

Possibilities Unlimited

US Financial Services Firm Speeds-Up Underwriting

AI-led document processing scaled underwriting review for complex 600-page offering documents.

Case Study

Summary

Our client is a financial services company that provides clearing and settlement services. The company regularly determines eligibility and assesses risk for newly issued corporate debt securities and secondary offerings before they can be traded in the marketplace. The client's underwriting process involves reviewing multiple parameters in the issuer prospectus, which spans up to 600 pages, and supplemental documents that usually contain complex operational, financial, legal, and regulatory aspects represented in semi-structured and unstructured formats.

Lead managers, underwriters, and placement agents rely on our client's eligibility service to rapidly issue their offerings to the marketplace. Hence, it is imperative for our client to have a quick turnaround on determining eligibility and ensure that these securities and offerings comply with the legal, regulatory, and operational requirements.

We implemented XtractEdge, our modular intelligent document processing platform, and developed a model to extract key attributes and elements in determining the eligibility of such offering documents. The platform streamlined the eligibility review process, improved operational efficiency, and reduced underwriting turnaround time significantly.

Business Challenge: Time-consuming review process

Our client's underwriting eligibility process is comprehensive, involving significant expertise and effort in reviewing the prospectus and supplemental documents. Since debt offerings are issued by both corporations in US domestic and international locations, they are usually underwritten by both US and overseas law firms. Due to this, the structure and language adopted in the offering documents significantly vary. Hundreds of pages and parameters are reviewed, evaluated, and captured to determine the underwriting eligibility, adding complexity to this process. As a result, our client faced several challenges including but not limited to:



Reviewing prospectus and supplemental documents with varying unstructured formats and languages



Interpreting legal language and multiple terminologies to determine key indicators



Evaluating key parameters within the hundreds of pages of offering documents that do not adhere to specific rules or patterns



Reviewing hundreds of pages of offering documents and determining eligibility within specific time constraints before the issue closing date

Solution: AI to the rescue

We implemented XtractEdge, our Intelligent Document Processing platform. The platform helped create an AI model to extract metadata elements involved in determining underwriting eligibility from the offering documents, streamlining our client's entire eligibility review process. Our approach to creating an intelligent model included:

01

Training models on sample offering documents with varying structures and formats, using convolutional neural network (CNN) for intent or paragraph-related content and SpaCy for entity or datapoint-related points.

02

Developing separate models for content extraction from the same paragraph to overcome data overlap

03

Developing specific post-processing rules to transform data from a specific language to the desired formats that meet business needs

04

Creating reusable models for subsequent issues under corporate debt, including municipal bonds, asset-back securities, and collateralized mortgage obligation

05

Continuously refining the model by accelerating document analysis using an accuracy tool

06

Grouping the attributes and establishing relationships among attributes to enhance the relation-wise model tuning

07

Creating end-to-end traceability and accountability of information, along with the history of all changes

We have also developed a hyper-automation framework that enables seamless data exchange between systems and facilitates straight-through processing.



Benefits: Underwriting that's fast and efficient

XtractEdge improved overall underwriting productivity by enabling data identification, extraction, and classification of data elements at scale from unstructured documents. As a result, the client is able to spend more time on value-added activities focused on expanding their business and servicing their end customers. The client's underwriting business benefited as below:



Streamlined the underwriting eligibility review workflows that significantly improved operational efficiency and reduced manual effort



Enabled the underwriting team to determine eligibility within a specific timeframe before the closing date



Empowered the client to convert highly unstructured data from disparate sources into meaningful structured information that drives greater insights and efficiencies.



Reduction of time involved in developing and enhancing AI models to review and determine eligibility



To know how XtractEdge can help you transform documents into insights and unlock new opportunities, write to us at

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About XtractEdge

XtractEdge, a powerful Document AI platform, enables enterprises to gain insights and enhanced decision-making from existing documents, legal contracts, commercial insurance documents, SOPs, images, handwritten notes, PDFs, emails, or any other complex unstructured data source. XtractEdge is recognized as one of the top Document AI platforms for large enterprises delivering on the promise of quicker time to market, superior customer experience, faster claims processing, underwriting, and efficient contracts management for more intelligent business decision making.

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About EdgeVerve

EdgeVerve Systems Limited, a wholly-owned subsidiary of Infosys, is a global leader in developing digital platforms, assisting clients to unlock unlimited possibilities in their digital transformation journey. Our purpose is to inspire enterprises with the power of digital platforms, thereby enabling our clients to innovate on business models, drive game-changing efficiency and amplify human potential. Our platforms portfolio across Automation (AssistEdge), Document AI (XtractEdge), and Supply Chain (TradeEdge) helps inspire global enterprises to discover & automate processes, digitize & structure unstructured data and unlock the power of the network by integrating value chain partners. EdgeVerve, with a deep-rooted entrepreneurial culture, our innovations are helping global corporations across financial services, insurance, retail, consumer & packaged goods, life sciences, manufacturing telecom and utilities, and more. Visit www.edgeverve.com to know more.

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