Automation, NLP Light the Path to Efficient Card Dispute Resolutions

Abstract

Over the past few years, payment cards have replaced cash as the preferred mode of conducting transactions. It is no surprise then that a rise in card-based transactions also means higher instances of related disputes. In addition, with the cards undergoing constant upgrades in terms of features as well as usage, the overall number of disputed transactions have also spiked. Consequentially, the financial Institution (FIs) are under immense pressure given the already stretched resolution processes and the added burden from the cost of resolution. With customers holding more than three cards on average, ensuring rapid and seamless dispute resolution has become a top priority for banks and financial institutions.

As card adoption continues to advance, FIs need to look at solutions to stabilize the cost of processing disputes to retain the competitive edge and yet be able to engage with the cardholder to strengthen trust.

According to the American Banking Association, there were 364 million credit card accounts in the US at the end of 2017.[i]

The paper highlights the benefits of using a rule-based engine to enable STP for fraud-related disputes and Natural Language Processing (NLP) for billing-related issues.
In addition, it also discusses how combining a rule-based engine and NLP with network operator rules can help FIs optimally solve both billing and fraud disputes to deliver exceptional customer experience.

Roadblocks to Dispute Resolution

Dispute resolution is a complex process that involves several stakeholders including – the cardholder, the issuing bank, card network operators such as Visa or MasterCard, acquiring bank, and merchant. Intelligent Straight through Processing (STP) of disputes can help enhance customer experience while reducing processing errors and operational costs.

A card dispute in general is not very different from a legal case processed in the Courts. Just like a legal dispute, the 'plaintiff,' the cardholder in this case, registers a complaint against the 'defendant' - in most cases - the merchant. The framework laid down by the card networks govern the dispute resolution process, and the issuing bank (cardholder's bank) and acquiring bank (merchant bank) argue the case (See Figure 1). The network operator acts as the presiding judge and delivers the final verdict following the arguments and presentation of evidence by both parties. The rule framework governing the disputes is under constant review and updates just like the Constitutional Amendments.

During the process, if either the issuing bank or the acquiring bank fail to respond within the stipulated timelines set by the network operator or central banks, they are liable to penalties.

Disputes can be frustrating and time consuming for both customers and financial institutions. The explosion of card usage across the globe has meant disputes are also on the rise. Research[ii] indicates customers typically raise disputes on 0.013% to 0.016% of the total cards transitions. While on a standalone basis this looks like a small figure, however, when applied to the estimated card-spend volumes of ~USD 5,600 billon (derived from sources), FIs are looking at a billion disputed transactions per annum.

Seamless dispute management, therefore, requires access to the right skills, adherence to timelines from network operators and central banks, managing of multiple threads, and ensuring financial entries for each step. Additionally, it requires financial institutions to maintain constant communication with the customers every step of the way.
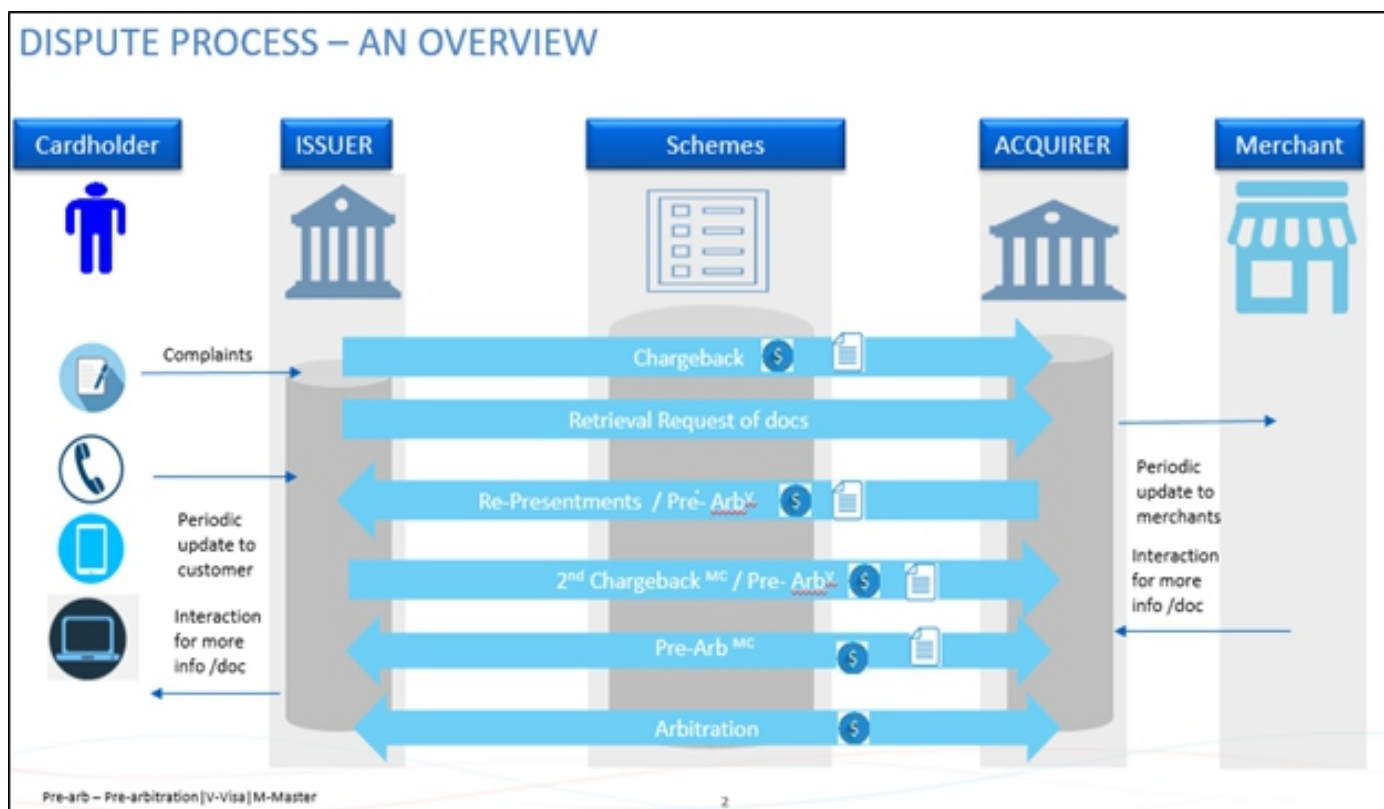
Figure 1: Card Transaction Dispute Resolution Process

Given the nature and volume of the issue on hand, there is need for an approach that can help effectively reduce dispute-management costs (without attracting penalties from network operators and regulators) and improve consumer experience.

STP in Dispute Resolution: The Approach

Categorization of disputes is the first step to designing a STP solution for the dispute-resolution process. The first category constitutes fraudulent or unauthorized disputes where transactions have been completed without the knowledge of the cardholder. Whereas, billing disputes - where the transaction has been completed but service-related issues lead to a dispute – are placed in the second category.

Fraud, authorization and processing error related disputes make up for nearly 70% to 75%[iii] of the complaints. Whereas, about 25% to 30% disputes arise from billing issues. With FIs diving deeper into data analysis and cardholders incrementally adopting digital channels, enabling STP to process disputes holds significant potential in terms of enhancing customer and business outcomes (See Table 1).

Types of Disputes	Attributes Related to Resolution Process			Suitability for STP
	Cardholder Participation for Resolution	Documentation from Cardholder for Resolution	Documentation from Cardholder for Resolution	
Fraudulent/ Authorization/ Processing error related Disputes	NO	NO	NO	As per network operator rules, most disputes of this nature can be resolved using data set available with the issuing bank, hence these are best suited for STP.
Billing Disputes	YES	YES	YES	This requires interaction with cardholders for additional information and documentation, thus offering a probable use case for Natural Language Processing (NLP) to qualify the responses from customers for dispute related queries. Such an approach will help FIs get one-step closer to enabling STP.

Table 1: Types of Disputes and Compatibility with STP

In the following sections, we will delve deeper into the ways in which automation and NLP can enable STP of fraud and billing disputes.

Resolving Fraud Disputes via Rule-Based Engine

In line with network-operator rules, FIs have the data and the framework needed to process disputes under fraud or unauthorized chargebacks. The FIs use the framework to analyze the data related to the disputes to decide whether a transaction qualifies for chargeback. If the data reveals positive findings, the bank assigns it a relevant 'reason code' for processing. However, the validation of chargebacks against the framework is a manual process. This also makes the process inefficient given the varying interpretations of network operator rules. In addition, the time taken to validate the transactions against the framework coupled with the delay in adapting to evolving changes to network-operator rules increases the probability of processing errors, and impacts the overall duration for dispute resolution.

A rule-based engine (See Figure 2) can potentially help with faster identification of fraud or authorization-related 'reason codes' needed to raise chargeback, and perform relevant checks across all network operator rules to eliminate manual processing. Once the guidelines have been uploaded to the rule-based engine, the system can take over the investigation and provide the output in the desired format.

Based on the output, the processor can log onto the platform of the network operator and manually raise chargeback for each transaction. The process of raising chargeback on the card-operator platform is fairly standardized and can be automated using Robotic Process Automation (RPA). Alternatively, chargeback can be raised via batch-mode processing on some network operator platforms.

In the final stage, files can be put through network-operator systems using RPA for additional processing, thereby, eliminating the need for manual processing. Apart from raising chargeback, a rule-based engine can enable FIs to define other activities like, preparing and passing financial entries for temporary credit and write offs and, initiating customer and interdepartmental communication.

Approach for Fraud Disputes
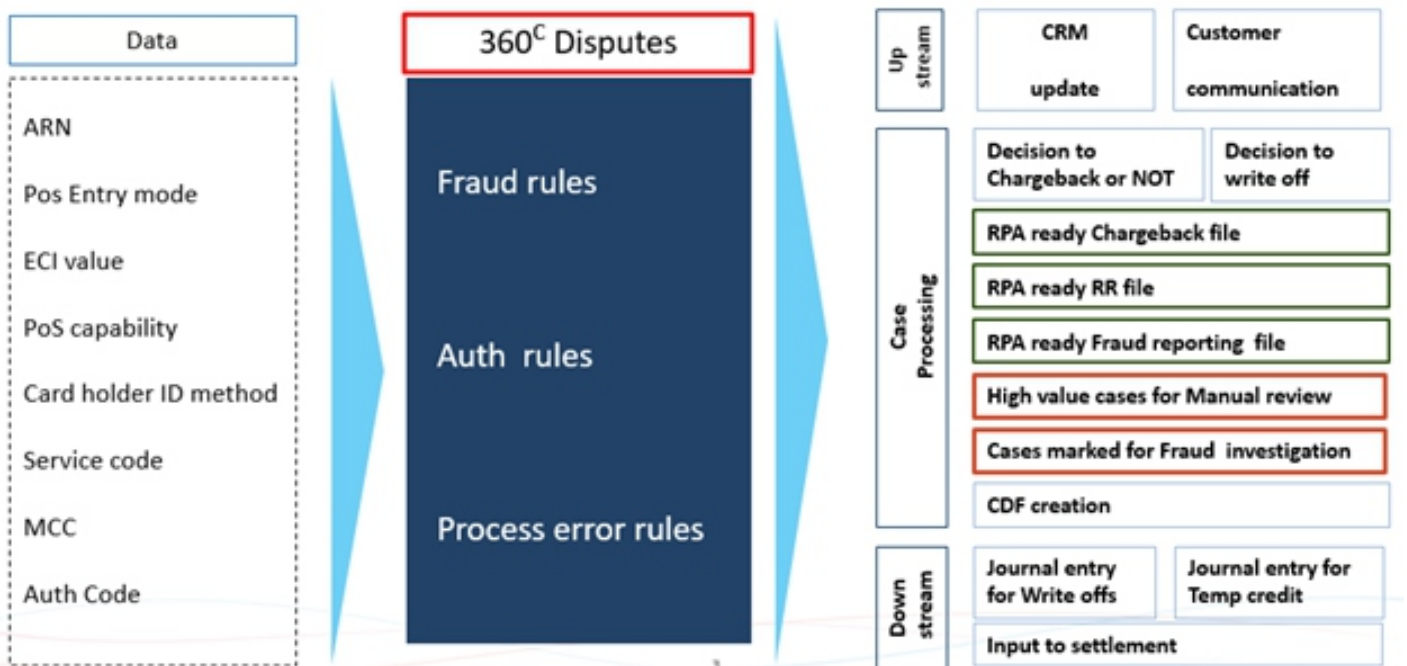
Figure 2: A Rule-Based Engine for Fraud Dispute Resolution

Resolving Billing Disputes Using NLP

A billing dispute could pertain to services not rendered, cancelled transactions, or products and services that do not deliver on promise. Enabling STP for resolving such disputes requires additional information and documentation from the cardholder. It is therefore important to design cardholder interactions keeping in mind the goals of dispute management for FIs. At the same time, the interaction should help the cardholder instantly recollect the transaction and the nature of dispute.

To achieve STP in billing disputes, it is therefore critical to pose intuitive questions to the cardholder and base the next set of questions in accordance with the responses received. An intelligent chatbot underpinned by Natural Language Processing (NLP), can ensure consistent customer experience and help FIs gather comprehensive information.

For example, if a customer raises a dispute saying, "I have returned a mobile phone purchased from ABC merchant, however, I'm yet to receive the refund from the merchant.'

The system should prompt valid questions, for the dispute raised above. This would help get the right set of information from the customer to raise an appropriate chargeback. Some of the potential questions include:

a) What kind of mobile phone was ordered? Brand, Model number, color and any specific feature the customer would like to mention.

b) What was the reason for returning the mobile phone?

c) Does the purchase have a return/cancellation/refund policy? If yes, upload the documents. If there is no refund policy, then close the dispute and request the customer to contact merchant for further clarification.

d) Has the customer contacted the merchant regarding the refund? If yes, attach the proof of contact. If no, request customer to contact merchant and revert with proof of contact to take the dispute forward for investigation.

The revelations can help FIs decide whether to pursue the case by raising chargeback and the category and in turn determine the documentation needed from the cardholder.

Currently, the manual dispute-resolution process enables for minimum information gathering from the customer. Additionally, it requires the bank to contact the customer multiple times to collect all the required data.

Realizing the Promise of STP in Dispute Resolution

Marrying the rule-based engine with NLP-based chatbots and network operator's rules (See Figure 3) creates a unique automated solution for FIs to seamlessly collect transaction related data, determine the nature of dispute and the merits of the case, as well as collect relevant documents from the customer in real time through digital channels.

Combined approach for billing and fraud disputes

Figure 3: Combined solution for billing and fraud dispute

The volume of disputes pertaining to card payments is set to rise with the increase in card payments. This will in turn place the service infrastructure for financial institutions under pressure in terms of delivering better customer experience. Leveraging an intelligent and automated solution, for resolving both billing and fraud disputes, will help banks and FIs deliver a consistent and seamless customer experience across geographies with cost efficiency.

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Swapna is part of Cards CoE(BPS) unit. She has over 13 years of experience in Cards back office operations and Customer Service with 10 years of experience in end to end Payment Card disputes handling both Issuing & Acquiring Business. She has led automation related initiatives and delivered efficiencies by identifying opportunities across process, risk & control and customer experience. She has good knowledge and experience in reviewing critical process with recommendations and changes in development/IT intervention. Swapna has completed her graduation in Mathematics from Vaishnav College, Chennai.

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