



Free Report

## Credit Risk Management

Key Themes and Trends: December 2024

Artificial Intelligence & Data Analytics Insights within Financial Services

# Credit Risk Management Spotlight

## *Artificial Intelligence & Data Analytics Insights within Financial Services*

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This document contains the summary themes and trends from the Distinctive Insights Use Case Spotlight Report on the use of artificial intelligence and data analytics within credit risk management processes at financial institutions. Full details of all of these insights are available to subscribers within the subscriber report.

We will also issue a follow up Vendor Spotlight Report which will highlight the leading software vendors within this field. Keep an eye out for this report coming soon.

The content of this report is based upon data analysed for the period 1<sup>st</sup> January 2023 to 1<sup>st</sup> November 2024. We have analysed technology procurement, technology releases, vendor partnerships, vendor corporate activity, and other industry developments over this period to identify the key themes and trends.

The diagram below provides a summary view of the themes and trends highlighted in this report.

<b>Prime Trend: Credit Assessment Innovation</b>	<ul style="list-style-type: none"> <li>Income and affordability evaluation using alternative data sources.</li> <li>Enhanced credit assessment methods using behavioural analytics and machine learning.</li> <li>Use of Open Banking data and Telco data.</li> <li>Automated data capture and information extraction from documents.</li> </ul>
<b>Rising Trend: Automation and Digitalization of Debt Management Processes</b>	<ul style="list-style-type: none"> <li>Machine learning models to make personalised recommendations to customers at risk of debt difficulties.</li> <li>Recommendations on refinancing and mitigation options.</li> <li>Recommendations for credit score enhancement.</li> <li>Use of Conversational AI / Voice AI within the collections process.</li> </ul>
<b>Rising Trend: Integration of Fairness Criteria</b>	<ul style="list-style-type: none"> <li>Use of machine learning models to mitigate algorithmic bias; identification of bias factors; and recommendation for alternative data to mitigate biases.</li> <li>Monitoring performance and outcomes; ex ante and ex post assessments.</li> <li>Integration into model validation processes.</li> <li>Internal and Regulatory Reporting.</li> </ul>
<b>Frontier Trend: Artificial Intelligence for Credit Analytics</b>	<ul style="list-style-type: none"> <li>Machine Learning Models.</li> <li>Generative AI / Large Language Models.</li> <li>Knowledge Graphs.</li> <li>Behavioural Analytics.</li> </ul>
<b>Frontier Trend: Use of Data Science in Private Markets Credit Analysis</b>	<ul style="list-style-type: none"> <li>Extraction of insights from documents and other unstructured data.</li> <li>Parsing of legal contracts, earnings reports, and investor presentations.</li> <li>Covenant identification and monitoring.</li> <li>Use of machine learning to undertake credit assessments on private companies.</li> </ul>

## STRATEGIC OVERVIEW AND KEY TAKEAWAYS:

### The Landscape Continues to Rapidly Evolve

There is a wide maturity range in the overall scope of applications of artificial intelligence to credit risk management in financial institutions.

- ❖ Some of the themes identified are now verging on mainstream usage. A particularly material development is observable in the use of AI to expand access to credit for demographic groups which traditionally have been ‘underbanked’ or have a ‘thin credit file’.
  - Expanding income and affordability assessments to leverage alternative data sources and use behavioural modelling techniques is a significant development in this field.
  - We see this trend globally with insights identified in diverse locations including Brazil, Canada, Mexico, the United Kingdom, the United States, and a particularly notable amount of activity in The Philippines.
- ❖ In many areas there continues to be a large amount of innovation and experimentation, much of which is being led by market software and solution vendors. We are currently tracking over 30 vendors with AI driven solutions for credit risk management, with many more emerging on the horizon.
  - New funding of AI driven credit risk vendors in the past 2 years suggests this market will continue to develop. Examples of vendors receiving new funding over this period include: Accelex, ADVANCE.AI, Alphastream, Clerkie, CrediLinq.Ai, Credit Genie, Credora, EnFi, Finexos, KlariVis, martini.ai, Nova Credit, Okredo, Otto, Prism Data, Stratyfy,.

### Benefits are Not Purely a Function of Size or Scale

Advancements are not simply a function of organizational size. Innovation is also being driven by institutional agility and pain points.

- ❖ For many use cases, it is smaller institutions such as credit unions, community banks and fintechs which are leading the experimentation in partnership with market solution vendors.
- ❖ That being said, the use of AI for credit risk within global and regional financial institutions is rapidly progressing. In this report, we have highlighted Annual Report references on this topic from a diverse group of international financial institutions including: American Express, Bank of China, China CITIC Bank, China Guangfa Bank, CIMB, Development Bank of Singapore, Discover, Hana Financial Group, HSBC, ICICI Bank, Itau Unibanco, JP Morgan, Kasikornbank, Siam Commercial Bank and Toronto Dominion.

### Early Adoption is Driven by Data Availability

In general, the use of AI is most developed within credit risk management processes for Consumer Banking and SME / Commercial Banking in comparison to larger scale Corporate Banking. This is perhaps understandable due to the greater availability of data when the volumes of customers are larger.

- ❖ We do, however, see evolving developments and experimentation in the application of AI to the larger ticket and more structured needs of both Corporate Banking and Private Markets Investment Credit.

- ❖ More broadly, we expect all segments of the credit risk value chain to see an increased use of these innovative techniques once the technological foundations are embedded.

### **Building the Foundational Components will Serve a Broad Range of Use Cases**

Many of the highlighted themes have significant overlap. Examples being:

- ❖ Innovation in credit assessment leans heavily on use of new analytical modelling techniques.
- ❖ Expanded use of AI models within credit assessment then requires investment into new solutions and capabilities to ensure fairness criteria are considered and respected.
- ❖ Many of the solutions leverage a similar set of core technological features (and associated people skills) such as innovations in document extraction, intelligent process automation, orchestration through agentic methods, and machine learning modelling. This will likely mean, therefore, that a bank successfully deploying for one use case may then more easily deploy these same capabilities to further use cases (in both credit risk and beyond) with only marginal incremental investment required.

## ABOUT DISTINCTIVE INSIGHTS

Distinctive Insights provides expert research into trends in **data and analytics within financial services**. Our research tracks the development of data driven solutions within banking, investment management, wealth management, payments, and many other financial sectors. We provide industry insights into the breadth of data driven solutions within financial services, including the use of artificial intelligence and machine learning, predictive analytics, data management, and business intelligence.

Our research reports include detailed intelligence on developments within financial institutions (use cases, vendor relationships, patents, and investments) and within the vendors which service them (including detailed insights into product and solutions, clients, partners, and funding).

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*Vendor news is sourced from press releases, available on the vendors' own websites.*

*Financial Institution news is sourced from press releases available on the financial institution websites.*

*If you need more information on any of the specific insights, an internet search on the key terms within the story should return multiple sources of further information. However, if you need help in finding further information, feel free to send an email to [contact@distinctiveinsights.ai](mailto:contact@distinctiveinsights.ai) and we will be happy to provide any further content or sources which we have available in our database.*



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