

The future of

AI in Risk

JAYWING

What is the future of AI in the risk sector?

If you have recently attended any conferences or industry events, you have probably already heard a lot about AI. Claims about AI seem to be a hot topic at the moment! None other than Sundai Pichar, Google's CEO, has called it 'one of the most important things humanity's working on. It's more profound than...electricity or fire.' As far as bold statements go, we'd say Pichar's comment is right up there.

But, while we do tend to think AI is probably a little overhyped, there's no denying that it's helping us to achieve some fantastic things already and has enormous potential. In this guide, we'll be exploring exactly how AI is impacting us now, with a specific focus on the risk sector.

Over the last decade, AI technology has advanced so much that traditional barriers to implementation are being overcome and more and more AI and automation technologies are being adopted in the risk sector. It is already having a huge impact which has led to many firms wondering if they should be following suit and adopting the technology.

Financial services organisations that embrace AI could see a 38% increase in profitability by 2035 so, in order to stay ahead and keep up with market changes, it's important to start investing now.

So, how can AI be approached in the Risk sector?

* www.accenture.com/gb-en/insights/banking/future-workforce-banking-survey

How is AI currently being used in Risk? Where do Risk professionals think it's heading?

81% of risk professionals are already seeing the value of AI

52% have seen value through process automation

45% through credit scoring

43% through data preparation

But, of the remaining 19% of risk professionals, the majority (84%) plan to be using machine learning and Natural Language processing in the next three years.

It's clear from these figures that Risk organisations see the value that AI promises to deliver. However, we believe that the actual take up of genuinely value-adding initiatives is still in its infancy. While technologies like Chatbots and automation tools will save processing time, the real game-changer lies in the benefits that can be realised through advanced, AI powered analytics.

Nowhere is this more true than in predictive modelling, where take up has been slow to date. But all of this is about to change...

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Despite the huge advancements in technology, many firms still face hurdles and challenges which prevent them from adopting AI.

These challenges include:

43% lack of clear strategy for AI

42% lack of talent with appropriate skill sets for AI work

25% lack of technological infrastructure to support AI

24% lack of available data

24% are uncertain or have low expectations for return on AI investments

Why has predictive modelling been slow to take off?

What hurdles do organisations face?

Traditionally, the black box nature of AI models has meant that full implementation of the technology in the sector has been limited. However, recent developments have seen the application of AI and advanced modelling technologies having a transformative impact. AI is set to become a core part of the risk landscape in order to help firms deliver better customer service, improve operational efficiency and effectiveness as well as gain a competitive advantage.

Despite these developments, there's still a long way to go when it comes to AI implementation.

When asked, 76% of organisations stated that the potential for bias and lack of transparency was still a major barrier to AI implementation. In order to meet increasing demands of the regulators, firms need access to AI models that explain their decisions.

Why?

To explain to:



Customers

Why have I been rejected?



Regulators

How robust are your credit decisions?
And are you treating customers fairly?



Internal credit policy functions

Are we accepting and rejecting the right people?

What's the future?

When surveyed, organisations cited these parts of the value chain they have developed in which AI could have the biggest impact:

65%

**Customer service
and retention**



Many firms now use chatbots which have conversational AI abilities. Using big data and machine learning techniques based on vast data sets from real conversations, these bots are able to understand and respond to customer queries in real-time with a high degree of accuracy, unless customers need to speak to a customer service advisor. This allows firms to streamline their customer service operations by answering common questions quickly and easily.

31%

Fraud detection

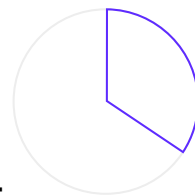


AI is an extremely useful tool for fraud prevention and detection. AI-enabled anomaly detection mechanisms enable banks to be alerted to potential fraud at the moment it occurs, whether that's using transactional data or anomalies at the point of application.

Such anomaly detection might analyse past spending behaviours on different transaction records to highlight odd behaviour such as a card being used in another country just a few hours after it has been used elsewhere or withdrawals of sums of money that are unusual for a particular individual, however AI's advantage is not so much in rule-based detection as in its ability to uncover fraud based on combinations of factors that, individually, may not look suspicious.

29%

Risk management



AI-based models can squeeze significantly more value from client data than traditional scorecards, making multi-million-pound savings for organisations that deploy them. Of course, there are some good reasons why lenders haven't adopted this type of model until recently, and some new developments that mean that there's now nothing stopping them. It's in Risk Management where we believe that the financial services sector stands to get the biggest advantage – we think this area will quickly become more important a focus than chatbots and similar technologies.

Despite many organisations citing these as the areas in which AI could have the greatest impact, we believe that predictive modelling is set to rise to the top of the popularity chart in the near future, replacing customer servicing as the main use.

The rise of explainable, controllable AI

One of the major challenges with AI is the ability to understand and explain the results generated. In Risk in particular, being able to explain exactly why a customer has been rejected for a lending application is essential.

AI systems have historically been unable to provide this information and the highly regulated nature of the risk sector has been prevented many firms from being able to adopt it in the ways they would like.

More recently, Explainable AI has come to the forefront of discussion and is a development in the technology that may overcome the barriers to implementation in risk. However, it's simply not sufficient just to be able to explain a decision: lenders also need complete control over how their models work in the first place – so that they can prevent bias and anomalous decisions, not just account for them after the event.

As AI is implemented into more areas of our lives, it becomes increasingly important for those systems to be able to explain how they arrive at their decision. In many AI implementations, it's difficult to understand how an AI system arrives at a decision so it is difficult to know when a mistake or an error has occurred.

In the world of finance, insurance and banking, where firms must be able to stand by each and every decision taken by a credit or fraud model, this balance of control and explainability is essential. And in areas such as crime detection, or the use of models to propel self-driving cars in the right direction, AI cannot be allowed to get it wrong.

As AI becomes more explainable, trust and confidence in its abilities builds, which should rapidly increase adoption rates. This, in turn, puts businesses in a strong position to innovate and stay ahead of competitors whilst being able to remain transparent and ethical. Explainable and more responsible AI will be the backbone of the intelligent systems of the future that enable the intelligent enterprise.

Our top tips for running an AI project

Although wider uses of AI may seem to be in the distant future, if you're considering AI implementation, here are the first steps you can take:

Step 1

Get your AI team in place early

Whether you're implementing your own in-house team or getting outside help, it's important to get an AI team in place early so that they can be involved in all of the decision-making steps, helping you towards effective AI implementation!

Step 2

What types of problems does your business face?

Rather than implementing AI for the sake of it or simply because everyone else is and you think you should, it's important to think about the types of problems that your business faces. Is there a decision point or process that generates or uses large amounts of data but currently takes a long time to complete? These are the processes that AI can really help with.

Step 3

Shortlist candidate projects

AI is not a magic solution and cannot solve everything. It is currently good at doing processes that would take a human around a second to undertake. This might include:

- Assessing an application (e.g. scoring)
- Recognising an image (is it a bird? Is it a plane?)
- Recognising the intention behind some text (e.g. understanding what agents' shorthand notes mean)
- Categorising a response
- Working out someone's customer segment
- Predicting a value or an outcome
- Spotting a data anomaly (e.g. fraudulent behaviour) or a process failure (e.g. call centre failing to meet SLAs)

Step 4

Gather a data set together to train the model

To develop an AI model, you will need a few thousand records. Ideally, you should have lots of characteristics that can be used to predict the outcome, as well as the outcome that you would like the AI to learn about. It's important not to include data that could introduce bias or unfairness.

Step 5

Pass the data and problem over to your AI team

Once you know which problems you are looking to solve and have the data, you should pass it over to your AI team who will work out the best type of model to build and work out if the data is suitable to predict the outcome you're after. They will be able to build an initial model and work with your data specialists to understand whether there's more value available from the available data.

Step 6

Test the model

Once you have followed these steps, you should be able to test your model against a different set of data and, if it works, deploy it as your first project and reap the benefits.

Where do you start with a predictive modelling project?

Jaywing's AI-powered modelling software, Archetype, can offer a helping hand

Archetype has the ability to create fully explainable, fully controllable models, overcoming the black box problem which has prevented adoption in the risk sector. Archetype's patent-pending approach achieves this with no loss of power in comparison to unconstrained neural networks or other AI techniques.

Archetype is available to help you get up and running with your first AI project.

This is ground-breaking for the Risk sector:

Fully controllable models that you can understand and explain with transformative improvements in Gini and impressive bad debt savings

**What results can
Archetype achieve?**

Application Risk Model

**15% reduction
in bad debt**

Behavioural Risk Model

**6% improvement
in predictive power
over existing model**

Marketing Attribution Model

**18% improvement
over existing model**

Buy To Let Application Model

19% improvement

Application Fraud Model

**10% improvement over
traditional techniques**

About Jaywing

Jaywing's team of risk and data science specialists is now more than 70 strong and we have almost 20 years' experience helping many of the UK's lenders with data and analytics projects in risk and marketing.

Through our industry-leading expertise and trusted partnership approach, Jaywing has held many long-standing (10+ years), large-scale relationships with some of the UK's leading financial services organisations. We have a wealth of experience in the financial services sector, working within both consumer and commercial portfolios, and our team of experts have developed industry leading ways of using data, analytics and systems to help our clients manage credit and fraud risk to meet the ever-increasing regulatory demands.

We have supported over 25 lenders in the UK with risk projects including Lloyds Banking Group, Royal Bank of Scotland, Nationwide, Secure Trust Bank, Shawbrook Bank, Paragon Bank and Coventry, Skipton, West Bromwich, Newcastle and Nottingham Building Societies.

AI Consulting

AI shouldn't feel like a step into the unknown.

AI adds an incredibly smart component into things you already do - creating powerful ways to solve your biggest challenges.

You don't need to be a tech giant to use it. We work with companies who often have little or no experience of AI applications.

We have 20 years of experience, applying AI and data science in financial services, a forward-thinking sector with a long history of applying data to solve business problems, so our ideas are proven.

Jaywing makes AI available as an everyday business tool. Automating your most important processes, models and applications.

Neatly integrated, easily managed and continually improving.

It fits in beautifully.



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