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CASE STUDY

INDUSIND BANK: GROWING REVENUE WHILE MANAGING FRAUD
WINNER OF CELENT MODEL BANK 2017 AWARD FOR FRAUD MANAGEMENT AND CYBERSECURITY

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CASE STUDY AT A GLANCE

FINANCIAL INSTITUTION	IndusInd Bank
INITIATIVE	Growing revenue while managing fraud
SYNOPSIS	Implemented a real-time enterprisewide cross-channel fraud and AML management platform. Then began reusing in-memory data to offer simultaneous real time cross-sell and upsell.
TIMELINES	• Kick-off: January 2014.
	• Went live in eight months with fraud and AML management.
	• Launched positive cross-sell and upsell scenarios in July 2016.
KEY BENEFITS	• $9 million in potential fraud prevented in the branch channel in one year.
	• Over 1 million offer notifications delivered in six months with much higher click (4-5%) and conversion (3.5%) rates than regular messages.
	• Compliance with AML and fraud management regulatory requirements.
KEY VENDORS	CustomerXPs and its Clari5 product

CELENT PERSPECTIVE

- In today's connected global world, managing fraud via disparate product and channel systems is no longer effective. Fraud management systems must be enterprisewide and operate in real time across:
    – Products: cards, current accounts, loans, etc.
    – Channels: ATM, POS, branch, mobile, etc.
    – Customers, employees and third parties.
- At IndusInd, CustomerXPs' Clari5 solution has been integrated with 15 real-time and seven batch systems and has revolutionised fraud and AML management within the bank.
- However, what really caught our eye is the bank's innovation to enable simultaneous real time cross-sell and upsell to customers using the same computed memory of a real-time enterprisewide fraud management platform. We are convinced that other banks can learn from IndusInd about the "yin and yang" of fraud management and cross-sell.

DETAILED DESCRIPTION

Introduction

IndusInd Bank Limited is a Mumbai-based Indian new generation bank, established in 1994. The bank offers commercial, transactional, and electronic banking products and services. The bank started with a capital base of INR 1,000 million, which was contributed by resident and non-resident Indians.

Table 1: IndusInd Bank Snapshot

	INDUSIND
YEAR FOUNDED	April 1994, inaugurated by then Union Finance Minister Manmohan Singh
REVENUE	7,814 Rs Crore/ ~US$1.2 billion (FY 2015-2016) 30.9% YoY growth
ASSETS	140,057 Rs Crore/ ~US$20.5 billion (March 31, 2016)
GEOGRAPHICAL PRESENCE	HQ in Mumbai, India Representative offices in London, Dubai, and Abu Dhabi
EMPLOYEES	23,060 (March 31, 2016)
OTHER KEY METRICS	1,000 branches (200 more planned this year) and 1,800 ATM's across 623 geographical locations
RELEVANT TECHNOLOGIES AND VENDORS	CustomerXPs and its Clari5 product

Source: IndusInd Bank

In 2014 IndusInd deployed a new real-time enterprisewide cross-channel fraud management and anti-money laundering (AML) platform. In 2015, it began offering simultaneous real-time cross-sell and upsell using the same computed memory of the fraud management platform.

Opportunity

Prior to deploying the new fraud management platform, IndusInd bank faced a number of challenges:

- Existing fraud management systems were point solutions operating in silos.
- Most systems were based on an end-of-day batch processing, resulting in delays in recognising and dealing with fraud.
- Once implemented, fraud scenarios were difficult to update.

The bank felt that many of the traditional fraud management solutions were "deep rooted in cards," i.e., designed to catch fraudulent card transactions. However, the reality today is that banks are faced with many types of fraud: internal fraud perpetrated by employees, identity fraud, and many other types.

Furthermore, it is becoming increasingly important to understand customer behaviour across channels and products. For example, a customer might log in to his online banking from his

usual location at home, yet a few minutes later his debit card might be used abroad. Traditional siloed systems would struggle to catch such anomalies. Not being able to notice such developments in real time only exacerbates the problems.

In line with its business and IT strategy, the bank wanted to detect any fraudulent behaviour in real time and in context, so that it could be curbed before the bank or the customer lost money. In addition, the bank required the capability to detect emerging patterns, so that fraud could be detected and mitigated _before_ the actual incident.

The bank also wanted to ensure it can stay on top of the ever-growing complexity of AML scenarios. IndusInd recognised that it needed a modern real-time enterprisewide cross-channel fraud management and AML platform.

The second half of the initiative was born based on a simple but powerful insight. Real-time enterprisewide cross-channel fraud management requires that every transaction is available in-memory in real time for the bank to do negative scenarios for fraud management. But only a minuscule portion of transactions are fraudulent.

Since every transaction is still available in-memory, after the fraud risk is assigned, the bank can run positive scenarios in real time, in the same calculation space, and do extreme "segment of one" cross-sell and upsell. While every transaction can expose the bank to risk, the same transaction can also be converted to make money for the bank when not considered at risk. The bank calls it the "yin and yang" of fraud and cross-sell.

Solution

Fraud and AML Management (Yin)

From a design perspective, IndusInd bank wanted the system to "suck in" as much information as possible from transaction processing and other host systems. Second, the "plumbing" had to work in such a way that it did not impact the host system's performance. Finally, the vendor had to possess adequate knowledge, especially of the core banking system and delivery channels, in order to effectively integrate with them.

After a thorough evaluation of various vendors, IndusInd bank chose to implement Clari5, an Enterprise Financial Crime Management (EFCM) solution from CustomerXPs. According to the vendor:

"CustomerXPs' Clari5 combats sophisticated fraud and money laundering with real-time, actionable insights. It monitors suspicious activities in real-time, and takes the right decision at the right time as opposed to end-of-day reporting and analysis. Clari5 EFCM is designed to meet the fraud detection, investigation, prevention, monitoring compliance and audit needs of banks.

Clari5 is a highly-scalable enterprise fraud and compliance solution with a capability suited to enterprise-wide deployment for global financial institutions. It uses advanced statistical and analytical techniques to identify patterns of unusual and suspicious behaviours hidden deep within a bank's data. The product provides a single view of customers and their known associates across an organization's entire portfolio of products and brands. Clari5's differentiated approach deploys a 'central nervous system' in banks with the ability to stop fraudulent transactions with real-time, actionable insights."

IndusInd signed the contract with CustomerXPs in January 2014. The phase one of an Enterprise Fraud Management system and AML solution went live in eight months, utilising the built-in adaptors for core banking and other systems. The system monitors financial and non-financial transactions for customers, accounts, users, and employees across branch and digital channels in real time to detect suspicious fraud. It responds with the decision in real time and generates alerts for investigation.

Generated alerts are supported with Push Up (fraudulent customer behaviour) and Push Down factors (desirable customer behaviour) which dynamically impact alert risk score threshold and help the bank control true and false positives. The system works on an intuitive methodology which helps identify events and transactions of fraudulent nature.

To ensure real-time cross-channel transaction monitoring and fraud management IndusInd bank integrated Clari5 with core banking, loans, debit switch, inward and outward remittances, HR system, retail and corporate Internet banking, retail FX, consumer finance, ATM, POS, e-commerce, and IVRS applications. In total, the system manages fraud across 15 real-time channels and systems, and analyses seven batch feeds (see Figure 1).

Figure 1: IndusInd Integrated Clari5 with Many Other Systems in the Bank
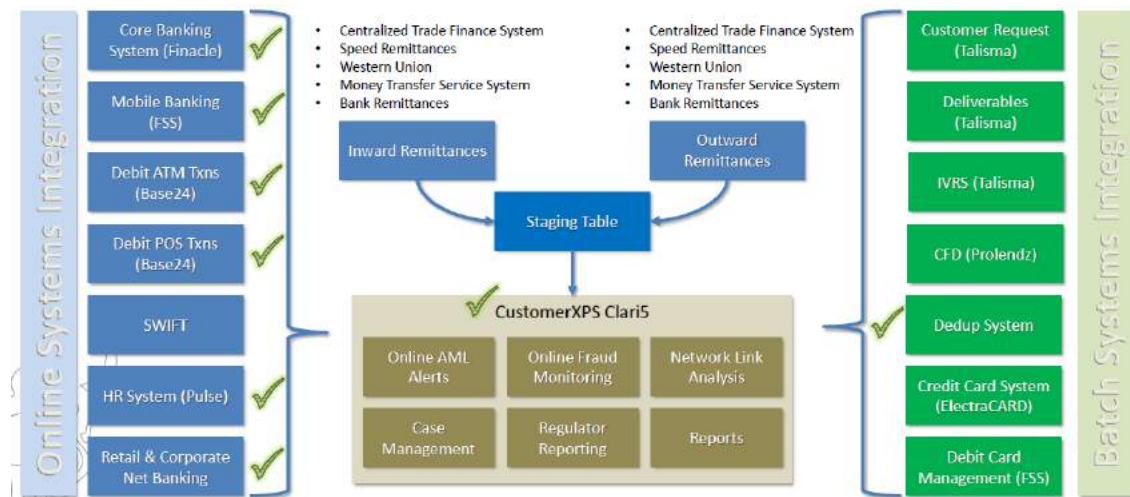
Source: IndusInd Bank

The bank has deployed over 150 pre-packaged and custom-developed channel- and product-specific fraud and AML scenarios. Importantly, business users can create, test, and deploy new suspicious patterns on the fly with the help of a web-based scenario authoring tool.

Clari5 was able to fulfil the bank's requirements and provides the required processing capability to handle incoming volume and apply complex business scenarios to generate alerts. Deployed solution is processing transactional and non-transactional events in real time across 150+ scenarios with no impact on the Finacle core banking application or any other core systems, and utilising less than 1% of CPU resource.

For implementation, the bank has mobilised a team of nearly 20 FTEs, including risk management and IT departments at the bank, as well as vendor resources:

- Bank: 3 project managers, 5 testing team members.
- Partner: 1 project lead, 1 project manager, 8 team members.

IndusInd bank's Head of Technology was the executive sponsor of the project.

Cross-Sell and Upsell (Yang)

After implementing the enterprise fraud management solution, the bank also realised the potential of the same Clari5 solution to cater to lead generation for cross-sell and upsell opportunities. When the transaction hits the system, it forks: the fraud and AML engine is running 150+ negative scenarios, while the same computing space is also being used to run positive scenarios for cross-sell and upsell.

Example positive scenarios include:

- Motivate customers to use POS or e-commerce channels for digital transactions rather than ATM machines for subsequent cash payments.
- Identify customers who usually travel internationally and offer specific custom products.
- Monitor salary accounts to identify increase in salary credits or a drop in usage of the accounts.

Such behaviour patterns are automatically picked up for a campaign targeted towards these customers.

In addition, the system can be used to deliver merchant offers in near real time. For example, if based on a card transaction, the system learns that a customer is shopping at a specific location it can send him an offer (e.g., 20% off) from another merchant at a nearby location. Insights from Clari5 are picked by a specialist campaign management system that further enriches the information with its own data to come up with the right offer. It works near real time by running batches every five minutes. If the customer is entitled to an offer, he or she receives a text message, a mobile banking in-app notification, or an email. The bank has a separate Alliances and Partnerships team that sources the offers.

Results, Lessons Learned, and Future Plans

Results
Key benefits of the system include:

- Compliance with fraud and AML regulatory requirements.
- Integrated case management system for fraud and AML investigation with 360-degree view of customer behaviour across products and channels in one single place.
- Boost to customer confidence for branch, retail, and online transactions.
- Increased security and bank brand reputation.

Mridul Sharma, Head of Technology, EVP at Indusind Bank and the project sponsor says:

> *Overall this project enabled us to have a check for fraud patterns across multiple systems and channels, providing a much safer working environment and one that cannot be spoofed. This mechanism is not always available in other fraud detection systems which only look at one particular silo and do not have collective 360 degree intelligence of customer and accounts across various products and channels in real time.*

According to the bank, in the first year of going live and just in the branch banking channel alone, IndusInd was able to prevent more than $9 million in potential fraud. Having the same common platform for both critical systems also helps the bank streamline its IT operations in terms of common system interfaces for consistent data quality, maintenance, and reduced total cost of ownership.

For real-time customer campaigns and cross-sell, about a dozen complex scenarios are running in the application. The specific benefits are harder to quantify, because it is more difficult to link the resulting outcomes to specific campaigns. However, it is possible to quantify other metrics, such as how much the bank intervenes with offers and positive messages, and how the customers respond to those interventions. According to Indusind, in the six months since the system has been live, the bank delivered over 1 million notifications across various channels such as Internet banking, email, SMS, and mobile app push notifications. Importantly, the bank

has observed much higher click (4.0–5.0%), and conversion rates (3.5%) for these targeted notifications than the regular messages.

Lessons Learned

Integrating with 15 real-time and seven batch systems is a major undertaking and can be disruptive. The chosen vendor's deep knowledge of Infosys Finacle, a core banking system used by IndusInd, proved to be very valuable in ensuring smooth integration with "minimum distraction" and without affecting the underlying system performance.

When implementing a fraud and AML management solution, the task of defining scenarios should not be underestimated. Coming up with the rule, making it specific, and fine-tuning it to minimise the false positive results, requires substantial effort. The Reserve Bank of India has a number of prescribed scenarios as a starting point, but they need to be further tailored and are not sufficient.

Furthermore, the scenarios can't remain static — they have to be maintained and updated. The system should not rely on a long history; it needs to be able to learn and forget as required so that scoring is based on recent events. A dedicated team constantly reviews the outcomes and tailors the rules and scenarios.

Finally, real-time fraud management places different demands on the operations teams. With the batch-based systems, the fraud analysts would look at the events at the start of the day, analyse, and react accordingly. Now, 24x7 AML and fraud operations teams have to be in place to react to the events in real time.

Future Plans

IndusInd bank is not resting on its laurels. It is planning to add more scenarios that utilise more data, which in turn requires connecting the platform to additional systems. It is also considering a pilot using external data.

The bank also expects to utilise the system to aid frontline digital customer management, such as performing KYC and enabling customers to open accounts in real time.

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