



The New Physics of Financial Services

Understanding how artificial intelligence is transforming the financial ecosystem



Insurance 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 insurance.

A quick look at the impact of AI on insurance



AI will help insurers predict risk with greater accuracy, customise products and use enhanced foresight to rapidly deploy new products. Potential strategies include:

- Streamline operations to win on price. For example, using natural language processing and decision trees to improve underwriting and capital efficiency.
- Develop a differentiated claims experience. For example, using image recognition and fraud detection to speed up claims processing.
- Improve and expand distribution strategies. An example of this could be using predictive analytics and new data sources to improve sales efficiency and expand into new markets.
- Insure against new types of risk in new ways. For example, using alternative data and dynamic behavioural pricing to develop unique insurance products that cover new risk categories.
- Offer add-on services that complement insurance. An example of this could be using real-time monitoring to advise clients on risk-exposure strategies to lower risk.



AI is driving efficiencies in underwriting and risk monitoring to give insurers a competitive edge, particularly in commoditised markets. New capabilities include:

- Optical character recognition (OCR) can read, verify and standardise support documents, eliminating the need for manual review.
- Non-static and complex decision trees can be built with machine learning by analysing past cases, allowing for automated underwriting and pricing for complex and irregular cases.
- Automated modelling using machine learning systems allows institutions to run thousands or millions of trial models a day, reducing the cost of meeting regulatory requirements.
- New and unstructured data can be used in risk analysis using machine learning, allowing for a wider variety of situational simulations and more accurate levels of liquidity capital.



AI is being used to evaluate claims, creating workflows that are more accurate and responsive to customer needs. New capabilities include:

- Providing adjudicators with summaries and statistics that enhance their decision-making and can increase the efficiency of individual underwriters.
- Ranking claim severity using deep learning to read claims documents and score their urgency, severity and compliance to expedite triage.
- Using new data to verify damage the moment a claim is filed allowing institutions to extend initial funds that can immediately address customer needs, while reducing the chance of fraud.
- Analytical models using external data can more accurately flag cases of fraud, reducing losses while increasing throughput.
- Analysing large quantities of data efficiently using machine learning allows for in-depth reviews of every submitted claim for fraud.



AI is augmenting the capabilities of new and existing distribution channels, allowing insurers to expand their reach and scale. New capabilities include:

- Predicting lead quality using machine learning by analysing external data (e.g. sentiment analysis on social media) can improve sales efficiency.
- Correlating sentiment and usage patterns with historic sales data can predict the likelihood of policy cancellations or renewals.
- Automated decision-making can provide instant pricing and underwriting to quote, bind and issue personalised policies in real-time.
- Integrations with third-party apps and points of sale can seamlessly integrate insurance purchases into the asset purchase at the point of sale.
- Non-traditional data usage can be used as a proxy in place of physical doctor check-ups, reducing the cost of verifying a life insurance application.
- Advanced visual recognition can automatically validate official documents (e.g., medical forms and doctors' reports).



AI allows institutions to be more agile, enabling them to deploy new products in response to emerging risk. New capabilities include:

- Alternative data sources can be used as proxies for damage data (e.g. repair bills, sentiment analysis of news) in order to correlate risk with damage and build actuarial tables.
- Dynamic pricing and underwriting models allow different components of a policy to be priced, bundled or sold separately (e.g. insurance on a per-use basis).
- Automated underwriting reduces the marginal cost of originating, allowing for dynamic underwriting at no additional cost (e.g. policies on an hourly basis).
- Dynamic behavioural pricing methods can correlate risk and damage data to a variety of data feeds (e.g. time-series) in real-time, in order to correctly price and underwrite insurance policies whose prices and coverage vary by usage patterns and behaviour.



AI allows insurers to make use of their internal data and provide unique service offerings that complement their product shelves. New capabilities include:

- Detailed insight generation using AI allows insurers to visualise risks in an intelligible way, allowing them to pass more information to their clients (e.g. the probability of flooding in various areas).
- Real-time monitoring provides insurers with individualised insights that can be sent to customers, enabling them to learn about their behaviours and how associated risk changes.
- Ecosystem analytics allow insurers to combine data from their customers, from suppliers and from the market to deliver targeted advice to customers faster and more efficiently.
- Personalisation at scale allows insurers to tailor advice on how to reduce risk exposure, in very specific circumstances, that provides actionable, non-generic insights.



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



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