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PERSPECTIVES

CREDIT RISK DECISIONING IN THE AGE OF DIGITALISATION

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The level of digitalisation varies among customer segments and credit products of financial services. While it is more matured in consumer credit risk decisioning, there are still opportunities in small and medium enterprise (SME) and corporate credit risk.

In consumer lending, in the last five to 10 years, with the impact of FinTech, neo-banks and challenger banks, which leveraged new technologies and advanced modelling approaches, customer journeys have been transformed. These companies mainly use artificial intelligence (AI), deep learning and machine learning (ML) algorithms to improve the predictive power of credit risk scoring models, such

as application scoring or collections role models. For example, a Swedish buy now, pay later (BNPL) company is using ML models to predict customers' payment behaviour.

Some FinTech lenders use these algorithms to process alternative data, and then use it to enrich credit risk strategies, which is used to determine consumers' credit eligibility and affordability. A US-based FinTech is using ML to process information on 'thin file borrowers', i.e., customers in its credit bureau with less than six months of payment history. The company started by targeting student loans and then grew with other customer segments. Another example is from the largest e-commerce company in

the US. Its small business lending is using ML models very successfully. This company has a huge amount of proprietary information on what products are sold on its website, how customers feel about those products and the financial status of the companies which make those products. So, it is using this information in ML models to target companies for small business loans. In 2021, it had lent out roughly \$1bn to small businesses with this strategy.

Another common use case of ML is to streamline and automate lending processes. For example, a hybrid personal loans provider from the US, which lends loans directly and also facilitates loans for other lenders, is one of the most high-profile start-up companies in the US. This FinTech firm is using AI to streamline the loan process to process loan applications end to end online.

The other most common use case of AI is chatbots. In credit decisioning, chatbots are used to increase the conversion rate. When the borrowing customer stops filling out an application form, a chatbot asks how it can help to process the application or if the customer would like to talk to an agent to reactivate the process.

It is not only FinTech using ML, but the big established players as well. One of the three big international credit bureaus in the US and the UK improved the predictive power of its scoring models up to 15 percent after implementing a new neural network algorithm. Using this algorithm to





co-evaluate recently declined applications, it was discovered that rejected loan applications which were turned down, could actually have been approved safely if the original process had used ML.

Today, the digitalisation race has shifted to SME application decisioning as the costs are still high and there are still opportunities to improve customer experience in terms of both approval and money disbursement timescales. Recently, a large SME lender from Asia Pacific launched an AI-based digital lending platform which enables the orchestration of internal and external data, the use of ML algorithms as well as open source analytics. The lender has significantly improved the customer experience by providing SME loans 24/7 with a much faster turnaround time.

Digitalisation also progresses in corporate lending, however this occurs at a much slower pace, mainly due to the cautious approach of corporate credit risk managers and the relatively lower volume of individual applications. Digitalisation of annual renewal processes and optimisation of collateral allocations are the most sought-after areas for automation.

Challenges of the digitalisation journey

There are several internal and external digitalisation challenges when it comes to credit risk decisioning processes. New and emerging risks, changing regulatory requirements, economic

uncertainties and technological advancements are at the top of the list of external challenges. Although external challenges are less predictable and much less under control, it can be more difficult to overcome internal challenges.

A lending company going through the process of digitalising its credit risk decisioning processes or developing new digital credit customer journeys will require several changes, from acquisition data management to strategy performance monitoring, depending on where the bank's current capabilities stand.

In terms of data management, capturing and effectively utilising 'customer360 data', especially when combining alternative data with traditional data, is a big challenge. Consumers have come to expect that today's financial companies will offer insight-driven, personalised products and services and deliver the kind of experiences they already receive from companies like Apple or Amazon. To design such experiences, financial companies need good data ingestion, aggregation and preparation capabilities to make that data ready for credit risk modelling and decisioning. For this purpose, some large traditional banks have established a 'data transformation' team along with their business as usual (BAU) data management teams. These teams focus on streamlining existing data management processes with innovative approaches and bring

additional capabilities, such as centralisation or connectivity, to existing databases.

Once data is made ready for credit risk modelling and decisioning, the next step is to use this data to develop more accurate predictive models, leveraging advanced analytical methodologies, such as AI/ML algorithms, to understand customer behaviour more precisely.

Financial companies are in a race to leverage these technologies in as many use cases as possible to increase their return on investment and to gain competitive advantage.

Alongside improving data and analytical capabilities, financial services companies are designing hyper-automated credit risk decisioning processes in order to develop personalised and innovative credit customer journeys. Once policy rules and analytical models have assessed credit risk, companies must get that information immediately to the point of decision. For example, a customer applying for a loan in mobile banking, if approved, should be able to receive money disbursement immediately after completing the online application.

Hyper-automation is at the heart of all credit risk decisioning processes, however the challenge here is to maintain a balance between customer experience and customer protection. Smartly designed points of friction can be extremely valuable for managing both credit and fraud risk, and are

important for making customers feel safe. In almost all recent surveys, customers say they feel the protection of their data and money is as important as the speed and convenience of application experience.

Benefits of digitalisation

Digitalising credit risk processes and customer credit journeys offers significant benefits to both financial services companies and their customers.

From a company's perspective, these transformation programmes chiefly enable revenue growth and cost savings. The main driver of revenue growth is to significantly improve time to decision, which helps financial institutions not only keep their existing customers but gain new customers, outpacing the competition. More applications, increased win rates and better pricing and product and services all contribute to this revenue growth. The main drivers of cost reduction are less touch time on the application journey and a lower cost of credit due to reduced expected credit losses and hence reduced provisions.

From a customer's perspective, digitalisation provides faster credit decisions and a better customer experience. Especially for consumer lending, digital customer experiences have already

become an industry standard. A lending company's existing customers can apply for a personal loan or credit card with a couple of swipes on their mobile phone, and time to cash is down to minutes.

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There are also several intangible benefits of digitalisation. To bring in the capabilities required for digital credit decisioning, companies must modernise their data, analytics and technology tools. These modernisation efforts enable siloed and top-down decision making to be replaced with agile decision making. It helps companies to be always on and real-time rather than reactive. Cookie-cutter approaches are replaced with more data driven, strategic decisions. This way, credit risk decisions are no longer static and channel-centric, but dynamic and customer-centric. The number of ad hoc and inconsistent customer engagements are reduced by introducing strategic, analytically optimised offers.

Key success factors

Digitalising credit risk decisioning has several milestones, each of which must be completed to successfully achieve targeted business outcomes.

The first milestone is often to improve data management capabilities. Especially for traditional banks, the company's biggest asset is customer data. Customers are expecting companies to use this asset for their benefit, providing them with better borrowing experiences and better products. Enriching available data for more complete customer insights, using streaming techniques to process this data, and making the data ready for credit modelling and decisioning are essential.

The second milestone is to expand the use of ML and AI algorithms into more credit use cases. Credit decisions are highly dependent on the analytical models used to make those decisions. The challenge is to continuously develop more accurate credit risk models. ML and deep learning find insights hidden in a massive amount of messy data without explicitly being told where to look or what to conclude from the data. These self-learning algorithms are especially valuable in dynamic environments where frequent change is making what happened in the past less useful for predicting future behaviour – like the socioeconomic environment we are experiencing today, with its post-pandemic challenges and cost of living crisis.

The third milestone is to use decision strategy optimisation. Analytical models are used to drive segmentation and help determine the best decision keys to use and the optimal splits in those keys. But if the decision actions or treatments are manually assigned, strategy is not optimised. In decision optimisation, actions are assigned using historical performance data. This not only helps to build smarter strategies, but gives companies a way to explain to regulators specific strategy action has been applied for a specific customer.

The fourth milestone is to redesign existing credit processes around customer centricity. The new customer credit journey designs must put the customer experience at the heart of credit decision processes. This is directly linked to using hyper-personalisation, which should already be enabled by achieving previous milestones in data, analytics and decision strategy design.

The final, and potentially most challenging, milestone is to move from a product/solution strategy to a platform/ecosystem strategy for technology resources. A modern, agile and integrated credit risk modelling and decisioning platform is an essential part of credit risk digitalisation. Without this platform, it is impossible to ingest and explore data, execute analytical modelling in real-time, provide optimised credit risk decisions and deliver these decisions to engage customers through digital channels in real-time. The

challenge of this milestone is the choice of the right technology partner. Digitalisation journeys typically take longer than one to two years to complete. It is not a short-term commitment for the company and the technology partner. Additionally, it is a dynamic field where times and technology change continuously. The technology partner must provide sufficient flexibility in its platform development roadmap and must commit to grow as the company grows. **RC**

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