Bulletin on Regtech Use Case
Sales Conduct Risk Monitoring

July 2023

Background

The Bulletin on Regtech Use Case series aims to showcase innovative Regtech solutions implemented in banks to promote adoption of Regtech, enhance risk management and compliance, and facilitate knowledge sharing among the Regtech community in Hong Kong.

This bulletin showcases Hang Seng Bank's Sales Conduct Risk Monitoring solution that leverages Machine Learning (ML) technology to identify the potential risk in staff conduct throughout the product sales journey. The solution further enhances the overall efficiency for risk oversight and aligns the view on alerts by taking into consideration the volume and concentration of certain typologies.

Sales Conduct Risk Monitoring

- As one of Hong Kong's largest banks, Hang Seng's staff interacts with customers on a daily basis regarding customer service and sales. Recognising the importance of safeguarding its customers, Hang Seng has set up a high standard for staff conduct and reviewing staff sales activities, particularly in the areas of investment and insurance sales.

- Hang Seng has developed an advanced conduct risk monitoring system. This comprehensive system utilises cutting-edge machine learning models and user-friendly data visualisation tool to identify and analyse anomalous sales behaviour, ensuring a more effective and efficient review process.

- The monitoring system features an all-encompassing, visualised dashboard that consolidates essential information, enabling the bank to prioritise reviews of high-risk sales based on the model's results. Furthermore, the dashboard facilitates seamless transaction-level reviews, streamlining the process and further reinforcing Hang Seng's commitment to customer protection and responsible sales conduct.
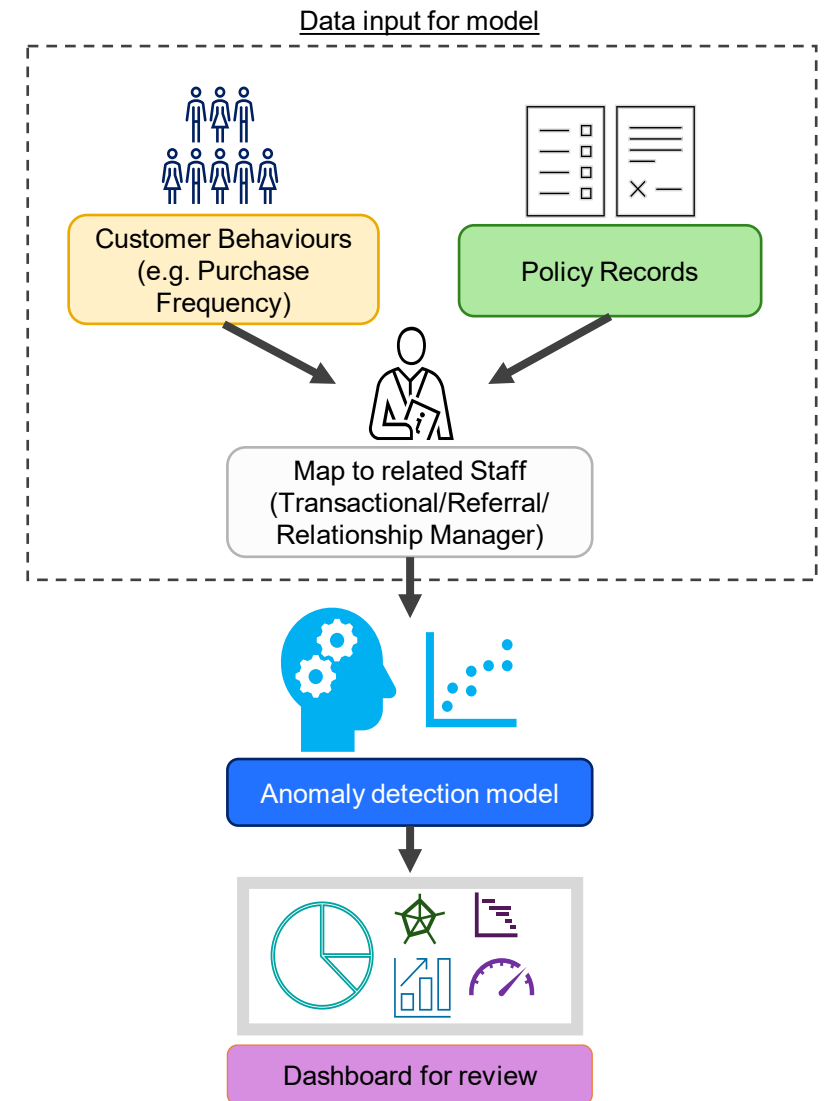
Use Case

Solution

- Isolation Forest (an unsupervised machine learning algorithm) is used to generate insurance and investment behavioral anomaly score and alert all frontline staff during sales process.

- Model covers different typologies of insurance and investment sales.

- Typologies of potential high-risk sales activities include different aspects on vulnerability, affordability, product experience, bundle sales experience, early cancellation, and customer complaints.

- Reviewers could leverage the holistic view dashboard to conduct risk detection and investigation, and prioritise the review with model score results.

Key Implementation Success Factors

- Model results have been validated using a mix of high-risk sales in addition to randomly selected transactions.

- Model is continuously fine-tuned by reviewing results and working with business users to improve accuracy identifying high risk behaviour.

- Insights presented on a visualised dashboard to facilitate usage.

Data input for model

Customer Behaviours (e.g. Purchase Frequency)

Policy Records

Map to related Staff (Transactional/Referral/ Relationship Manager)

Anomaly detection model

Dashboard for review

Benefits

Challenges

The scope of conduct risk monitoring encompasses a wide range of sales patterns. However, reviewing them efficiently and effectively can be challenging as information is scattered across multiple reports. Traditional trigger reports only monitor the transactional staff and do not include referral or Relationship Manager (RM) staff involved in the sales process.

Achievements

- Effective adoption – Due to championship from senior management, and the fact that usage of the tool among sales management and governance roles can be tracked at individual user level, consistent 90% usage rate is observed, which indicates the tool is actively used in daily conduct monitoring by frontline.

- While mis-selling rarely occurs, a shorter turnaround time during mis-selling investigations is expected due to the monitoring capabilities of the tool.

How Regtech Helps

- Holistic review of potential conduct risk at staff level, given the high volume of transactional data and rarity of problematic sales of identified typologies.

- The model can benefit business in both sales conduct review prioritisation and early detection of potential conduct risk behaviour for timely risk mitigation and remediation actions.

- Detection of anomalies by the model also improves the effectiveness of risk detection by enhancing the sampling process.

- The centralised monitoring dashboard contains consolidated information from different data sources on a single platform, facilitating more efficient assessment by investigators.

- Enable geographical insights by area and branch level, to provide relative comparison between regions for more accurate risk identification and tracking (e.g. absolute measure of high-risk cases vs. penetration of high-risk cases).

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