Collibra

Automated data quality checks for financial FxRate data

Collibra Data Quality addresses FX rate reliability without rules writing

Overcoming challenges

Reliable and up-to-date FxRate data is essential when exchanging one currency for another, which is typically determined by the supply and demand in the market. Managing accurate exchange rates for multiple currency combinations is extremely challenging given the scale and rapid change in variables.

Foreign exchange (FX) rate volatility exposes banks to various risks, including transaction, conversion, credit, interest rate, and inflation risks, which can reduce the bank's profitability. Notably, with increasing exchange rates, international debtors may find it harder to repay their debt, leaving the bank open to potentially massive and debilitating losses.

Use case: The massive scale of FX pairs and data quality checks

While there are 28 major pairs of these currencies actively traded on the Forex market, banks may need to consider the reality of over 2300 pairs that are possible for loans and transactions with emerging markets, with 5% of these trading and 95% being illiquid. For our example, let's consider just these major pairs with a simple number of checks.

Key outcomes of Collibra Data Quality

- Automatic correlation and relationship analysis
- Histograming and Segmentation analysis
- Anomaly detection
- Currency pair tracking
- Schema evolution and changes
- Avoiding maintenance of static rules
- Duplicate detection for redundant currency pairs

28 major FX pairs * 8 checks = 224 rules to manage. Your data quality checks may also increase, which is often the case over time.

28 possible FX pairs * 20 checks = 560 rules to manage. And if we were to consider all possible pairs, the number of data quality rules to write and manage over time grows exponentially.

2300 possible FX pairs * 20 checks = 46,000 rules to manage. For all of these, you may have any number of use cases that you need to check for. You need to ensure that the data was copied correctly, ensure the level of precision at the decimal, and that the information from a source provider is accurate. You may need to flag exceptions on a currency pair, while not flagging others, capture data steward interactions vs repeating corrective actions.

This only becomes more challenging when you consider the number of false positive alerts that you would need to manage. Managing signal-to-noise ratio and confidence factors at scale is important. This means having a way to easily down-train individual foreign currencies that don't fit your model.

Clearly a manual approach with rules would be labor intensive and unsustainable over time. An intelligent, automated, and timely solution is critical to maintaining trust for FX data and rates.

Our solution

It is important to note that Collibra's data quality checks are tailored specifically to your data profile automatically. Our ability to track unique numerical outliers with AI solves this problem with zero rule writing and in just a few clicks. This makes it easy for you to kick-off and monitor multiple FxRates in a push button manner for a number of scenarios and use cases, even if you have a large number of currency pairs to consider.

At every one of your columns you can profile them day over day, making it possible to turn off certain days like the weekends,

select the AdaptiveRules that you want to begin with, and compare historically what matters most with your FxRate data and use case.

Conclusion

FX Rate data means very little by itself. It's the ability to manage these currency pairs and combine them with accurate and reliable data across the entire organization that provides value. Different datasets may have varied columns, relationships, and time windows, making this difficult to manage.

Collibra Data Quality takes an auto-learning approach where it runs fitness tests against each dataset individually with AI for smart guidance. The outcome is an automated and elegant way to have consistent controls and outcomes across all your datasets, helping to solve for FX rate issues quickly that are specific to the banking industry.
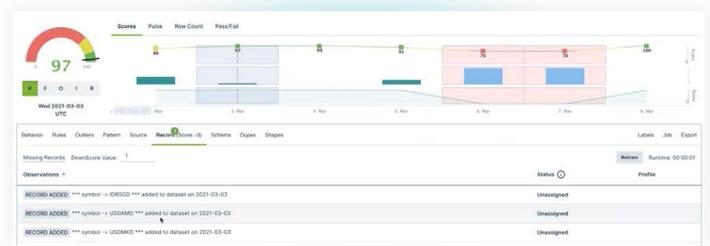
In this example, in one run and without any previous knowledge or setup for FxRate our anomaly detection has identified three new currency pairs that are newly available. Having this quick record level detection means there is now no need to build out a long reference list.
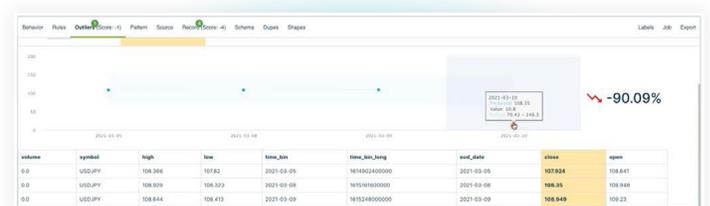
And in that exact same run, our anomaly detection quickly finds an abnormal end of day value on 2021-03-10 for the USDJPY trading pair. Clearly we can see in the table below that the value has been truncated by one decimal point, likely due to a broken ETL process

Ready to get started?
Talk with your Collibra representation and [learn more](#).