What is AI's potential in banking and capital markets?

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Speaker 1: Tech Reimagined. Redefining the relationship between people and technology. Brought to you by Endava. This is Tech Reimagined.

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Bradley: Hello, and welcome back to Tech Reimagined. I'm Bradley Howard, and I'm pleased to welcome you to the latest episode of our show. Running now into season three, we'll be looking at how technology is influencing the fabric of our society; the way we work, the way we live and the way that we do business. Join us every Thursday on any podcast platform that matters to listen to our subject matter or experts this season. And speaking of expert guests, I'm glad to introduce you to Stephan Malrait, MD Global Head of Market Structure and Innovation for Financial Markets at ING. Hello, Stephane, how are you?

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Stephan: Hi, Bradley, thank you for the invitation.

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Bradley: Lovely to have you on the show. We also have a colleague of mine from Endava, Pierre Kovacs, Industry Consultant Banking and Capital Markets. Hi Pierre, how are you doing?

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Pierre: Hi, Bradley. Hi, Stephan. Glad to be here.

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Bradley: Stephan, could we start with you? Can you tell us a little bit about your background?

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Stephan: Yes, of course. I started my career quite some time ago, around 25 years ago in technology, in fact, and I spent probably the first ten years of my career as a project manager, developer, tester of technology solution for the capital market industry, and then moved to what we call the front office environment, the training for our environment when I focused on electronification of our markets.
 It's just a few years ago when I changed my focus to look at innovation and how we can use innovation practices to further enhance our product and service to clients. So when I look at market structure is working with regulator policymaker on the electronification of our market and what the law should be like. And then the innovation is working with FinTech companies to try to see how we can adapt our processes internally or working with clients.

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Bradley: That sounds really interesting. And hopefully we'll explore some of that as time goes on. Pierre can you share some of your background as well, please?

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Pierre: Absolutely. And for full disclosure, Stephane and I crossed path probably 15 or 20 years ago on electronic markets. And since then, so I've been working for a number of

investment banks. Asset managers even run a FinTech for seven years. I'm based in London. And as you said, I'm in an industry consultant in banking and capital markets for Endava, which means on a daily basis. I have our clients such as banks, asset managers, exchanges, fund administrators, et cetera, build better solutions.

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Bradley: Thanks very much and welcome to the show Pierre.

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Pierre: Thank you.

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Bradley: So today we'll take a closer look into how AI that's artificial intelligence can change banking and capital markets. Now there's clearly a lot of hype around AI in the technologies that feed into it with analysts, believing that in finance, we're now only entering the era of practical AI. Organizations that will win the AI game are the ones that will adopt a holistic strategy that cuts across business lines, products, departments, and partners as well, enabling them to identify and deploy the best use cases quickly for maximum impact. Now banks that focus investments in related areas, such as big data clouds and RPA that's robotic process automation will be the best position to harvest the truly transformational potential of AI across all dimensions of customer experience. Stephan, forgive me for that long introduction. Those are some of the predictions, but what's the reality looking like?

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Stephan: Yes. And I was like too, if you look at AI in other industry like the travel industry, the hotel industry, or even big data, Amazon, et cetera, is they use it a lot more than what is used in capital market or in banking in general. And it's strange in a way, because we had a lot access to a lot of data for quite a long time. We have historical data from our client activity. We have market data that we saw for quite some time, but it was never used to the same level of automation (inaudible) and one of the reason I think it's because this data is hard to access. The quality of the data is not there. It's very distributed in different system, and we really didn't move that level of data automation and data focus to the level that it's needed for AI model to be powerful.

And why banks talk about AI I think there are still a step back to where the potential is for them to be able to deliver service to their clients. And the reason is that you have to solve your data problem first, and then you have to understand the data, the power of the data that you have. And then you can build the AI model on top of that. For ING we had develop a team looking at data automation, data normalization, and AI five, six years ago, but it took us at least two, three years to be able to get that data model right, to be able to play with the data and to be able to get the benefits. So it's a long answer, sorry, but it's true that I think there is great hope that we can use AI a lot more in banking, but we have to solve the basic first.

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Bradley: Yeah. Although doesn't two or three years, to me, it sounds like, but every two or three years, there's a new generation of AI that's released onto the market and certainly new product set as well. So it's almost like by the time you start organizing all the data there is that new version of, and functionality that's come out

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Pierre: And there's going to be a new paradigm of data platforms as well.

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Bradley: Definitely. Have you got anything else to add on that Pierre from your experience working across lots of clients?

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Pierre: I think that's exactly what we observe as well with our clients and they need to sort out their data first and that's usually where we start with the data platform and they all have some kind of data platform already, usually these old on premises, data warehouses, but it's not enough to build on top of that to build some proper AI capabilities. So since then we have data links, we have cloud data platforms, there are a number of different parting data virtualization, data fabric now there's data mesh. So yeah, I'm absolutely agree with what Stephan said. We still at a phase where we need to solve data and we start seeing a bit of automation happening with NLP, extracting some data more automatically, a bit of, or some reconciliations, STP, et cetera, but we see less demand at the moment for more advanced AI. And I'm wondering if there's a case that it's a bit more sensitive, for example, you don't want to be sued because of a bad recommendation of your robot visor.

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Bradley: Algorithmic trading systems are autonomous and they've been out for years. From what I understand the models are based on machine learning and can continuously adjust and learn new trading platforms through NLP or natural language processing and other techniques as well. So Stephane, in your experience and looking at the industry today, has AI started replacing traders?

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Stephan: Yes and no. So you are probably right. That I was a bit harsh when I say we are not at the level, we should be using AI because we've been automating and using algo trading for the past 10 years potentially. And there is different version of algorithmic trading using more and more automation. And the first two third level of AI being applicable. So algorithm, you can say yes and no that they are going to replace traders. Because in my career, I saw the number of people sitting on the trading desk being quite the same, but the skillset of the trader have changed over time. While 20 years ago, you had what we call the voice trader. Was very good in term of risk management of market activity, predicting of market move and will man manual trading intervention. Now the trader of today are more having a (inaudible) background they're, electronic, they know how to use Python, they develop their own models.

And so it's probably require a different type of skill set for them to be a trader on the desk. So some traders would don't want to make that move, maybe a risk where other we're ready to make that move will enhance their career to be more, more so it's a new type of traders that we see. And I think it's going to continue to accelerate where you need to be more proactive in term of technology development, activity, knowledge of AI and so on. So to be able to keep your place on the trading desk,

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Bradley: Pierre anything, add on that.

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Pierre: No, actually I would have a follow up question about one discussion we usually have with our clients when we start as well, is buy versus build and is in that case, is it, do we want to buy, are there some, I don't know, algo trading models or product that we can use, or do we want to build? Usually we work with clients, obviously they want to retain the IP on what they do. They want to be able to retrain the model to avoid some drift, for example, or they want to be able to leverage this framework again and again, to solve different problems. I was wondering, what's your view on that, Stephane?

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Stephan: Yes. I agree Pierre that everything is close to the IP of the bank. Like the price we give to the client, the way we want to manage risk, the way we want to hedge our position to the market is things we want to keep close to the heart. And we want to probably develop in house or use tools who are heavily flexible to be able to change the parameters and to be in controls.

But things are less critical like you want to be alerted if a client stop trading with you, or if a trade, there is some anomalies on the trade or trading pattern for those kind of things, you can buy it because it's more about the consequence of the actions that you will take from those alerts. If you use this example than the tool itself. So for us, we try to do mix and match on those and deciding quite quickly, this is key to us, and this is what we can outsource to a vendor product. The complexity is when you try to put the two together, and I sure that the software that you use will give you that flexibility to say this part of the solution I need to own. So I need to be able to have API to connect to the software solution, to be able to own that where this I don't care, please plug your own API or your own software to be able to automate those solution.

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Bradley: You mentioned a lot about data earlier, Stephane, about in order to use machine learning and artificial intelligence, it's about consolidating the data, having the data ready and accessible as we start moving more towards unstructured data, where do you think the ethical boundaries are on doing the research across other public domains of data and even some individual personal identifiable information?

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Stephan: Yeah. This is a big question for the industry because it's the ethics around data and AI. How far can you go to, and I will use an example with outside of capital market with an example in the press. But I think to make the point, if you have a bank account and you use your credit card to make payment, et cetera, the bank can probably detect what you buy and sell. And they probably can detect that you are in financial trouble or your life is you have some spending while not in line with what you should have. And if you go to that bank to ask for a mortgage, the bank could use this data to say, well, this is... It probably not the right time for you to buy a house or a flat because you're spending activities. All right. And this is where is it the right things to do?

Because in one way you can say yes, but I want to help my customers to not put him in the worse situation, but they may be good reason why this person needs to move out of his existing place and to buy a new one and to put them in a better, safer place. So that's way the ethic is very important in AI. And I think good news is that there are several banks who work together to put some framework on how AI should be applied and what you should do and not do. And also there is at least a (inaudible) we have an ethic board, where if you want to do something a bit too pushy, we have to go and get it approved by this ethic board can review it, assess it and say, yes, this you can do.

And you cannot do. And most of the case, we don't go that far.

So it's more using data to detect pattern and those pattern to help you improve the pricing capability or your hedging capability. So you are far away from using personal data and, or try to impact a person per se. So I think that another positive on that is I think for the moment, the way it is used in the market, it still don't impact people. It's more how to improve your pricing, how to improve your hedging, how you manage your risk better.

And in most of those case, it's still under the supervision of a trader on the desk. So all the automations that we do there is people monitoring it in real time. The machine is never alone to make those decision and to manage. There is always supervision on top of it. So I think we put a lot of safeguards to make sure it doesn't go crazy. And even the regulator, as I say, want to make sure that all the algorithms that we write are tested, validated review approved by the compliance officer, the risk manager, et cetera. So there is a algo framework model that is used by every bank and validated by regulators to be able to put those barriers. And I think it's needed. And it fair that those barrier exists to make sure the system stay resilient and safe for clients.

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Bradley: However, when you are using machine learning, which is not necessarily algorithmic based, how do you then prove some of that, thinking back to the regulator? Are they even thinking about this at the moment? The regulators?

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Stephan: Yeah. So I will give you example of natural language processing. Some of the experiments that we do, where we look at some chats that we're having with us and our client, but those machine learning model, just try to extract from those chats. If the client has the intention to buy or wants some market color and try to speed up the process to give an answer of the client questions, same thing under the supervision of the salesperson in the chat. And we stop it there. We don't want to look at, do they speak about football? They speak about something else, but the technology you are right? The technology that we use could be applied for much broader scope.

And I saw some company was trying to do a kind of the policeman to try to alert, to say this information that your salesperson is talking to the client is compliant or not compliant, or they spend too much time talking about the weather and not enough talking about the business. So you can apply those type of technology for a lot of things. Then it's up to you to decide where the focus should be on how do you apply this focus. The guideline is all of that is under also supervision and validation of compliance officers. So I think people could do it apply wrongly, but I think they will be stopped quite soon. If it's doesn't apply the same safeguard that they should be.

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Pierre: That's interesting what you also said because it seems like we can also use mean the same tools, AI or machine learning to actually help with the ethical conduit or with the ethics of the activity. So that seems a bit self reference, but we can definitely also have some tools that we have with the ethics. And what we see is the clients we work with. Usually we have a discussion about this. There's definitely some awareness. Now, usually we have a discussion about guiding principles around by reliability, accountability, transparency, fairness, ethics, as you were asking, Bradley, make sure that the models

are going to be auditable, that they're going to be explainable. And now there's definitely, at least what we observe is the awareness of this guiding principle.

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Bradley: Thanks for wrapping that up. So well, pier to both of you, if any of our guests want to get in contact with you, what's the best way they can do that. Starting with you, Stephane.

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Stephan: I think I'm quite involved in LinkedIn so people can find me under my name in LinkedIn. I'm also checking my Twitter feed quite a lot. So it'll be at S Malory on Twitter.

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Bradley: Thank you very much and Pierre?

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Pierre: Oh LinkedIn, please.

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Bradley: Okay. Wonderful. Well recommend that guests do get in contact. Thank you to both of you for this interesting discussion on AI and banking to all of our listeners I hope you that you enjoyed this episode of our Tech Reimagined podcast. Thanks for joining us today. And please look out on all the major podcast platforms for the next episode. If you enjoy today's episode, then please recommend us to your colleagues, your friends, and your family I'm Bradley Howard and this was Tech Reimagined until next time.