



The New Physics of Financial Services

Understanding how artificial intelligence is transforming the financial ecosystem



Payments sector summary

AI is changing the physics of financial services

As artificial intelligence (AI) significantly changes the traditional operating models of financial institutions, Deloitte and the World Economic Forum's latest report in their 'Future of Financial Services' series explores how financial services firms can better embrace AI. The report is comprehensive, so here we have explored the sector-specific findings relating to payments.

A quick look at the impact of AI on payments



AI presents new tools to fight fraud, respond to the shifting form of payments and draw valuable insights from data. Potential strategies include:

- Reduce fraud and malicious activity in the payments system. For example, using machine learning to significantly reduce false positives in fraud detection.
- Unlock the power of payments insights. For example, payment providers using payment data to provide machine learning-based merchant analytics "as a service".
- Respond to the disappearing moment of payment. For example, use image recognition to authenticate and transact point-of-sale payments



AI is increasing customers' confidence when making payments by enabling real-time interventions and responses to criminal activities. New capabilities include:

- End-to-end resolution engines can use machine learning to detect patterns in transactions and proactively intervene with increased confidence to stop abuse before a transaction is settled. This can allow for threshold limits to be expanded while limiting losses due to abuse.
- Looking for patterns in new datasets (structured and unstructured) can provide precise detail and context on the potential for abuse.
- Complex relationship mapping using machine learning can recognise more complex patterns, as well as understand results from past investigations.
- Dynamic data-gathering using AI to validate and transmit transaction details enables the automation of downstream back-office processes and streamlines workflows.
- Automated reporting can source, sort, generate and store reporting requirements to maintain audit trails, risk logs and reports.



AI enables payments providers to generate new revenue streams by using their datasets to provide unique insights. New capabilities include:

- Optimisation engines can generate highly specific and accurate recommendations by using machine learning to analyse and predict shoppers' behaviour.
- Analysis of third-party datasets (e.g. personal data, available market information) can provide insights into the needs of shoppers.
- Bespoke analytics solutions can combine payments providers' unique datasets with machine learning capabilities to provide targeted insights for merchants and other clients. This in turn can provide contextual and specific recommendations (e.g. next best action) for services, products and personalised promotional campaigns.
- Advanced analytics can automatically generate core macroeconomic indicators and provide real-time statistics to satisfy various client requests.
- Dashboards that use deep learning and visualisation can allow users to drill into data in a simple and easy-to-use format.



AI provides valuable tools for payment providers to preserve relevance of the moment of payment disappears. New capabilities include:

- Niche and custom reward offers can be generated using machine learning, optimising the reward rates for different purchasing categories based on each customer's unique purchasing patterns.
- Real-time benefits optimisation can intelligently maximise benefits for customers through time-based events such as travel or promotions.
- Seamless authentication can be introduced by payment providers using image recognition and/or biometrics to verify identities without disrupting the customer experience.
- Automated checkout can be delivered "as a service" by payments providers using image recognition to compile shopping carts and determine when to collect payment, removing the "point of payment" as a separate event that requires conscious effort from customers.



Download the full report at [Deloitte.co.uk/AIFSfuture](https://www.deloitte.co.uk/AIFSfuture)



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