

Application Fraud Detection

Improve fraud detection rates and minimize losses



Fraud losses witnessed by the credit card companies are on rise. The existing fraud control measures are costly, time consuming and yet not as effective. In particular, the timeliness and accuracy of instant credit decision gets impacted because of the use of limited data inputs and dated algorithms.

EXL's proprietary Application Fraud Detection methodology enables higher and timely fraud detection in instant credit environment. The approach leverages in-house domain expertise in "comprehensive data harvesting", "innovative data use" and "advanced fraud

modeling". The fraud solution also enables cost-effective investigation through EXL's multi-shore delivery. **The key differentiators of this approach are:**

- Tapping into right sources of data providers for the right data elements
- Drawing data for selective applications which is cost-effective and customer friendly
- Creation of additional innovative fraud detection flags
- Using proprietary MicroAnalytix™ toolkit for faster data evaluation and advanced modeling to identify the right fraud checks



It equips management with analytical tools to maximize fraud detection and drive loss prevention, all while optimizing the referral rates.

Application Fraud Detection is based on EXL's long years of analytics experience advising top US financial firms on effective fraud control measures. It has enabled clients achieve substantial benefits including:

- Increased fraud detection by 27%
- Capturing 3X higher fraud rate amongst referred cases
- 40-50% incremental cost savings from off-shored fraud investigation

Existing application fraud control measures are however costly, time consuming, and less effective

Challenges faced by existing application fraud control measures...

Limited use of data for fraud detection

- Application is approved primarily using SSN and associated validation of SSN
- Limited use of other key data elements captured at the time of application e.g. photo ID, name, address, etc

Limited use advanced algorithms

- Fraudsters are continuously evolving new means to trick the system
- Algorithms used for fraud detection however are dated

Delayed credit decision

- To prevent fraud at the time of application, merchants and creditors require instantaneous credit decision, which is not readily available

...have resulted in ineffective fraud detection and higher fraud losses

Higher referral rate¹
~4%

Lower fraud rate amongst the referred cases²
(% of referrals)
~3%

Higher referral rate¹
~5-6% of revenue²

Lower fraud detection¹
(% of total fraud applications)
~29%

1. Based on EXL's experience working with top US credit card issuer
2. Based on discount revenue earned by the credit card issuer

Sample Illustration Fraud detection process

1 Augmenting in-house data with external vendor data

In-house data
Tom Daniels Application data

First Name* Tom
Middle Initial
Last Name* Daniels
Name on Card* Tom Daniels
Home Street Address* 205 E 45th Street
Home Apt / Suite* 4C
Home Zip Code* 1000117
Do you? Own? Rent?
Date of Birth* 10 28 -
Home Phone Number* 201 456 5858
E-mail Address *tdaniels@gmail.com
Social Security Number* 016 43 2323

Assessing need for external data

Assessing external data requirement	Assessment
Verification checks	
• Is SSN verified	Yes
• Name verified (level of confidence)	Yes 4/5
• Is Age verified	No.

Get external data

Vendor 1

Vendor 2

2 "Additional" data capture and "right" variable selection

Additional information

Applicant Photo ID Number
Tom Daniels 010 000 501

Additional validation 1 Additional validation 2 ...

Name check State check ...

information "Relevant" variable selection

Starting variables	Dropping variables
<ul style="list-style-type: none"> • Application data • Fraud indicators • External bureau • Additional variables 	<ul style="list-style-type: none"> • "Unimportant" • "Unusable" • "Redundant"

"Relevant" variables

□ Variables of interest
□ Variables dropped out

3 Developing simple rules to detect fraudulent applications

Key fraud variable set

- Application data
- Fraud indicators
- External bureau
- Additional variables

Segment 1
In-house algorithm

Segment 2

Segment 3

EXL methodology

Segment 1 Referrals

Segment 2 Referrals

Segment 3 Referrals

EXL's solution brings about higher fraud detection and loss prevention

EXL solution drives higher fraud detection...

Incremental fraud detection (%)
27%

Low referral rate
Prior referral rate: 4%
EXL referral rate: 0.76%
80% reduction

High fraud rate amongst referred cases
Prior fraud rate: 3%
EXL fraud rate: 9.52%
3X increase

...leading to greater operational efficiency

Lower fraud loss (\$MM)
Prior fraud loss: \$23MM
EXL fraud loss: \$17MM
27% reduction

Higher cost savings from offshore investigation
40-50% cost savings

Case Study

EXL successfully deployed Application Fraud Detection at one of the top US card issuers. EXL developed analytical decision process to detect application fraud in instant credit and point of sale environment. The solution having low referral rate of 1.5% and 9.4% fraud rate enabled 58% higher fraud detection and generated ~\$12 MM gross fraud savings.

To learn more about EXL's Application Fraud Detection Services, please write to us at marketing@exlservice.com

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