Citi® Payment Outlier Detection

Intelligent Payment Review

citi handlowy®

Account Payables Challenges

Digital transformation is bringing **speed, transparency** and **efficiency** to payments processing, leading to challenges around payment **accuracy, reliability** and **security.**

There can be several challenges associated with payment transaction oversight. Erroneous transactions can affect accounting and disrupt business continuity.

Payment Risk

Incorrect payments may be processed with no ability to recoup funds

Extensive Manpower

Manual review of all payments takes numerous human hours

Lack of Visibility

Increased chance of undetected errors in payments, particularly for larger data sets

The *Intelligent* Payment Review Tool

- **Sophisticated analytics tool** comparing current payments against historical payments.

- Helps identify **materially different transactions** compared to past trends.

- Powered by **advanced machine learning algorithms** that continually evolve and recalibrate.

- Outliers are **flagged for review and approval or rejection** by nominated users before payment is processed.
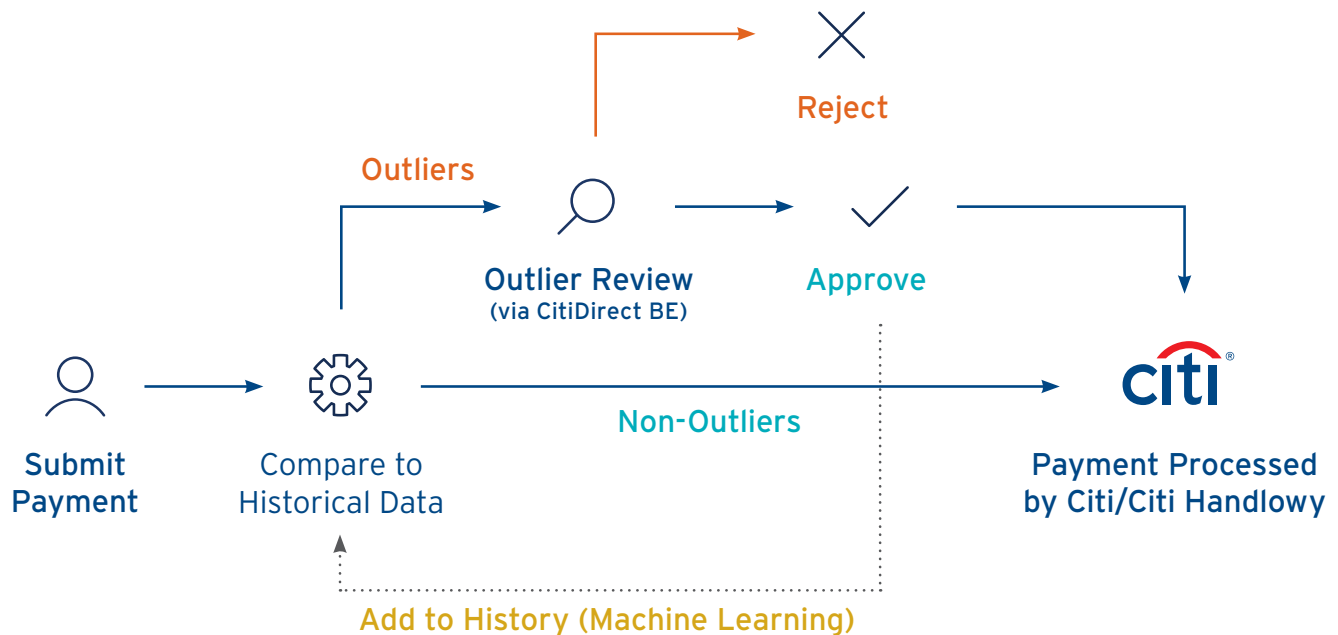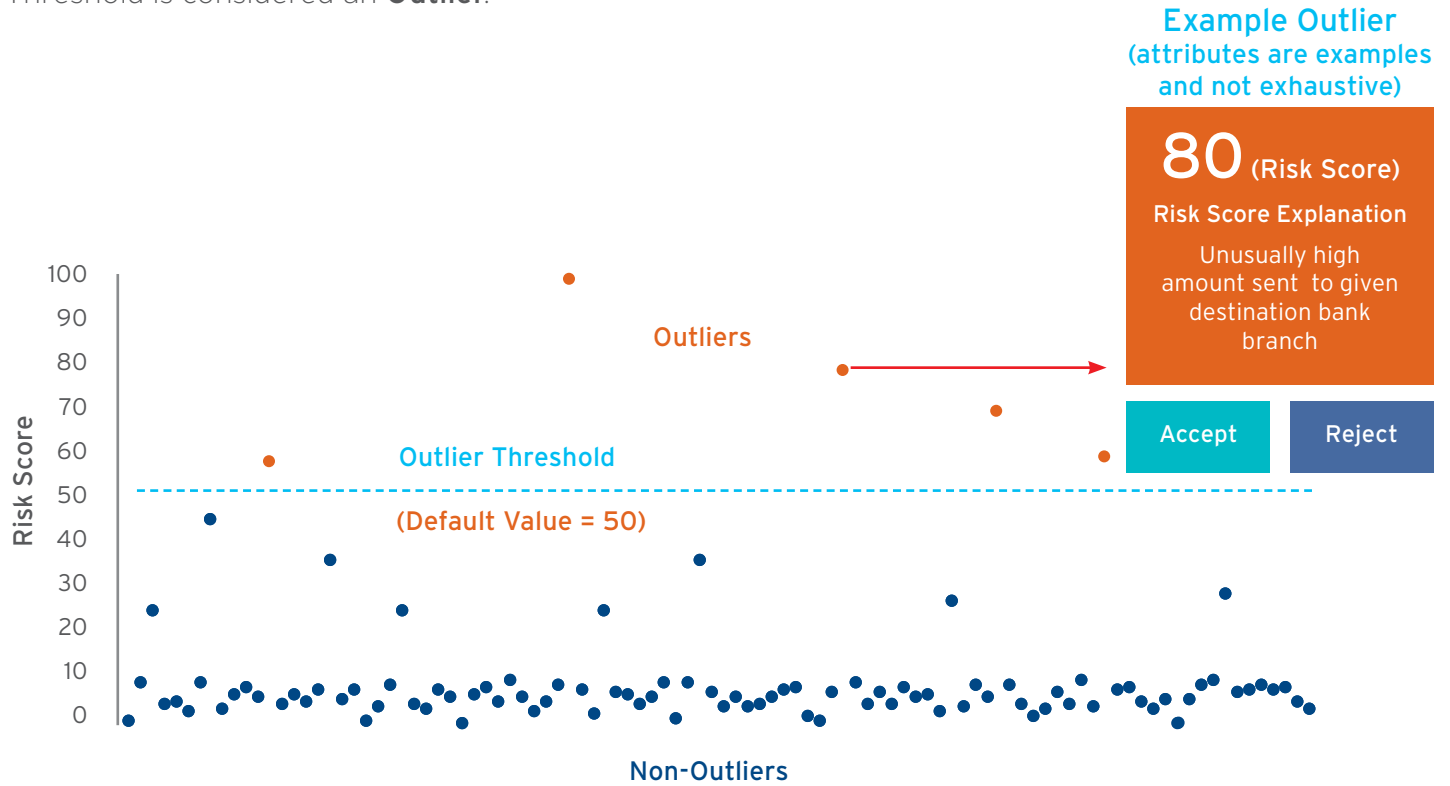

How Does It Work?

1 COMPARE TO HISTORY
Payments are compared to historical data

2 RISK SCORE
A risk score is assigned to eligible payments based on deviation from payment history

3 REVIEW
Payments with a high Risk Score sent to you for additional review

4 RELEASE
Payment released upon approval, otherwise rejected

5 LEARN AND IMPROVE
Machine Learning Algorithm learns based on user input to improve future risk scoring

Citi Payment Outlier Detection can be accessed through CitiDirect BE, within NO development or build required on client systems.

Risk Scoring and How It Works

The **Machine Learning** algorithm compares every transaction to the most appropriate set of data in transaction history and determines whether transaction is unusual or not.

Every transaction receives a **Risk Score from 0 to 100**. Clients decide which payments should go for additional review by configuring the **Outlier Threshold.** Any payment with risk score above Outlier Threshold is considered an **Outlier**.

Example Outlier
(attributes are examples and not exhaustive)

80 (Risk Score)

Risk Score Explanation

Unusually high amount sent to given destination bank branch

| Accept | Reject |

Risk Score

100
90
80 — Outliers
70
60
50 — Outlier Threshold
40   (Default Value = 50)
30
20
10
0

Non-Outliers

Outlier Payments will be identified based on an important combination of potential risk factors
(attributes are examples and not exhaustive)

| Transaction Value | Transaction Day or Time |

Is the amount high for given Beneficiary, Currency, Destination Branch or Executing User?

| Payee Country or Currency | Beneficiary Account |

Is this payment submitted during usual hours/day of the week?

From Offline to Online

	Offline Mode	Online Mode
All payments for nominated accounts and selected payment methods are screened	✓	✓
Outlier transactions are identified, and users notified	✓	✓
Outlier transactions are not processed until approved by designated payment reviewer	✕	✓
The machine learning algorithm continues to allow the system to keep learning from transaction data and the responses provided as part of a continuous re-adjustment of the risk-scoring routine	✓	✓

From Offline to Online

The More You Use It, The Smarter It Gets

The More You Use It, The Easier It Gets

The More You Use It, The More Precise It Gets

Citi® Payment Outlier Detection is a MACHINE LEARNING TOOL

- Over time, your feedback teaches it to provide better results.
- Your organization's intelligence becomes its intelligence.

WEEKS 1 – 3, USE OFFLINE MODE

- It learns from your actions and feedback.
- Become familiar with Payment Outlier Detection features and functionalities.
- Define internal roles and responsibilities to review outlier payments.
- Calibrate tool parameters
  - outlier threshold
  - eligible payment methods and types
  - and more!

WEEK 4 – SWITCH TO ONLINE MODE

Citi® Payment Outlier Detection is now ready to be an essential part of your transaction review and approval process.

The accuracy and performance of the algorithm will continue to improve EVERY TIME you Approve OR Reject outlier transactions. **We strongly encourage you to utilize the tool in Offline Mode before switching to the Online Mode.**

Advantages of Machine Learning Algorithms

Rules-Based (Deterministic)

Starts with a defined classification

Empirical

Needs manual intervention

Low flexibility – cannot recognize beyond rules

"Result(s) based on inputs"

Machine Learning (Probabilistic)

Starts with a training data set

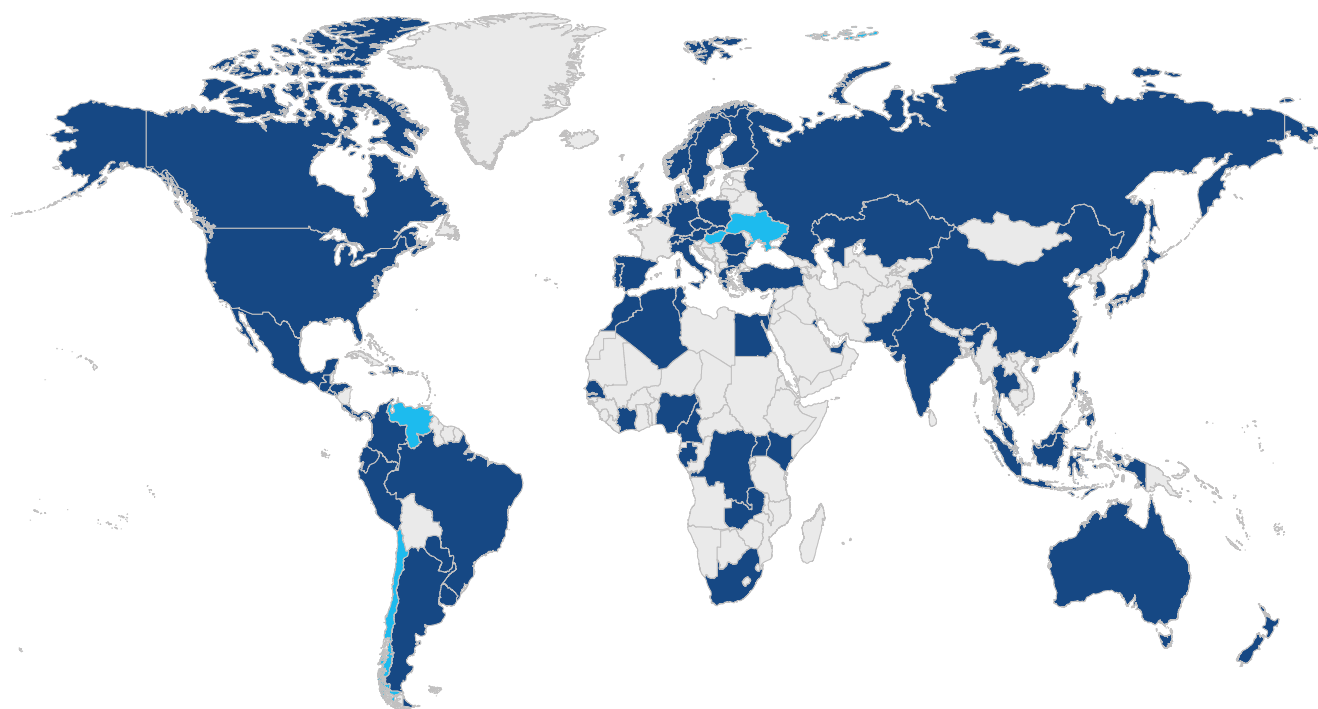Learns from historical data trends, beyond binary outcomes

Minimal manual maintenance effort

High flexibility and wider insights

Self-evolving and self-improving

"Current results based on historic outcomes in the same situation"

Our Global Footprint

North America			
Canada	●	United States	●

Latin America			
Argentina	●	Honduras	●
Bahamas	●	Jamaica	●
Brazil	●	Mexico	●
Chile	●	Panama	●
Columbia	●	Paraguay	●
Costa Rica	●	Peru	●
Dom. Republic	●	Puerto Rico	●
Ecuador	●	Trinidad & Tobago	●
El Salvador	●	Uruguay	●
Guatemala	●	Venezuela	●
Haiti	●		

Africa			
Cameroon	●	Senegal	●
Congo (DRC)	●	South Africa	●
Cote D'Ivoire	●	Tanzania	●
Gabon	●	Uganda	●
Kenya	●	Zambia	●
Nigeria	●		

Western Europe			
Austria	●	Jersey	●
Belgium	●	Luxembourg	●
Denmark	●	Netherlands	●
Finland	●	Norway	●
France	●	Portugal	●
Germany	●	Spain	●
Greece	●	Sweden	●
Ireland	●	Switzerland	●
Israel	●	United Kingdom	●
Italy	●		

CEEMEA			
Bulgaria	●	Morocco	●
Czech Rep.	●	Pakistan	●
Hungary	●	Qatar	●
Romania	●	Tunisia	●
Slovakia	●	Turkey	●
Algeria	●	UAE	●
Bahrain	●	Poland	●
Egypt	●	Kazakhstan	●
Jordan	●	Russia	●
Kuwait	●	Ukraine	●
Lebanon	●		

Asia			
Australia	●	N. Zealand	●
Bangladesh	●	Philippines	●
China	●	Singapore	●
Hong Kong	●	S. Korea	●
India	●	Sri Lanka	●
Indonesia	●	Taiwan	●
Japan	●	Thailand	●
Macau	●	Vietnam	●
Malaysia	●		

● Country Live

● Not Available