tinubu what can artificial intelligence offer credit insurers?

INDUSTRY VIEW

Trade credit insurance has been a data-driven industry for a long time, based on the information gathered in the field and from providers. To a large extent, carriers have built risk models derived from assessments by experts and automated underwriting decisions.

Now, artificial intelligence and especially inductive learning are opening new perspectives for risk assessment, which trade credit insurers can benefit greatly from and use to further develop their business intelligence. Every component of the value chain can benefit from emerging technologies, such as explainable AI, natural language processing, and quantum machine learning.

	Distribution	Underwriting	Policy Administration	Claims
Use-cases	 Automated Sales Campaign generation Product recommendation and question answering Workload balancing 	 Granular Risk models Time horizon management Leverage unstructured data 	 Treatment of incoming e-mails and requests Assistance for self-service queries 	 Detection of weak signals Automated loss analysis Prediction of Exposure at default (EAD)
Benefits	 Cross and Up-Selling Customized products and services Increased service quality 	 Improved risk assessment Segmented Risk appetite More comprehensive risk analysis 	 Automation of customer support Anticipation of policy lifecycle events 	 Dynamic management of reserves Improved claim assessment and faster indemnification

Modern AI is a way to augment an insurer's capabilities, and while the main focus to date has been underwriting, AI can also be used to support other activities.

The rise of XAI

Al is all about data. Powerful machine learning and deep learning algorithms have emerged that can be used to develop models. However, the key to success is having input data in sufficient quantities and of sufficient quality, and reliable benchmarks for training and validating performance. Credit insurers have this invaluable data in spades, in the form of information they have been gathering on buyer portfolios for decades. Insurers can leverage cloud computing for the computing power required to run such algorithms. It's a wonder that the practice has not gained more traction.

In recent years, Google has been training a neural network to reduce the amount of power required to cool their servers. The results have been extraordinary, with a 30% reduction when in use. Yet, no one at Google understands how AI gets its results.

Credit insurance is a regulated industry, one in which such a gap in knowledge would be completely unacceptable. But now, a new field called eXplainable AI (XAI) has emerged. Thanks to additional algorithms, such as SHAP and LIME, data scientists can generate post-hoc descriptions of how machine-generated models work (global explanation) and what leads them to a given assessment (local explanation), thus overcoming the obstacle. The EU commission and financial regulators are scrutinizing the technology.



As a start, AI models could be used simply as another source of information for underwriters or as a backup for current decision models.

The adoption challenges and opportunities

Because AI is not well understood, we ask a lot of it, slowing its adoption. Proof-of-concept experiments with AI show that it outperforms traditional decision trees coded into almost every carrier's computer system. Yet even researchers who are quite far along in their experiments seem reluctant to move the models to production. One reason for this is that AI is perceived as a replacement for humans or current algorithms. But a different way of looking at it is as a decision facilitation tool rather than the ultimate arbiter. AI models could be used simply as another source of information for underwriters or as a backup (another "set of eyes") for current decision models. The advantage of this perspective is that it helps companies get used to the idea of AI, something that will most certainly be a factor of success in years to come.

We are facing the challenge of limited access to financial information. But in the meantime, we have greater access to so-called alternative data, especially in emerging markets. The advantage of AI is that it can train models under different conditions quickly and simulate new conditions. We shouldn't miss out on the opportunity to exploit this capability. We are also living in times where short-term indicators are becoming increasingly important. While probabilities of default have been largely assessed using throughthe-cycle (TTC) approaches, credit insurers can now introduce more point-in-time (PIT) factors into their evaluations—for instance, using social media data.

Unlike finance, credit insurance is not a topic on the radar of AI researchers. That's why Tinubu decided to approach the credit insurance community, which has started to recognize the benefits and opportunities of Al. We would all benefit from a wider industry effort to make our challenges more visible and engage with academics. Industries that have done so are reaping the benefits of research applied to their problems, from ad-hoc credit risk scoring algorithms based on product risk profiles to specialized natural language processing that extracts information important to experts from large volumes of unstructured data (e.g., FinBERT). Al also represents an immense opportunity to attract new talent with different skill sets and create an office culture that younger generations, who don't see why they can't use tools from their daily lives at work, have come to expect.

Is there any room for an industry initiative?

The emergence of AI is a unique occasion for the credit insurance industry to do more and do better for its customers and to strengthen its value proposition. It is also a field in which competition could accelerate deployment by facilitating applied research. Such an approach would not prevent competitors from differentiating themselves, for example, through risk appetite and pricing strategies. The current data environment is already a great asset for moving forward and will only get better in the near future with the rise of open finance, access to accounting data from SMEs, and the adoption of electronic invoicing. It's time to place our AI bets now!

About Tinubu

Tinubu is the business facilitator and exchange enabler that delivers fluidity and simplicity to the insurance industry by using the strength of collective performance.

Our company is an alliance of technology software and insurance expertise offering the best combination to its clients. It covers the entire value chain of credit insurance & surety with one end-to-end platform, connecting every part of your business with one digital highway.

Established in 2000 and headquartered in Paris, France, Tinubu is an independent software provider and employs 170 people, located in Paris, London, New York, Orlando, Singapore, and Montreal. Its clients represent 30 of the top 60 Credit & Surety underwriters worldwide.

About the Authors

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Thomas and his team are developing outside-thebox solutions to tackle the industry pain points, and are augmenting Tinubu's competence in advanced technologies (blockchain, AI, quantum computing).

He has built an expertise in trade finance and balance sheet management as an advisor for financial institutions at CSC Peat Marwick and lead the European business analysis team dedicated to surety bonding at Atradius.

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