

A Guide to Merchant Payment Cleansing

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Financial institutions (FIs) have found themselves investing in digital transformation over the last 15+ months to bring stability to their account holder interactions and customer experiences. The pivot was swift and crucial to meet demand, as customers' utilization of digital platforms forced the adaptation of the traditional brick-and mortar banking model.

According to Celent research, what has also shifted in recent years is the understanding of data as a strategic asset. The concept of leveraging payments data to enhance banking services for corporates has been around for several years. Indeed, it has been widely touted as something of a silver bullet for banks wishing to respond to growing competitive challenges¹. Payments data monetization is now high on the investment agenda for a growing proportion of the market.

Financial institutions are sitting on a wealth of rich data, and this data, if foundational, can be the key driver within the ecosystem to remain competitive, grow revenue and provide unparalleled service. The relevant insights that live deep in transaction and payment data should be the basis for activating a data-driven strategy that can be used beyond marketing in a variety of ways to build customer relationships, improve communications, provide a better user experience, and innovate products and services.

Data is the lifeblood of a modern institution, yet traditional silos and rigid application structures can make integration a challenge.² Starting with clean, usable data that can empower an institution with insights can change the narrative. Merchant payment cleansing is a foundational element of an organization's data strategy.



What is Merchant Payment Cleansing?

Transaction cleansing is a critical tool that allows financial institutions to better understand customer transaction behavior and model spend patterns. The content of merchant payment transactions is often cryptic and non-descript, with a significant number of transaction variants for a single merchant. This makes it difficult to distill into a clean merchant name - and as a result, makes them unusable for data modeling, customer analysis, or integration with other solutions such as CRM or PFM. The cleansing solution ingests a raw transaction string and transforms complex descriptions into a cleansed business name, and assigns valuable metadata such as a detailed business category. This metadata provides context to the merchant, so you know, for example, whether Pirate's Cove is a Miniature Golf establishment or a Themed Restaurant.

An FI can leverage this clean, tagged data to provide a more organized online banking experience, avoid transaction disputes by providing better online banking statements, and reduce IT man hours, lag time and quality issues. It is impossible to truly understand every transaction string, but institutions should expect more from their merchant payment cleansing partners than they are getting today.

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Key Considerations When Choosing a Merchant Payment Cleansing Partner

FIs should evaluate vendors carefully and find a partner who will deliver the match rate, speed, quality, and other specifics to lay the groundwork for a solid data game plan. Don't be fooled by match rate metrics, and ask the right questions to be sure the process the vendor is taking will produce highly accurate results.

1. Match Rate

Match rate describes the percentage of transactions for which a cleansed business name and category is provided. Match rate is typically the first metric that FIs will evaluate. After all, who doesn't want to get as many transactions cleansed and categorized as possible?

It's an important metric, but beware that it can be deceiving - a match rate approaching 100% sounds impressive, but it might be too good to be true and should prompt these important questions, listed here on the right.

Financial institutions should look beyond what is on the marketing slick and evaluate which merchant payment cleansing vendor can deliver the best match rate on its data. The proof is in the pudding.

- ◆ **How large of a data set was used to generate the match rate metric?**
Small data sets, or data sets that don't include many transactions from single location merchants (which are typically more challenging to cleanse) may show a higher match rate but might not be reflective of the match rate that can be delivered on your data.
- ◆ **Was any data excluded from the calculation?**
Typically 5-10% of the transaction descriptions are too vague or dirty to do anything with at all.
- ◆ **Are all types of transactions being cleansed?**
A merchant payment cleansing solution should identify businesses where consumers are making payments, but should also be able to identify payroll receipts, tax refunds, stimulus payments, investment accounts, and more. ACH, bill pay, and deposit account transactions are just as important as card swipes.
- ◆ **How long did it take to reach that match rate?**
Speed will be discussed more on page 4.

2. Merchant Granularity

Granularity means the specificity and the precision of cleansing and enrichment of a transaction. Let's look at the merchant identification component first.

Amazon is the most frequently transacted business in existence. However, not every Amazon transaction is the same. There are at least 27 different business units like Amazon Music, Amazon Prime, Amazon Web Services, Amazon Pay, and many more.

Uber isn't just ride share, it's Uber Eats and Uber Freight. Major financial institutions, like Wells Fargo, have dozens of different products that people are making payments for. Merchant payment cleansing should treat all of these as distinct merchants.

Merchant identification and categorization should be as granular as possible.

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3. Category Granularity

It's easy to classify a business to a general category, like restaurants. It takes more effort to categorize all the restaurants based on cuisine or style. A high-end steakhouse is different from a family restaurant when you are trying to understand the spending habits of your customers. 'Shopping' can describe many distinct purchases - a transaction at a men's clothing store, a women's clothing boutique, or a home furnishings store. Specific categorizations make a difference.

Taxonomy can also reflect other attributes of a purchase. For example, identifying transactions as recurring subscription payments could allow a financial institution to know which of its cardholders use its product as their primary card and which customers are most sticky.

Financial institutions should demand that a merchant payment cleansing vendor deliver specific categorization into a robust taxonomy so the cleansed data can help the FI make strategic decisions.

4. Accuracy

For merchant payment cleansing, accuracy rate is measuring the percentage of enriched rows that were returned completely correct. Was the merchant name correct? Was the business category correct? If the answer is yes to both, then that row is accurate. If the answer is no to either question, then that row is not accurate. Accuracy should not be mixed with match rate. Only transactions where a result is returned should be evaluated for accuracy.

The gold standard for evaluating accuracy is a manual review of the enriched merchant name and categorization returned for each transaction. A statistically significant randomized sample of transactions should be pulled from a larger set of cleansed transactions and graded row by row. This will ensure that all transactions, not just the easy ones, are part of the accuracy evaluation. The data should have gone through the same process that will be used in production. Don't allow cherry picking or massaging of data before it's graded.



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5. Speed and Scale

Speed measures the time required to process a set of transactions while scale is a measure of the number of transactions. Both are critical - an FI should make sure the vendor can deliver in alignment with production needs.

It's easy to deliver good match rate, accuracy, and granularity with a small data set and a lot of time. Leading merchant payment cleansing vendors can deliver great match rate, accuracy, and granularity on a large data set in a short period of time. Demanding speed and scale in a test will help FIs weed out the pretenders and will ensure that the results you see in a test are representative of what you can expect in production. Ideally, you want a solution that can deliver the lion's share quickly after a short training period on your specific data.

Extensive transaction knowledge base and human supervised AI delivers accurate results quickly, within days, not weeks or months.

Key Inputs to Deliver Speed and Scale

Humans are critical to highly accurate and granular merchant payment cleansing, but humans alone can't deliver speed and scale. The detailed transaction knowledge base and rules library are the key inputs to a machine learning and AI infrastructure that can accurately cleanse and enrich millions of transactions a day. Segmint's technology takes each new raw transaction received and matches it to the most relevant human-verified entry in the knowledge base. This ensures, even at tremendous speed and scale, a human touch is part of every single enrichment.

Segmint's technology will also provide suggestions back to the team of library scientists about where new transaction strings may fit best into the knowledge base, creating a virtuous cycle of humans and machines working together to create an optimum result. As more transactions are received, the output is continuously optimized over time.

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Success & Competitive Advantages with Use Cases

Accurately identifying and matching millions, or even billions, of transactions and transaction descriptions to the right merchants requires a lot of time and resources that institutions of all sizes do not have.

A vendor that can accurately identify, tag, and categorize financial transactions including credit card, debit card, ACH, bill pay, and more can lead to profit opportunities within the ecosystem and provide a competitive advantage.

Statement Cleansing & Enhanced CX Experience

Your customers have a 5-star experience with your online banking portal with clean transaction descriptions.

Targeted Marketing

Customers making transactions with competitive institutions or using competitive products, like P2P or merchant processing, can be identified to receive targeted messages about products that your FI offers.

Data Warehouse Enrichment

Transactions stored in a data warehouse can be appended with enriched metadata from merchant payment cleansing to enable faster and more meaningful reporting and insights.

Data Science & Modeling

Stop wasting time cleaning and standardizing your data. Leverage a proven and robust taxonomy and enhance your transaction data with most accurate data tags and rigorous categorization.

Optimize Resources

Free up your call center with easy-to-read transaction descriptions within the online and mobile banking platforms. Limit the calls that customers initiate thinking there is fraudulent activity within their accounts.

AI & Chatbots

The more accurate your data is tagged and categorized, the faster your artificial intelligence and chatbot investments can respond to requests.

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The Segmint® approach to Merchant Payment Cleansing...

Segmint is the industry leader in Merchant Payment Cleansing. Segmint's approach uses an advanced process that has been refined over 13 years and delivers high match rates, near 99% accuracy, and unparalleled granularity, all with the speed and scale needed to support the largest financial institutions in the world.

Foundation Built on People

The foundation of the Segmint Merchant Payment Cleansing process is people. Segmint has a team of advanced degree library scientists whose sole focus is building a curated knowledge base of merchants and transaction variants that are classified to a detailed business category taxonomy. For each new FI, the Segmint team trains its knowledge base to reflect the unique set of transaction and merchant variants, ensuring that a high match rate, outstanding accuracy, and detailed granularity will be delivered for the FIs transactions.

Segmint's human element, combined with AI and machine learning ensures that it can pivot quickly to respond to a client's unique use case. For example, if an FI wants to run a marketing campaign to target businesses that are using a competitive merchant processing solution, Segmint's team of library scientists will review that FI's transactions and ensure the knowledge base is up-to-date and complete for that category.

Digging Deeper

Transaction data is notoriously difficult to comprehend. AI and machine learning can't replace humans yet.

Here are a few examples of transaction descriptions that only a human researcher could accurately classify:

"Raiser LLC EDI Payment" =
Payment to an Uber driver

"Doctors Associates" =
Subway franchisee royalty payment

"MCW305-RESEARCH" =
Purchase at a Mister Car Wash

Feeding a knowledge base with detailed human research and intelligence is a foundational step towards a merchant payment cleansing solution that can accurately scale.

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Optimum Output

In the short example below, both debit and credit payments are identified with a specific normalized merchant name and assigned to a detailed business category. ACH, deposit transactions, and card transactions can all be cleansed and enriched.

RAW TRANSACTION DESCRIPTION	MERCHANT	CATEGORY 1	CATEGORY 2
MERCHANT REFUND TERMINAL 469216 AMAZON MUSIC 888 802 3 WA XXXXXXXXXXXXX5104	AMAZON MUSIC	MUSIC STREAMING SERVICES	ENTERTAINMENT
MERCHANT REFUND TERMINAL 449215 PAYPAL HAUTE-LOOKI N 402 935 7 CA XXXXXXXXXXXXX5867	HAUTELOOK	DISCOUNT STORES	GENERAL MERCHANDISE & SHOPPING
MERCHANT PURCHASE TERMINAL 490641 JTV 161355552 40F5 800 55083 TN XXXXXXXXXXXXX0117	JEWELRY TELEVISION (JTV)	JEWELRY STORES	GENERAL MERCHANDISE & SHOPPING
TERMINAL 401637 VISA TRANSFER CASH APP*CASH OUT XXXXXXXXXXXX9378	CASH APP	PEER TO PEER PAYMENT SERVICES	TRANSFERS AND WITHDRAWALS
CTDOL UNEMP COMP CWE 210708 SEC: PPD	CONNECTICUT UNEMPLOYMENT COMPENSATION	UNEMPLOYMENT BENEFITS	TAXES AND FEES
GOODWILL OF WEST DIRECT DEP 210708 SEC: PPD	GOODWILL INDUSTRIES INTERNATIONAL PAYROLL	PAYCHECK - RETAIL INDUSTRY	SALARY AND WAGES

The final step is a manual review of the output by a Segmint business analyst who grades the results for accuracy and determines if any adjustments can be made to optimize match rate. Match rates and accuracy are measured and monitored on an ongoing basis.

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The Results Speak for Themselves

In a recent bake-off, **Segmint delivered results faster and assigned more than 10x the number of detailed merchant categories than the leading competitor.** The client is now using Segmint's cleansing results to more accurately model customer usage and retention for its credit card product.

In another recent data cleansing project, Segmint classified \$1 trillion in transaction dollar volume in a single day for a large financial institution. This financial institution was able to analyze the flow of payments through their systems, while signaling and modeling the impact of economic activity.

Segmint's Merchant Payment Cleansing solutions consistently outperforms the competition in head-to-head bake-offs.

“
Segmint provided us clean data to fully identify member transaction activity, unlocking new insights that will influence critical decisions about products and services offered to our members. Additionally, this cleansing produced unique data that allows us to better serve and preserve our relationships with member cardholders and drive strategic product decisions.”

-- Raj Prasad, Sr. Assistant Vice President, Data Science and Analytics from Redstone Federal Credit Union

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Key Takeaways

Data-driven decision-making is no longer optional for financial institutions with customer transaction data holding a wealth of valuable insights that can help an FI improve its bottom line. Every FI is going to need a merchant payment cleansing partner to help it unlock the value in this data, better understand customer transaction behavior and model spend patterns, while simultaneously giving the institution a competitive advantage through multiple use cases.

FIs need to select a partner that can deliver match rate, granularity, accuracy, speed, and scale for all types of transactions. Be skeptical of AI only solutions - the challenging nature of financial transactions requires a process that intelligently uses humans and machines to deliver the quality output that an FI will require. And don't be fooled by match rate - while oftentimes metrics are the driving factor in choosing a partner - the right merchant payment cleansing solution will deliver a holistic approach.



SOURCES

¹ Celent Report: *EXPECTATION VERSUS REALITY FOR PAYMENTS DATA MONETIZATION* Identifying the data led services corporates want
Kieran Hines, Senior Analyst 08 June 2021

² Celent Report: *TECHNOLOGY MODERNIZATION AND THE ROLE OF THE ECOSYSTEM* Bob Meara and Stephen Greer June 11, 2021

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