an LLM or an AI model at the data and getting it to build something.

So, we still need that human judgment and the expertise that our team have.

CI: I guess that leads to the next question, which is around the challenges and the governance of using AI and what, for you, is a very well-established, very robust investment process. Is it about testing and retesting and ensuring that the technology is enhancing the process? And is patience important in that process?

RR: It's a good question. Governance is key. And for sure, it's not a free lunch, so as we allow these tools to write some of the code, it means that the onus is then on writing what we call test cases.

So, it's effectively making sure that it's doing what you expect. You can read the code to try and understand and make sure that it's doing what you think, but really the only way of knowing for sure is to write the test cases, put in the inputs, and then create the outputs that you expect the code to be able to do, and then make sure that the code's doing that.

That's one form of governance. The other is [that] this code doesn't get automatically into our investment signals, into our production environment. There's governance around that where different members of the team have to sign off on any code written by a human or a machine before it can get into our production system. So that process becomes even more important and key within the whole process.

CI: We've seen what's happening with the software sector, but is there a risk of accelerated model decay where you have to constantly be on top of all the new kinds of model developments in the industry?

RR: Yeah. I think, I think there [are] two folds to it. One is how it impacts us relative to other quants on the street. Sophisticated quants on the street will be looking at similar data sources, and have teams trying to do the same thing, which is try and extract alpha from these new data sources and these new techniques.

For me, one of the unforeseen consequences – or one that people aren't so well aware of – is that it does also allow us to encroach on approaches that were within the purview of a fundamental manager.

So, to give you an example, a new data set that we've onboarded and we're in the process of building signals from is a patent data set – looking for being able to read the patents that companies have filed and make assessments of how innovative they are.

We found that the score we've built around that has very strong alpha and stock selection skill within it. But traditionally, that might have been something that sat with the fundamental manager.

So, to give you an example, a healthcare team might have had 10 analysts looking at 10 names each to read those patents and make assessments around the pipelines and the future profitability of the company. Ten years ago, we wouldn't have been able to get into that space and build insight with that data, whereas now we can. And I think there's other data sources out there that allow us to challenge more traditional approaches.

CI: I guess that's where the real benefit is, isn't it? It would take an analyst a long time to go through all the patent documents in something like drug development, and AI can do it very quickly and more efficiently. Listen, it's been great talking to you, Ram. It's a very exciting field.

Hopefully, these new techniques can help sustain the solid performance that your team has. So thanks very much for joining me today.

RR: Thank you, Chris. Pleasure to be here.

CI: That's it for this week's episode of Talking Heads. If you would like to learn more about our investment insights, then please reach out to your BNP Paribas Asset Management contact or check out Viewpoint, our website for investment insights, at viewpoint.bnpparibas-am.com.

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You've been listening to the BNP Paribas Asset Management Talking Heads podcast with me, Chris Iggo, and Ram Rasaratnam from the EQI team at AXA IM Core, part of BNP Paribas Asset Management.

Hope you've enjoyed it, and please do join us again on Talking Heads next week. And until then, take care.