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# Datos Matrix: Payment Orchestration Vendor Evaluation

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Thad Peterson and Ron van Wezel

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# Introduction

Merchants have to deal with an increasingly complex payments ecosystem. Companies are looking for the flexibility to harmonize their payments processing, profit from local market conditions for better authorization rates and cost reduction, minimize operational risk (e.g., outages), and simplify acquiring relationships when possible.

In recent years, a new category of merchant service providers called payment orchestrators have established themselves to support merchants in their payments optimization journeys. Payment orchestration is the process of efficiently managing a diverse range of payment methods, providers, and channels within a unified platform to ensure seamless payment processing for businesses.

Working with a payment orchestrator, merchants have one point of contact for their payments activity, avoiding the need for working directly with multiple integrations with different payment gateways. The result is cost savings, improved payment success rates, and, in many cases, superior user experiences for customers.

This report explores key trends in payments orchestration. It discusses new market needs and challenges and provides high-level provider market analysis and projections.

## Methodology

Datos Insights invited several established providers of payment orchestration solutions to respond to a request for information (RFI). Six vendors agreed to participate in the study: ACI Worldwide, BPC, BR-DGE, Celeris, Cellpoint Digital, and Spreedly. Datos Insights analyzed the responses and organized briefings with each vendor. We also spoke with merchants and other clients of these vendors. In addition, we leveraged our existing expertise and extensive payments research database to develop this report.

This report highlights the capabilities of the participating vendors and ranks them according to Datos Insights' proprietary vendor evaluation methodology.

# The Payments Orchestration Market

Market trends impose demanding requirements on global merchants to manage payments effectively and efficiently (Table A).

**Table A: The Market**

Trends	Implications
Consumers expect fast and seamless checkout experiences regardless of device or venue.	Merchants operating in highly competitive markets need to offer their customers seamless checkout journeys or risk losing the sale and damaging the brand’s value to the customer.
The payments ecosystem is becoming increasingly complex.	Global merchants must support digital channels and local payment methods to allow customers to pay how they want. Payment choices need to be broad enough to capture the majority of consumer payment types.
Regulations and standards are changing.	Merchants must deal with changing regulations and industry standards for the countries in which they operate. This is an increasing burden not only for merchants but also for PSPs and orchestrators.
Merchant payment management is becoming strategic.	Merchants are looking for acquirer-agnostic payments processing to lessen dependence on individual providers, optimize conversion, and reduce payment costs.

Source: Datos Insights

As a result of these trends, there is a business case for merchants to further optimize their payments processing by working with multiple acquirers globally.<sup>1</sup> This setup provides critical redundancy in case of nonperformance or even the demise of an acquirer (e.g., the Wirecard scandal in Germany). It also allows the company to deploy intelligent routing of payments to different acquirers to optimize cost and performance. The enterprise can be acquirer-agnostic and can switch quickly among its acquirers. This way, it can achieve

<sup>1</sup> See Datos Insights’ report [Optimizing Merchant Payment Acceptance: Benefits and Risks of Multi-Acquirer Models](#), August 2022.

competitive pricing conditions and benefit from the best services that each acquirer can provide in a certain region or country.

However, internally managing an acquirer-agnostic structure requires a significant investment by merchants to orchestrate the multiple acquirers they work with into a harmonized, consolidated processing experience. To reduce the complexity of the operation in this structure, merchants can choose to work with a payment orchestrator, which allows merchants to select from a menu of different PSPs, acquirers, and payment services through a connection with a single provider.

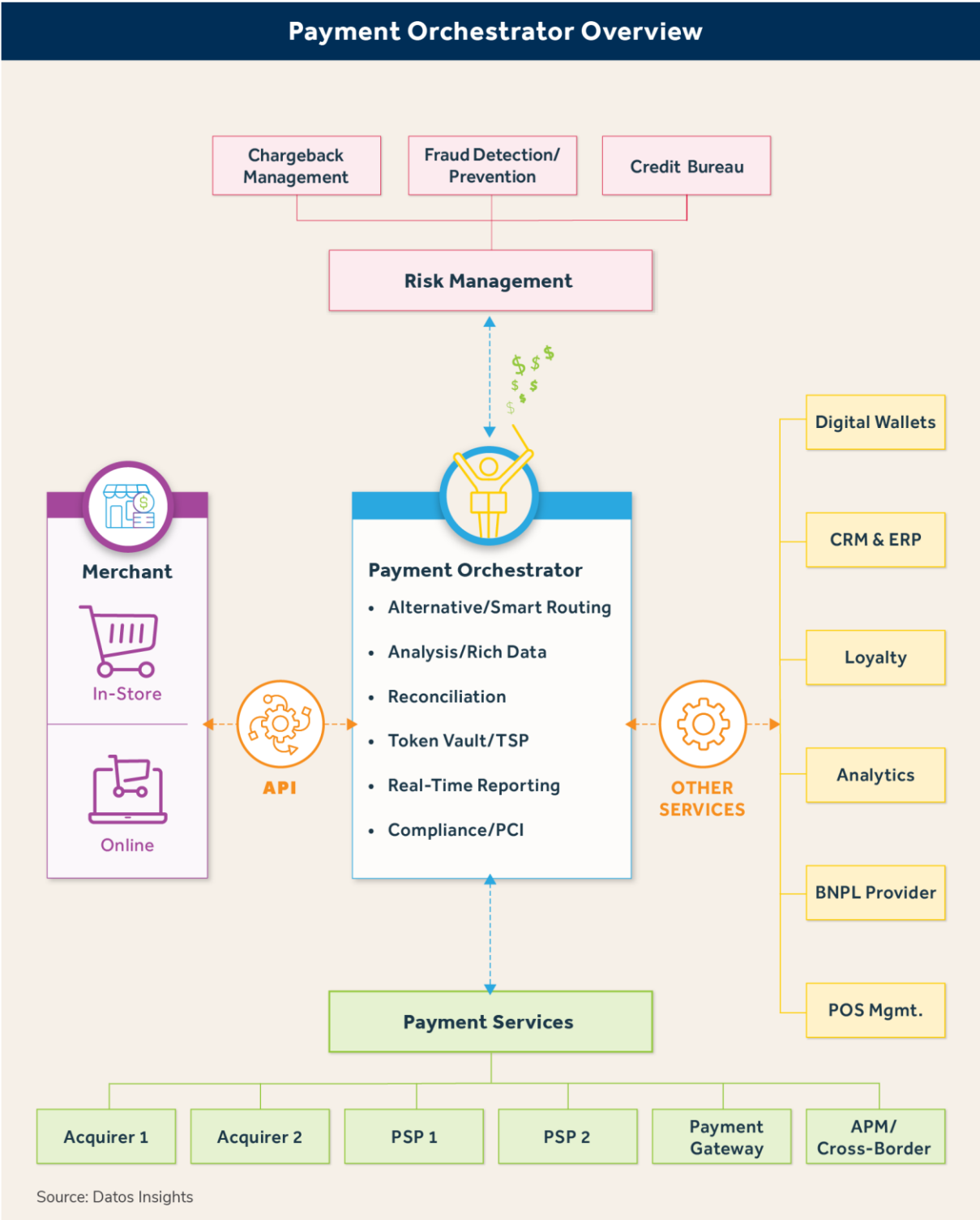
# The Payment Orchestration Model

Payment orchestration has become a widely used business term in today's payments market, and it may have different meanings for different people. Generally speaking, three distinct categories of merchant service providers provide some form of payment orchestration:

- **Acquirers/processors:** Processors enable their merchant clients to connect to multiple payment methods using a single API. These processors act as acquirers in some countries or regions while working with acquiring partners and gateways in others to maximize coverage and optimize performance. Processors own the merchant account and consolidate payment processing and funds flow on behalf of their clients.
- **Gateways to local payment methods:** Specialized providers such as Boku and PPRO provide access to local/alternative payment methods around the globe. Their clients are acquirers/processors and merchants that need a provider to support local payment methods in addition to their core global card brand offerings. They have established contracts with local banks and other providers in multiple countries, making it easy and potentially less expensive for their clients to add new local payment methods.
- **"Pure-play" or technical payment orchestrators:** These companies provide independent and acquirer-agnostic orchestration platforms as a service to merchants. Merchants can connect to nearly any PSP, acquirer, processor, fraud management system, or other third-party software offered by the orchestrator. Such technical payment orchestrators are independent of any acquirer or processor, managing the different APIs but leaving the choice of providers and contractual arrangements to the merchant. Merchants can build resiliency in their payment processing by connecting to different processors in one region. This enables merchants to quickly reroute payments in case of outages or switch payment volume between processors based on the latter's performance or transaction cost.

This report focuses on the last category of providers, further called "orchestrators." Providers in this category have no acquirer processing platform owned by themselves, and they have no preferred acquirer/processor relationships. Figure 1 provides a schematic overview of the technical orchestrator model.

Figure 1: Orchestrator Model





Acquirers/processors such as Adyen, Fiserv, Global Payments, Stripe, and Worldpay do not qualify as pure-play orchestrators for the purpose of this research as they are not acquirer/processor-agnostic. This doesn't mean that these companies are in any way inferior to the evaluated orchestrators; their processing models can work better for some merchants, while others may prefer the agnostic orchestrator model. Both models have benefits and challenges. In fact, orchestrators use many acquirers/processors as gateways to process transactions.

The payment orchestrator value proposition is to enable merchants to easily connect with providers of payment services, risk management, and other services without them having to manage multiple integrations. Orchestrators go to market directly to merchants or provide white-labeled services to PSPs or acquirers/processors to complement the latter's offering. The direct model is only economical if sold to midsize and large enterprises (i.e., annual revenue over US\$50 million). Partnerships with PSPs or acquirers typically serve the small and midsize market.

## Functionality Offered by Orchestrators

Orchestrators can provide the following functionality:

- Smart payment routing
- Vault for storage of tokenized cards
- Reconciliation and reporting
- Fee management
- Management information
- Integration options
- Risk management
- Security and compliance

These features are further explained below.

## Smart Payment Routing

Interruptions in payment processing can have significant negative impacts on a business, leading to declined transactions, checkout abandonment, and decreased customer retention. To safeguard the revenue stream and ensure a smooth payment experience, a multi-acquirer setup allows the merchant to better manage these risks. It provides the flexibility to work with different payment providers, eliminates reliance on a single provider, and safeguards payment flows from unexpected outages or disruptions.

Smart (or intelligent) payment routing is a crucial feature in payment orchestration, providing businesses with greater control over their payment strategy. This feature allows customization of payment flows, implementation of dynamic load distribution, reduction of transaction costs, A/B testing of different processors, and the use of fallback routing and cascading to an alternate provider in case a payment provider becomes unavailable.

For enterprise merchants, having access to multiple payment integrations with acquirers, PSPs, gateways, and other stakeholders allows them to enhance payment acceptance rates and reduce processing fees. With more options available, they can choose the most suitable provider for specific transactions, optimizing costs and improving payment success rates.

The following are features of smart payment routing:

- **Dynamic retries:** If the preferred gateway declines the transaction in case of rejections, false positive declines, or system errors, it can be automatically retried through a different provider. Fallback rules can be implemented to address false positives and ensure business continuity. Instead of immediately aborting the payment process when a transaction is flagged as potentially fraudulent, a fallback rule allows for a transaction retry or alternative processing path. If the merchant's preferred gateway declines the transaction, it can retry using a secondary gateway. So-called "soft declines" can happen for a variety of reasons, and many of these apparently unsuccessful transactions can be "saved" using one or several retry approaches.
- **Load balancing:** Load balancing is a technique that automatically switches transactions between different payment providers, ensuring that the most efficient and high-performing providers handle critical parts of the transactions. This not only enhances the overall payment processing speed but also reduces the risk of soft or hard declines for high-risk merchants.

- **Least-cost routing:** Fees to process different transaction types may be priced differently based on the processor's relationship, the merchant category code, or the payment type. A payment orchestrator can route the transaction to whichever processor will provide the merchant with the lowest transaction cost for that transaction type.
- **A/B testing:** This allows merchants to compare multiple payment solutions directly. A/B testing involves simultaneously using different payment providers for specific segments or categories of transactions and comparing their performance. It allows businesses to evaluate factors such as success rates, processing times, cost, and customer experience with different providers, helping them make informed decisions about which provider is the most suitable for their needs in different circumstances.
- **Waterfall routing or cascading:** This feature maintains business continuity in the face of technical problems, outages, or other challenges. If a transaction encounters an issue with the primary PSP, the orchestration platform automatically forwards the transaction to an alternative service provider. This process continues until the transaction can be successfully processed. By using this approach, the chance of completing the transaction successfully significantly increases.
- **Geographic optimization:** Geographic routing is relevant to selecting the cheapest PSP for the region and reducing decline rates. Global processors may have regional strengths or weaknesses, and the merchant can choose the optimal setup through the orchestrator. Also, local providers may charge lower processing fees and deliver higher authorization rates.
- **Risk-based routing:** Depending on the risk assessment for a certain transaction, the platform will determine the best routing path to send transactions to the most relevant providers and improve authorization rates.

### Vault for Storage of Tokenized Cards

Businesses must comply with strict regulations to ensure the secure storage of sensitive payment data and obtain a PCI-DSS Level 1 certification when processing credit card transactions. However, implementing and maintaining this infrastructure can be costly and complex, prompting many e-commerce businesses to rely on their PSPs for data storage. This process involves tokenization, wherein card data is encrypted and stored by the PSP. At the same time, the business retains a token to be used for future transactions on its e-commerce platform. This method frees the business from the burden of securing sensitive payment data directly.

However, this convenience comes with a potential drawback known as provider lock-in. If the business wants to switch to a different PSP or if its existing contract is unexpectedly terminated, it faces challenges. Transferring customer data to a new provider is expensive and time-consuming, and asking customers to re-enter their payment data can lead to trust issues and lower conversion rates. Thus, provider-level tokenization can create a strong lock-in effect with the current provider that's difficult to unwind.

Businesses can utilize an orchestrator to store their customers' payment data to address this issue and avoid provider lock-in. This way, tokenized payment instruments can be processed through any PSP connected to the orchestrator's platform, giving merchants the flexibility to reroute payments to a new provider quickly.

The following are features that orchestrators provide to relieve merchants of the task of staying compliant with data security requirements:

- **Portability:** Payment data can be stored and tokenized by the payment orchestrator, reducing a merchant's dependency on a single acquirer or PSP and providing more control over payment processes.
- **PCI 3DS-certification:** This ensures that the platform complies with the Payment Card Industry Data Security Standard (PCI-DSS) 3DS requirements, which enhances security for online card transactions.
- **PCI-DSS Level 1 compliance:** This provides a high level of security for storing and tokenizing customers' payment data, reducing the risks associated with handling sensitive financial information.
- **Data security compliance:** Compliance with data security legislation, for example, GDPR in Europe and CCPA in California, is essential for handling the customers' personal data in those markets, ensuring privacy and data protection.

## Reconciliation and Reporting

Reconciling transactions in a multi-acquirer setup can be a complex and challenging process for enterprises. Different service providers may have varying approaches to providing reconciliation data, leading to differences in the timing, format, semantics, and granularity of the data, particularly based on the underlying payment methods.

The orchestrator can address these challenges by standardizing the reconciliation process, regardless of the PSP and payment methods used by the business.

The following are reconciliation and reporting features:

- **Standardization:** The orchestration platform standardizes the reconciliation data, ensuring a consistent and unified format for all transactions, regardless of the service provider or payment method involved. Settlement data is matched to the platform's transaction data to identify any differences, providing an end-to-end view of transaction success, payouts, and associated metrics across all the providers being used by the multinational corporation.
- **Collating conflicts:** The platform's reconciliation overview brings together any identified conflicts that may arise during the reconciliation process. These conflicts can include incorrectly calculated transaction fees, missing reconciliation data, and unidentified transactions. The reconciliation overview presents conflicts in a clear and organized manner, making it easier for staff to identify and address any discrepancies.
- **Efficient resolution:** This feature allows for easy resolution of identified conflicts, streamlining the reconciliation process and simplifying the task for employees.

## Fee Management

Enterprises need a solution for managing and tracking a wide and complex range of fees incurred during payment transactions. Orchestrators support different fee calculation models, including blended pricing and Interchange++. They ensure accurate and flexible fee calculations in real time based on various transaction types, including intra- and inter-regional transactions, personal and corporate cards, and specific transaction categories.

The following are fee management features:

- **Support of diverse fee types:** This enables businesses to define various types of fees, such as transaction fees (with different price points for specific transaction types and processors), recurring fees, monthly fixed costs, minimum commitments, and tiered pricing structures.
- **Independent fee verification:** The platform compares the applied fees with the information received from service providers during post-processing (reconciliation and settlement). This way, the orchestrator serves as an additional independent data source for validating the accuracy of fees.

- **Cost-effective transaction routing:** Detailed fee structures enable enterprise merchants to identify lower-cost payment processors and forward transactions through the most cost-effective channel. This ensures optimal routing decisions and cost savings.

## Management Information

Orchestrators can provide a single dashboard or interface to enable merchants to analyze trends, measure performance, and test customer uptake of new initiatives. The following are features:

- **Management dashboard:** Orchestrators can provide role-specific dashboards with customizable widgets to provide relevant and actionable insights to different departments.
- **Benchmarking:** The platform has a line of sight into hundreds of payment services and billions of transactions each year, enabling the orchestrator to benchmark performance across different providers.

## Integration Options

Orchestrators can offer a comprehensive suite of payment integration options to streamline the checkout process. Features include the following:

- **Plug-ins for commerce platforms:** Plug-ins are made available so that merchants can easily integrate into various e-commerce platforms such as Shopify.
- **Software development kits:** These enable smooth payment integration into mobile apps, ensuring seamless payment experiences for customers using mobile devices.
- **Virtual terminal:** This feature caters to mail-order and telephone-order businesses. The virtual terminal enables businesses to manually enter payment information for processing.

## Risk Management

Orchestrators can provide a risk management tool to support merchants in their risk management and fraud prevention strategies. This tool can be used independently, integrated with external tools already used by the merchant, or integrated with a third-party risk management service offered as a value-added service by the orchestrator.

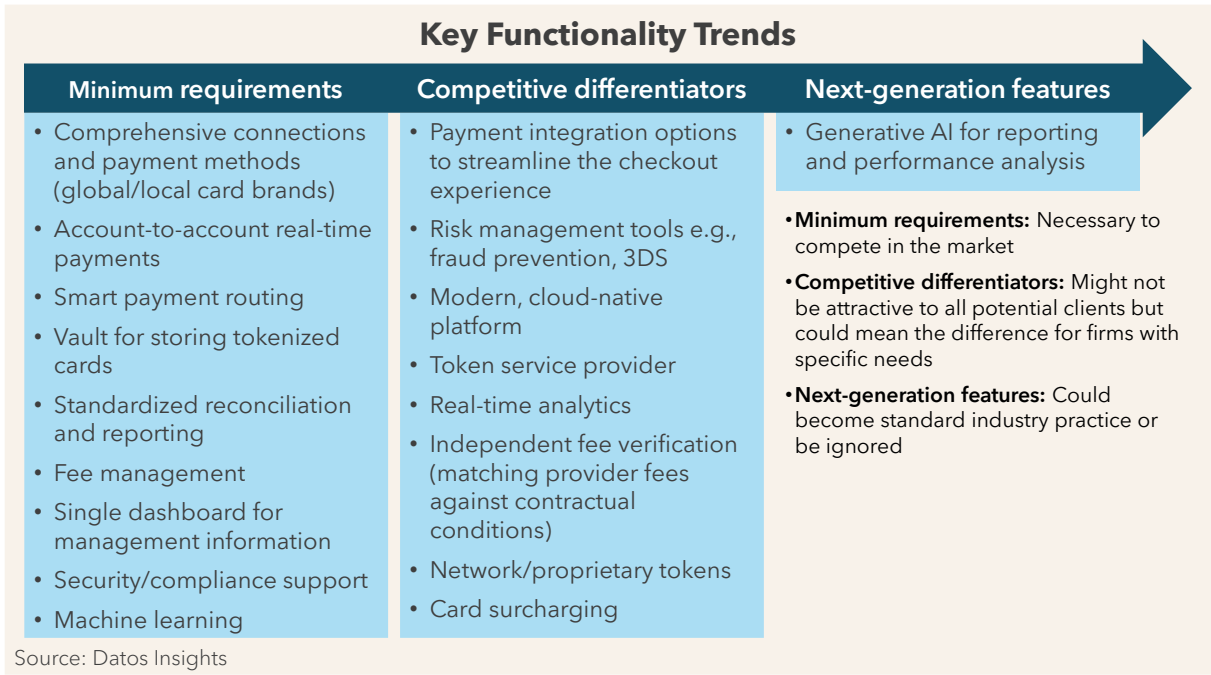
Security and Compliance

Best practices for the management and control of the orchestrator’s platform and organization include multifactor authentication (MFA), role-based access, cybersecurity best practices, PCI certification, data protection policies, and regular audits.

Payment Orchestration Key Functionalities

Many features presented in the previous section are considered table stakes (Figure 2).

Figure 2: Key Functionality Trends



Beyond the core capabilities that are becoming table stakes in the payment orchestration space, vendors can differentiate themselves by offering the following:

- Payment integration options to streamline the checkout experience
- Risk management tools (e.g., fraud prevention, 3DS)
- A modern, cloud-native platform, which an increasing number of companies today demand
- Being a token service provider to deliver and manage a merchant’s tokenization requirements and offering network tokens in addition to proprietary tokens
- Providing dynamic real-time analytics

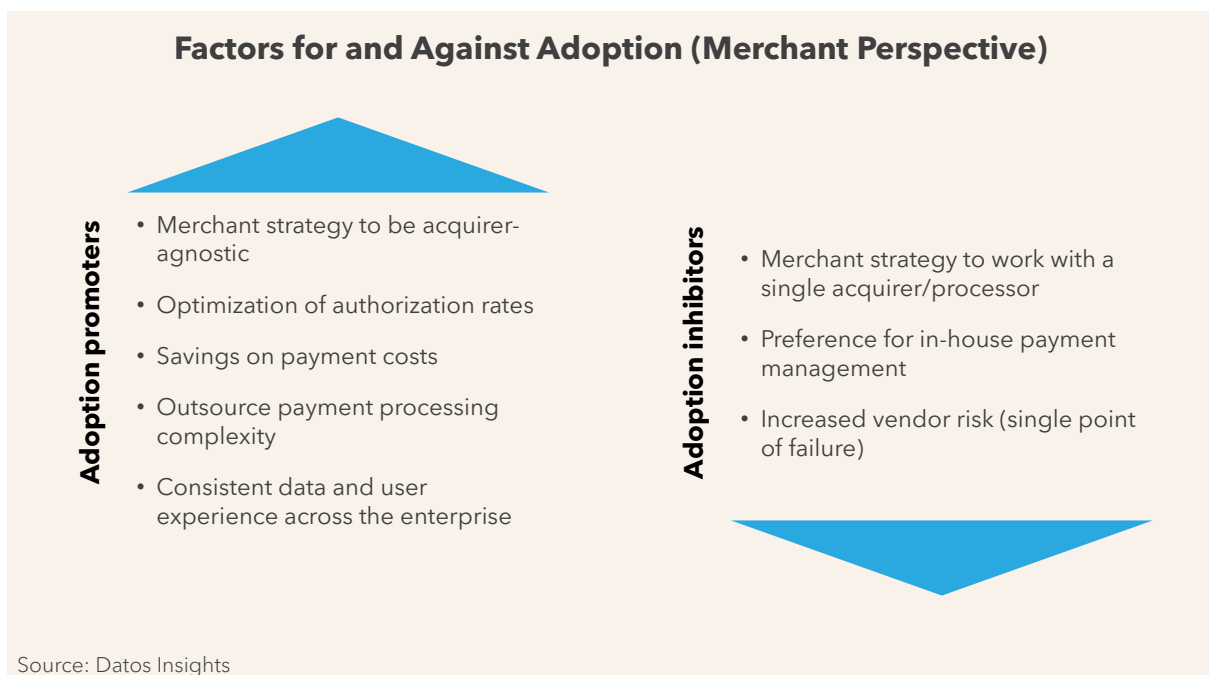
- Offering independent fee verification to match actual fees charged to contractual agreements
- Allowing merchants to surcharge for card transactions

Generative artificial intelligence may become an essential tool for orchestrators to streamline their reporting and analytics capabilities further. Payment orchestration is essentially an intelligent tool for managing the payments ecosystem, so artificial intelligence should play a significant role in the future.

## Drivers for and Against Adoption

The following factors contribute to overall adoption and pose challenges for providers to penetrate additional prospects (Figure 3)

Figure 3: Factors for and Against Adoption



### Drivers for Adoption

- **Merchant strategy to be acquirer-agnostic:** Merchants are looking for acquirer-agnostic setups for their payments processing to become less dependent on individual providers, optimize conversion, and reduce payment costs.
- **Optimization of authorization rates:** For enterprise merchants, having access to multiple payment integrations with acquirers, PSPs, gateways, and other stakeholders



allows them to enhance payment acceptance rates and reduce processing fees. With more options available, they can choose the most suitable provider for specific transactions, optimizing costs and improving payment success rates.

- **Outsource payment processing complexity:** The payments ecosystem has become very complex for merchants. Rather than managing this in-house, merchants can choose to work with a payment orchestrator, which offers the flexibility for merchants to select from a menu of different PSPs, acquirers, and payment services without owning the infrastructure itself and maintaining a single point of contact.
- **Consistent data and user experience across the enterprise:** Working with a payment orchestrator may help to decommission legacy systems, consolidate data management and reporting across the firm, and leverage tools provided by the orchestrator to improve the customer experience.

### Drivers Against Adoption

- **Merchant strategy/desire to work with a single acquirer/processor:** The orchestration model works best for merchants that prefer an acquirer-agnostic model. Other merchants prefer a “one-stop-shop” approach with a single acquirer/processor. This latter model fits best with merchants looking for end-to-end harmonization of payments, covering as many markets as possible through a single provider.
- **Preference for in-house payment management:** Technically advanced companies, including some of the very largest enterprises, may prefer to build payment orchestration services in-house to stay independent of a third party and tailor the service exactly to their specific needs.
- **Increased vendor risk:** The orchestrator may become a single point of failure for the merchant’s entire payments operation. Some merchants won’t accept that risk.

## Purchasing Factors

There are many reasons for opting for a payment orchestration solution. The following are key factors in deciding which provider and solution to select:

- **The technology used:** Clients are looking for fast, secure, and state-of-the-art technology. Payment orchestration requires an agile, flexible, scalable platform to deliver a plethora of available services to their customers. To the degree possible, the

platform should be future-proof to allow for continued changes in the ecosystem and the global economy.

- **Product expansion options:** While payments processing is at the core of an orchestration offering, multinational corporations need many more services and capabilities to manage payments efficiently. Most orchestrators have a wide array of service providers offering fraud and risk, loyalty, buy now, pay later (BNPL) services, and other functions to complete a commerce solution for a merchant. Connectivity to commerce platforms such as Shopify can also broaden their offering and create differentiation against competitors.
- **Speed to market:** Speed to market is a major deciding factor for startups and existing FIs. Clients no longer want to push their start dates from six to 12 months into the future if they want to stay competitive. They prefer providers that can move from contract to product in the market in a few months, if not weeks.
- **Configurable products and programs:** Systems and products should be customizable to the unique needs of the merchant. At a secondary level, the solution should be capable of configuring a solution in real time based on the tender type, geography, transaction cost, and merchant transaction rules.
- **Support for value-added services:** In addition to offering a wide array of services beyond payments, payment orchestrators should offer support for the capabilities they offer, including customer service, white-label mobile or online banking applications, fraud and risk management services, and other services necessary to support their customer's needs.

## Selected Providers

The following providers were included in this study. This is by no means an exhaustive list. Firms looking to select an orchestrator should conduct initial due diligence before assembling a list of providers appropriate for their unique needs (Table B).

**Table B: Orchestrators Included in the Study**

Firm	Headquarters	Founded	Target market	Sample clients
ACI Worldwide	Miami	1975	Global, with the largest client base in North America and Europe	Alto Global, Mango, Pilot Flying J, The Co-Op Group UK, Wendy's
BPC	Switzerland	1996	Europe, the Middle East, Africa, and Asia-Pacific	Worldline, Multi-Choice
BR-DGE	Edinburgh, Scotland	2018	Europe, and a recent extension into APAC	First Group, Travel Counsellors, Kenwood Travel, Worldline Shop & Pay, LiveScore Bet
Celeris	Amsterdam	2019	Europe, 90% through FI partners	Truevo Bank, Bankera, PayAlly, Alto Global, Equals
Cellpoint Digital	London	2007	Global, with a focus on the travel and hospitality sector	Southwest Airlines, Avianca Airlines, Virgin Atlantic, Radisson Hotel Group, Cebu Pacific
Spreedly	Durham, North Carolina	2007	Global, with a focus on North America (65%) and Europe (15%)	Rappi, SeatGeek, Chargebee

Source: Datos Insights, Vendors

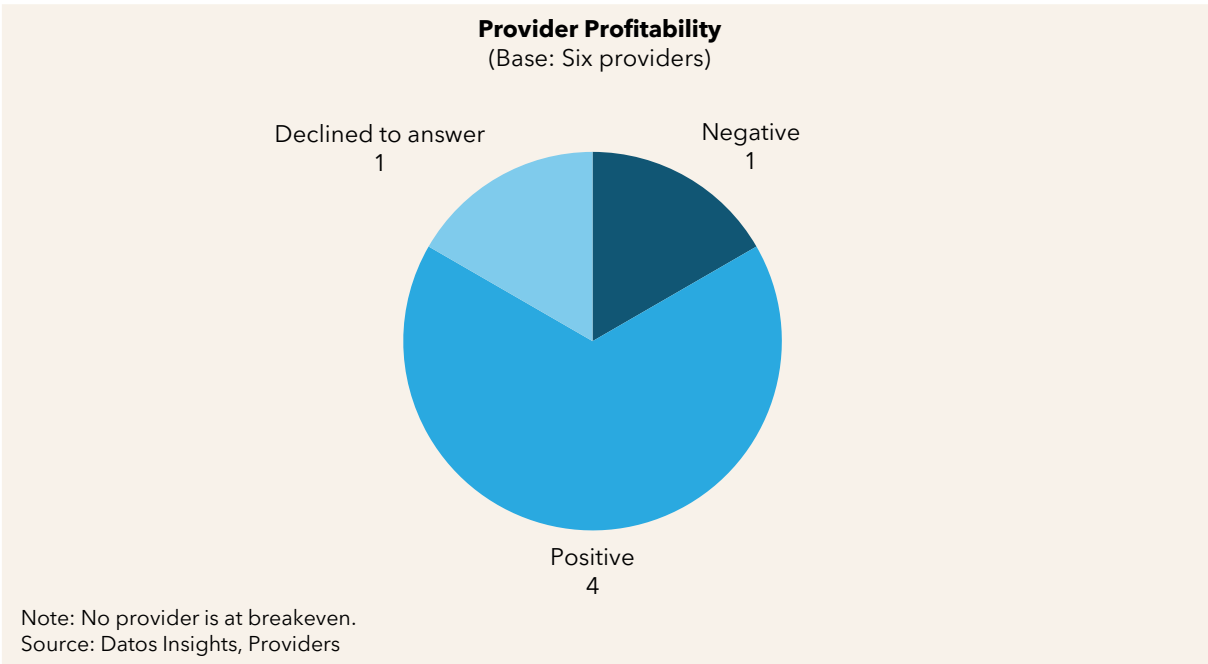
# Key Statistics

This section analyzes key market statistics related to the market and projected annual global volume. According to proprietary research shared by one of the vendors, the global TAM for technical payment orchestration was US\$9.9 billion in 2022, growing to US\$15.2 billion in 2026 (CAGR 11%). However, the SAM will be highly dependent on the business model and target market for each provider of orchestration services. With the global TAM for payments in the trillions of dollars, payment orchestration is a nascent category with ample room for growth.

## Provider Revenue and Profitability

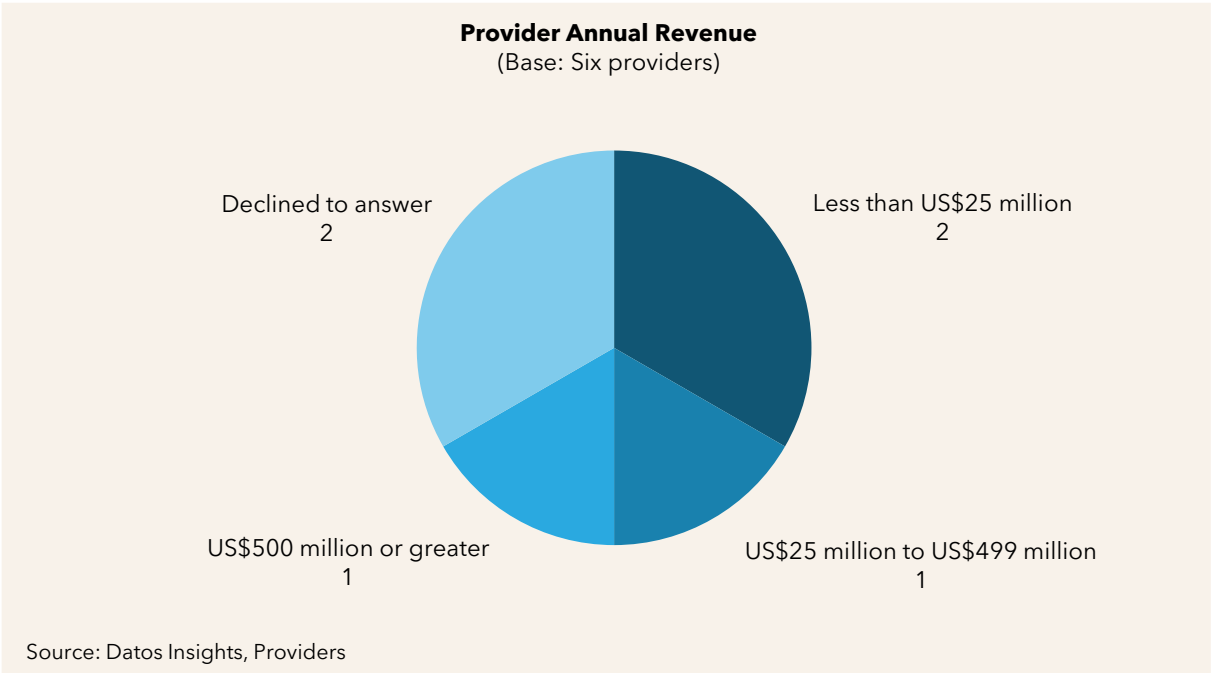
Overall, companies are profitable. ACI Worldwide is profitable, but it has a much broader offering than payment orchestration alone. Of the dedicated fintech providers, two are profitable, and one has not yet reached that stage of maturity. One company chose not to disclose financials (Figure 4).

Figure 4: Provider Profitability



Revenue reported by dedicated fintech orchestrators is less than US\$25 million, indicating that this market is still emerging, given the TAM of around US\$10 billion. Figure 5 shows the annual revenue of the providers included in this study.

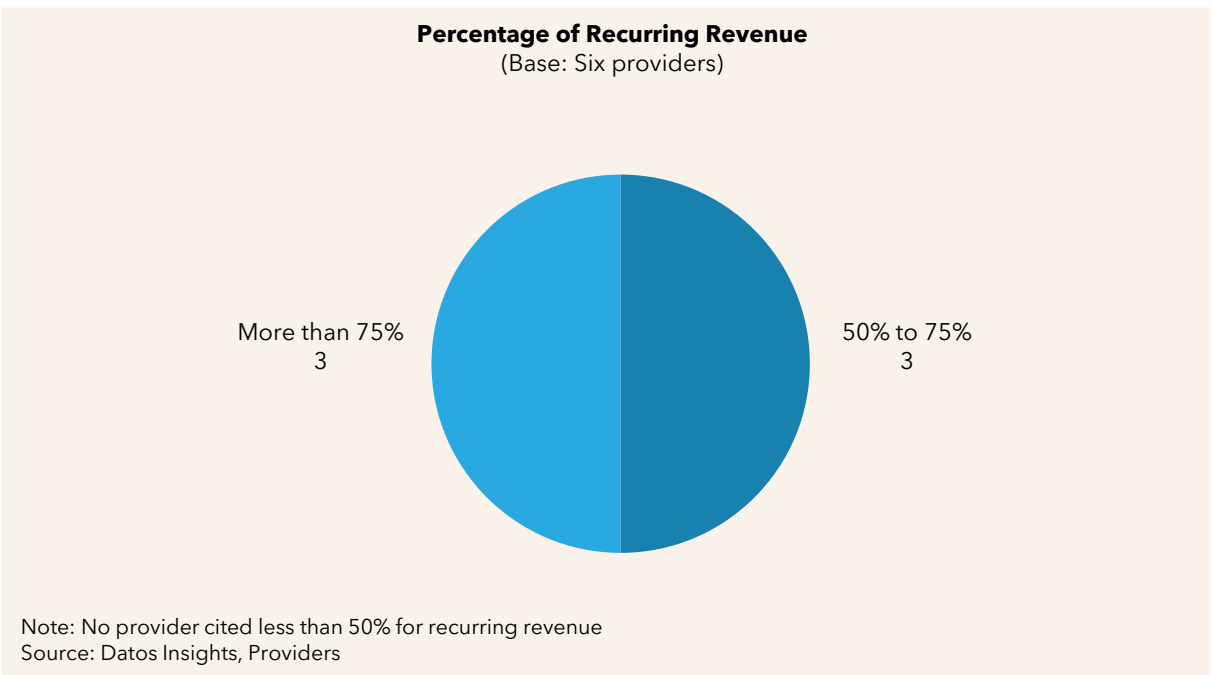
Figure 5: Provider Annual Revenue



## Percentage of Recurring Revenue

Figure 6 shows that recurring revenue drives the business model for orchestrators.

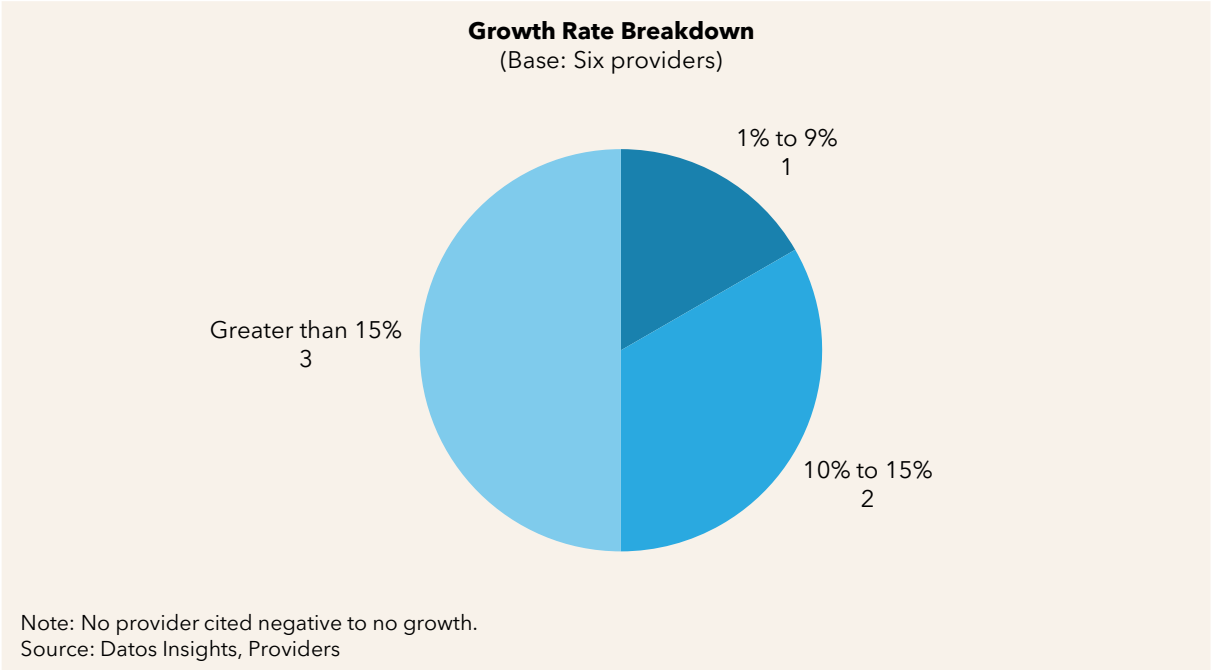
Figure 6: Percentage of Recurring Revenue



## Provider Growth Rates

Figure 7 shows that most providers grew at 10% or more per year.

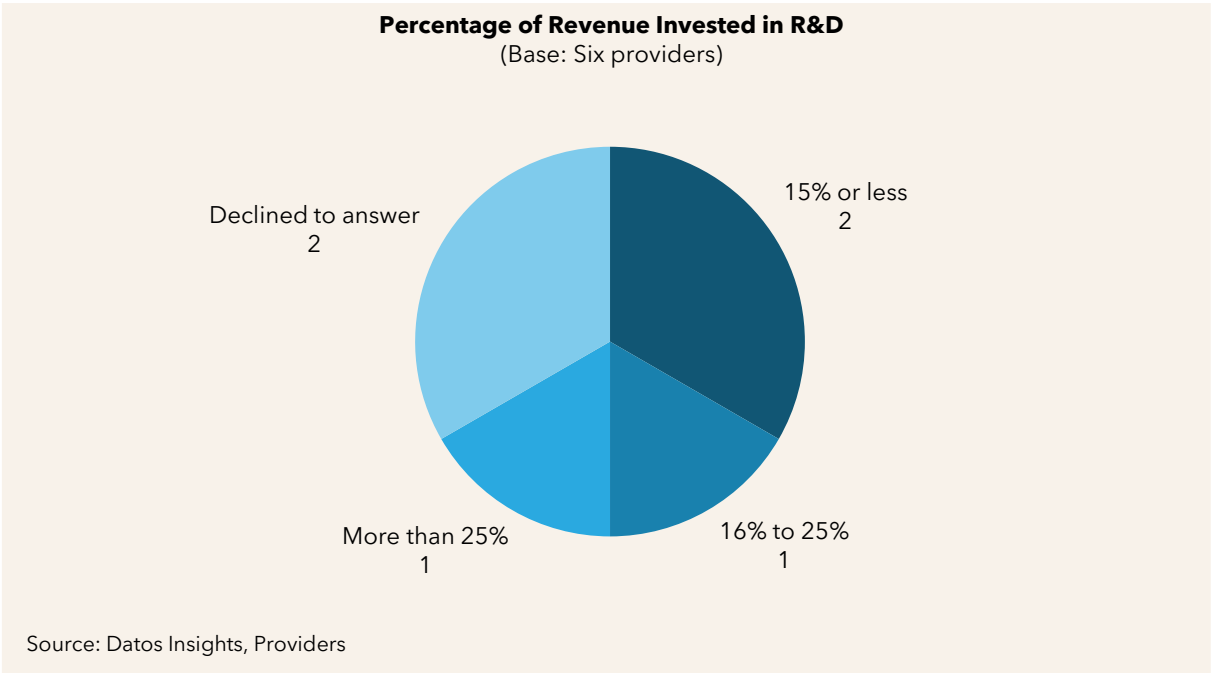
Figure 7: Growth Rate Breakdown



## Investment in R&D

R&D and platform innovation investments vary across providers (Figure 8).

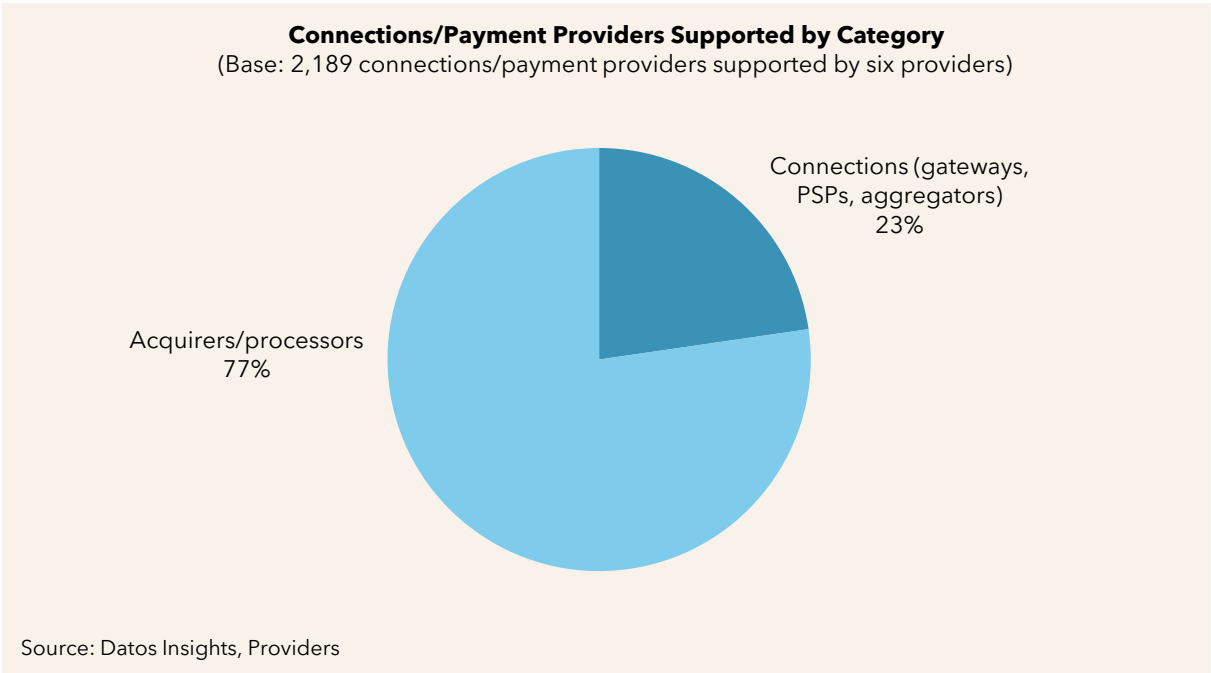
Figure 8: Percentage of Revenue Invested in R&D



## Connections/Payments Providers Supported

Orchestrators support an average of more than 350 connections to acquirers (77%) and gateways/PSPs/aggregators (23%; Figure 9). The number of connections can differ from the number of individual firms since a provider can connect as a gateway and an acquirer.

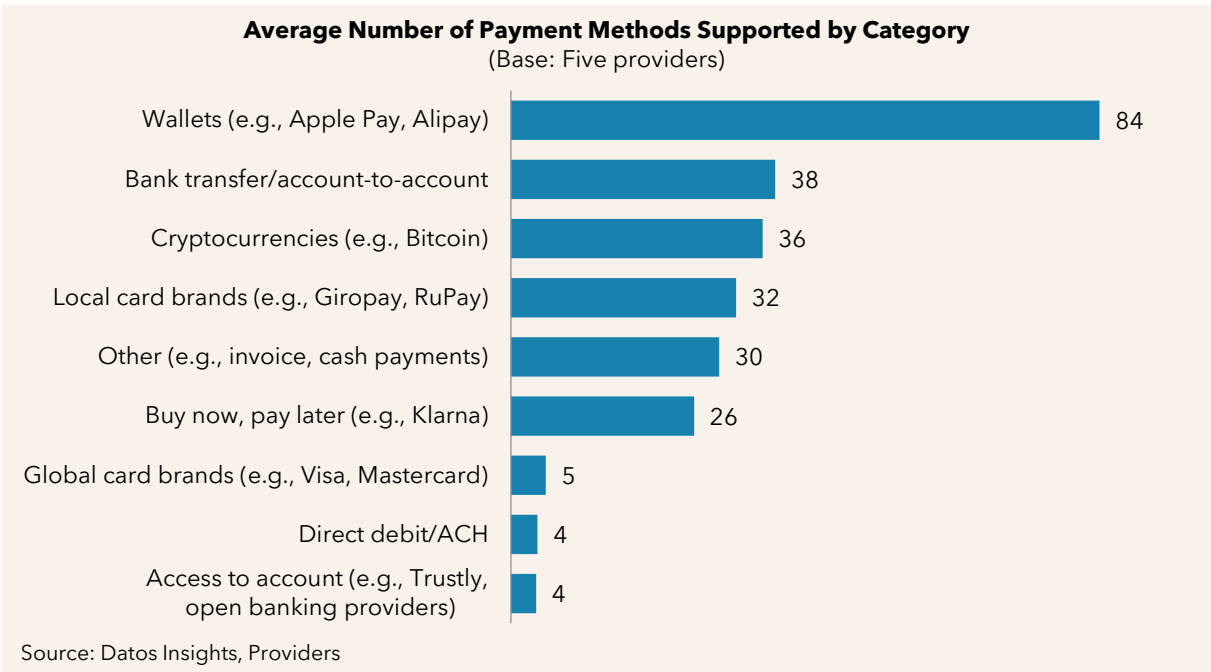
Figure 9: Connections/Payment Providers Supported (by Category)



## Payment Methods Supported

Payment orchestrators support an average of 259 payment methods (Figure 10).

Figure 10: Average Number of Payment Methods Supported (by Category)





# Vendor Stability

Table C looks at vendor stability factors, including financial stability figures and third-party risk management.

Table C: Vendor Stability

Vendor stability	ACI Worldwide
Number of employees	4,400
<b>Financial stability</b>	
Profitability	Positive
Percentage of recurring revenue	50% to 75%
Revenue growth rate (past 12 months)	1% to 9%
Percentage of revenue invested in R&D	Under 15%
<b>Third-party risk management</b>	
Assigned information security manager	■
Written information security and data privacy policies and procedures	■
Insurance coverage related to security and data privacy failures	■
Annual business continuity plan testing	■

Source: Providers

Table D shows client strength, which examines the vendor’s diversity and the size of its client portfolios.

**Table D: Client Strength**

Client strength	ACI Worldwide
Number of payment orchestration clients	NR
Average client tenure	NR
Annual client retention rate (last three years)	NR
Average net new clients per year	NR
<b>Diversity of client base</b>	
Large enterprise merchants (revenue over US\$1 billion)	NR
Midsize merchants (revenue between US\$50 million and US\$1 billion)	NR
Small merchants (revenue under US\$50 million)	NR
Banks/FIs	NR
Nonbank acquirers/ PSPs/gateways	NR
<b>Client global footprint</b>	
The U.S.	■
Canada	■
Europe	■
Asia-Pacific	■
Latin America	■
Middle East	■
Africa	■

Source: Providers

Orchestrators offer a wide range of payment methods and connections (Table E).

**Table E: Payment Methods and Connectivity**

Payment methods/connectivity	ACI Worldwide
Connections/ payments providers supported	Over 200
Payment methods supported	527
Global card brands	8
Local card brands	49
Access-to-account, e.g., Trustly, open banking partners	1
Bank transfer/account-to-account	22
BNPL, e.g., Klarna	70
Cryptocurrencies, e.g., bitcoin	120
Direct debit/ACH	7
Wallets, e.g., Apple Pay, Alipay	200
Other, e.g., invoice, cash payments	50

Source: Providers

Deployment options are increasingly important (Table F).

**Table F: Deployment Options**

Option	ACI Worldwide
On-premises	■
Hosted at data center	■

Option	ACI Worldwide
Hosted on public cloud	■
Hosted on private/ managed cloud	■

Source: Providers

Table G presents the location of the provider’s support resources.

**Table G: Service Footprint**

Location	ACI Worldwide
North America	■
Latin America	■
Europe	■
The Middle East	■
Asia-Pacific	■

Source: Providers

Table H presents high-level functional information associated with each product. Buy-side firms should consult individual providers for more detailed information.

**Table H: High-Level Functional Information**

Functionality	ACI Worldwide
<b>Integration</b>	
Single API	
Sandbox and developer portal	■
<b>Smart routing</b>	

Functionality	ACI Worldwide
Dynamic retries	■
Least-cost routing	■
Load balancing	■
A/B testing	■
Waterfall routing/ cascading	■
Geographic optimization	■
Risk-based routing	■
<b>Vault for storage of tokenized cards</b>	
Portability (acquirer/PSP agnostic)	■
PCI 3DS certified	■
CCI-DSS Level 1 certified	■
Data security compliance (GDPR/CCPA)	■
<b>Reconciliation/reporting</b>	
Standardized reconciliation data	■
Conflict reporting and resolution	■
Management dashboard	■
Benchmarking of provider performance	■
Customized reports	■
<b>Fee management</b>	
Support of diverse fee types and structures	■
Independent fee verification (matching of actual provider fees against contractual conditions)	■

Functionality	ACI Worldwide
Cost-effective transaction routing	■
<b>Other features</b>	
Streamlining of checkout process (plug-ins, SDKs, virtual terminal)	■
Risk management and fraud prevention	■
Security and compliance best practices (e.g., MFA support, role-based access, cybersecurity)	■

Source: Providers

Table I shows key client service offerings.

**Table I: Client Service Support**

Client service support	ACI Worldwide
Pricing structure	High-level description; named components
Average annual revenue per client (US\$ thousands)	Over US\$250
Annual service, maintenance cost per client	Under 20% of licensing; not for subscription
<b>Components of subscription licensing model</b>	
One-time licensing fee	■
Hosting	■
Maintenance and support	■
Ongoing access to latest software version	■
Implementation of upgrades	■
<b>Technology/implementation</b>	

Client service support	ACI Worldwide
Access to core code	
Size of product design and engineering team	Over 1,000
Size of in-house implementation team	251 to 1,000
Size of in-house support team	101 to 250
<b>Resource location</b>	
The U.S.	■
Canada	■
Europe	■
Asia-Pacific	■
Latin America	■
Middle East and Africa	■
<b>Implementation staffing approach</b>	
In-house	■
Third-party provider	■
<b>Customer engagement</b>	
Online community	■
Customer advisory committee	■
Customer success manager	■
User event, working groups	■
Onsite training	■
Online training	■

Client service support		ACI Worldwide
Additional support		
Offer SLA		■
Online issue tracking		■
Single point of contact (no fee)		■
24/7 support (no fee)		■
Global support (no fee)		■
Localized support (no fee)		■

Source: Providers



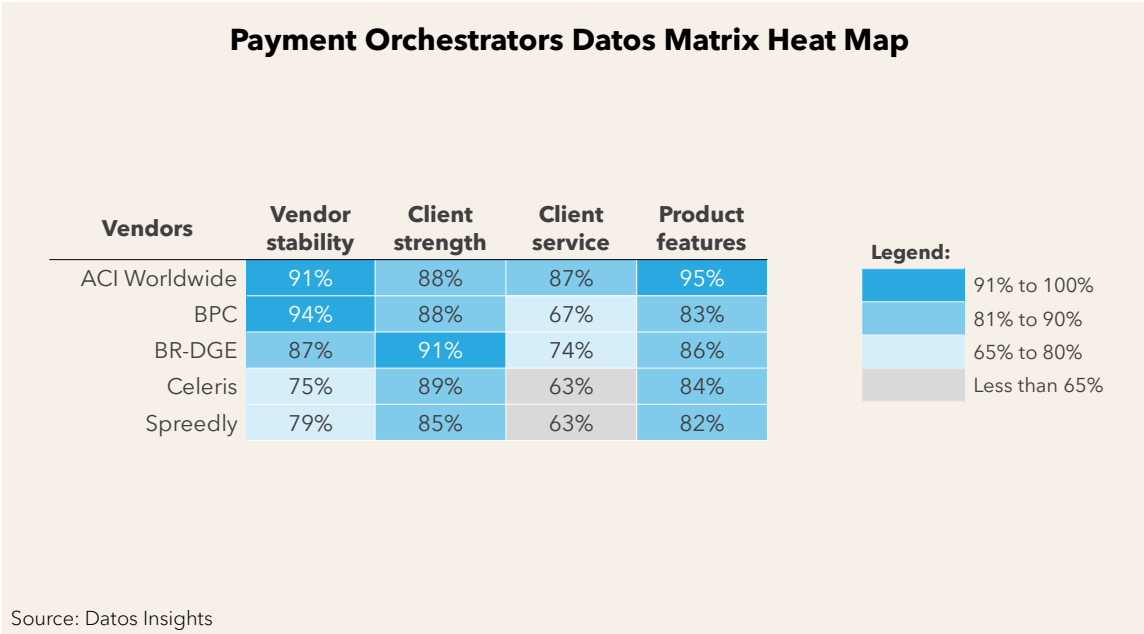
# Datos Matrix Evaluation

This section breaks down the individual Datos Matrix components, drawing out the strong providers in each area and how they are differentiated in the market.

## The Datos Matrix Components Analysis

The Datos Matrix has four key components: vendor stability, client strength, client service, and product features. Figure 11 provides an overview of each vendor’s scores for these four components. Each vendor is rated based primarily on data provided in response to the RFI distributed by Datos Insights. Additionally, client interviews and an analysis of the provider’s platform help drive the ratings.

Figure 11: Datos Insights Matrix Component Analysis Heat Map



### Provider Stability

Payment orchestration is a new category in the merchant acceptance space, and there are few long-term, established players at this time. Since merchants depend on the orchestrator to effectively manage and route their transactions, the relationship between the merchant and the orchestrator is very close. If an orchestrator has difficulty and the merchant is forced to change providers, the process would be complex and time-

consuming, so the stability of the organization is critical. ACI Worldwide received a best-in-class score in this category.

## Client Service

The client service score is determined by a combination of criteria, including size and geographic locations of support and implementation teams, pricing models, and other factors. ACI Worldwide achieved the best scores for this category.

## Product Features

Providers in the payment orchestration space need to be able to support their merchant clients with a wide breadth of available product features. The number of gateways/PSPs, acquirers/processors, and aggregators supported increases the likelihood that a merchant will be able to fully convert its transaction flow to an orchestration model. The offering should also be available as an on-premises or cloud solution, and smart routing is essential, particularly if the orchestrator is operating in the U.S., where least-cost routing for debit cards is mandated.

Additional capabilities needed to be a leader in the category include supporting a vault for tokenized cards, reconciliation and reporting capabilities, fee management, and managing best practices in security and compliance. ACI Worldwide received the best scores in this category, driven by its support of different payment providers and types and the depth of its feature functionality.

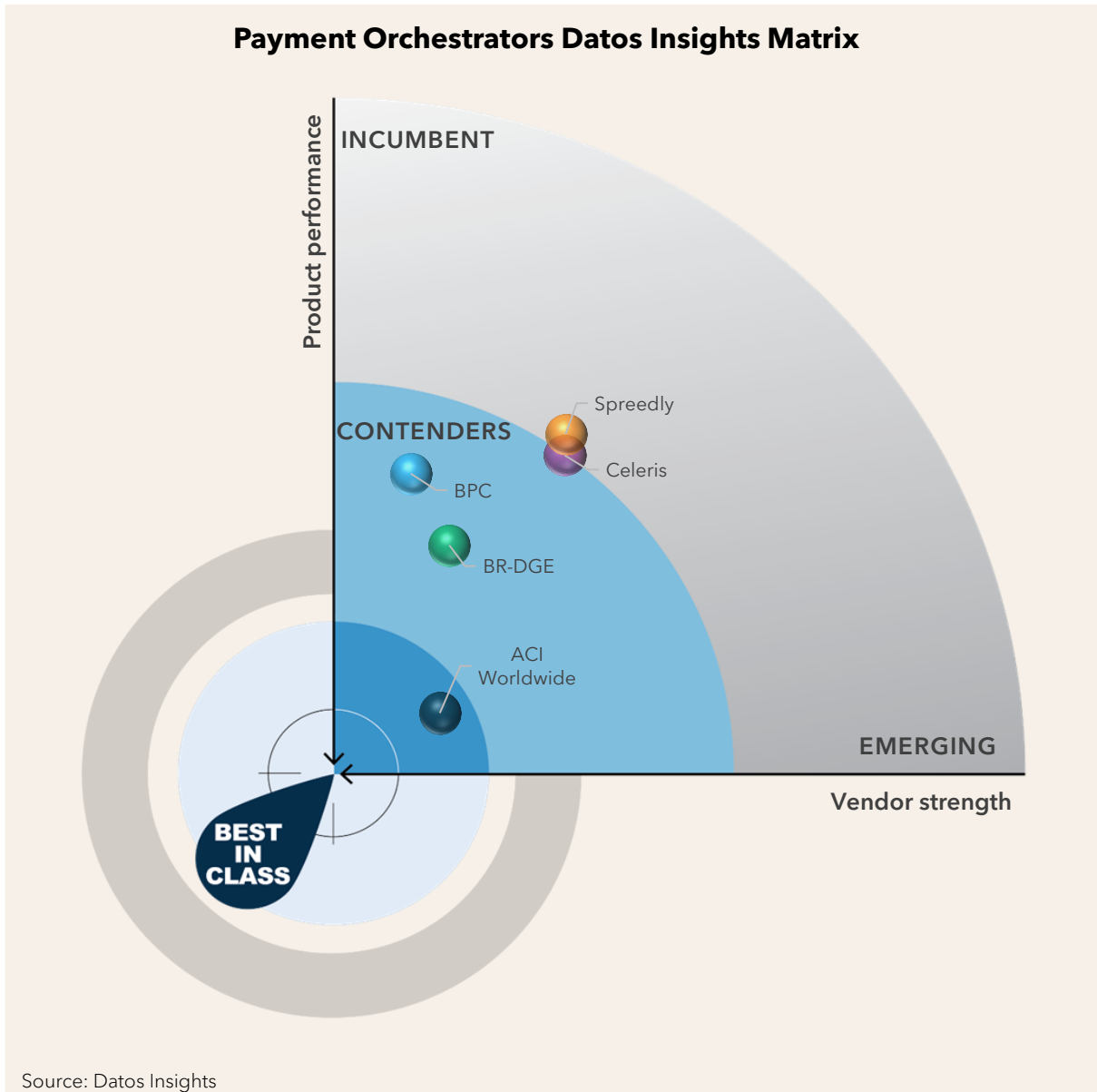
# Datos Matrix Recognition

Three major factors drive the results of the Datos Matrix recognition:

- Vendor-provided information based on Datos Insights' detailed Matrix RFI document
- Participating providers' client reference feedback or feedback that Datos Insights sourced independently
- Analysis based on market knowledge and provider product demos

Figure 12 shows the final Datos Matrix evaluation, highlighting the leading providers in the market.

Figure 12: Payment Orchestrators DatoS Insights Matrix



### Best in Class: ACI Worldwide

The DatoS Matrix uses four categories to analyze each vendor: provider stability, client strength, client service, and product features. ACI Worldwide achieved the highest average score, securing its place as DatoS Insights' Best-in-Class Payment Orchestrator for 2024.

- **ACI Worldwide** has a global payments orchestration offering that supports hundreds of payment providers and payment types. It has a comprehensive suite of services and capabilities, and it can fully support very large merchants—a significant strength in the

category. ACI Worldwide is well-positioned to support complex merchant payment requirements across the globe.

### Other Recognitions

This section highlights additional recognitions to identify companies that received high marks in specific areas that may be critical for buyers to consider:

- **Top client rating for delivering on promises:** ACI Worldwide
- **Top client rating for features and functionality:** ACI Worldwide

# ACI Worldwide (ACI)

Miami-based ACI is a global software company founded in 1975 that supports card and real-time payment processing and other mission-critical payment-related functionalities for banks, merchants, and billers. The company provides payment processing solutions for many of the world's largest financial institutions and fintech companies.

## Datos Insights' Take

ACI leads the pack on the features and functionality of its payments orchestration offering compared to the other vendors participating in this survey, which is confirmed by the client interviews. The company supports hundreds of payment providers and payment types globally, serving enterprise merchants directly and small to midsize businesses indirectly via its offering to PSPs. ACI is well-positioned to support complex merchant payment requirements across the globe, including omnichannel payment acceptance, AI-powered fraud prevention, and payment journey optimization. All these capabilities are available through a single, unified platform.

Datos Insights' research has shown that ACI is viewed as a payments leader in the market and has a clear and strong view of the future of the payments landscape. However, client feedback also indicated that ACI's platform is not yet perceived as the most modern, for instance, regarding its cloud capabilities.

## Basic Firm and Product Information

- **Headquarters:** Miami
- **Founded in:** 1975
- **Number of employees:** 4,400
- **Ownership:** Public
- **Key financial information:** ACI is a profitable organization, with recurring revenue accounting for over 50% of total revenue. ACI's revenue growth rates have been less than 10% for the last 12 months, and the company invests 10% to 15% of its revenue in R&D.

## Payment Orchestration Features, Products, and Services

- **Integration:** ACI offers a wide range of solution features that allow clients the ability to customize solutions based on their needs. ACI has multiple APIs that tie to and match specific functions that are offered as separate components of the solution. For example, there are specific APIs for device-driving software, fraud solutions, and partner solutions. It offers clients a sandbox and developer portal.
- **Smart routing:** ACI offers a full suite of smart routing tools, including dynamic retries, least-cost routing, load balancing, A/B testing, waterfall routing or cascading, geographic optimization, and risk-based routing.
- **Token vault for storage of tokenized cards:** ACI's vault is acquirer agnostic, PCI 3DS certified, PCI-DSS Level1 certified, and complies with GDPR and CCPA requirements. The ACI token vault allows clients to create and own their token hierarchy across accounts.
- **Reconciliation and reporting:** All components required for reconciliation and reporting are available, including standardized reconciliation data, conflict reporting and resolution, a management dashboard, benchmarking capabilities, and provision for customized reports.
- **Fee management:** ACI supports a variety of fee types/structures, cost-effective transaction routing, and independent fee verification to match provider fees against contractual agreements.
- **Other features:** ACI offers the tools to drive and manage devices; streamline checkout, risk management, and AI-based fraud prevention capabilities; and use best practices in security and compliance.

## Connections to Payment Providers

ACI provides access to over 200 unique payment providers, gateways, APMs, and aggregators. The company provides connectivity to the payments ecosystem to PSPs, powering over 70 PSPs around the world.

## Card and Payment Networks Supported

Over 500 payment methods are supported, including the following:

- **Major card brands:** Visa, Mastercard, Amex, Discover, Diners Club, JCB, CUP, and Maestro

- **Local card brands:** 49 supported worldwide, including China UnionPay, Carte Bancaire, Dankort, Meeza, Mada, Maestro, Bancontact, and PostFinance
- **Other payment methods supported:** PayPal, real-time payments, bank transfer/account-to-account, BNPL, and cryptocurrencies

### Target Customer Base

- ACI provides solutions to customers in a wide range of industries worldwide, with specific expertise in grocery, fuel, quick-service restaurants, general retail, and travel and hospitality. Banks, merchants, and billers represent ACI's largest industry segments.
- **Number of payment orchestration clients:** Not disclosed, but ACI claims more than 6,000 total direct merchant clients and over 80,000 indirect merchant clients through PSPs.
- **Average client tenure:** Not disclosed
- **Global footprint:** U.S., Canada, Europe, Asia-Pacific, Latin America, the Middle East, and Africa
- **Implementation options:** On-premises, hosted at a private data center, hosted on a public cloud (Azure and all the major providers), and hosted on a private or vendor-managed cloud

### Key Features and Functionality Based on Product Demo

- Operates on both traditional servers and cloud-native platforms
- Works with relational, nonrelational, and cloud-native databases
- Has out-of-the-box connectors available, including Java SDK, ISO, XML, ITK, X9.15, JSON RESTful, NCR Proprietary, Oracle OPI, and SMI
- User interface available on the web as well as mobile native/rich client applications
- REST APIs are part of the solution; ISO 8583, XML, JSON, and SDK are also available

### Top Strategic Product Initiatives Over the Last Three Years

- ACI wallets
- Digital identity services

- ACI PayLater (BNPL marketplace)
- ACI Instant Pay

**Top Three Strategic Product Initiatives in the Next 12 to 18 Months**

- Expansion of AI-based features and functions inclusive of payment analytics and consumer behavioral data available as part of the payment orchestration platform
- New offerings to support merchant business-to-business payment functions inclusive of real-time and cross-border payments
- Enhancements to consumer and client user journeys and experiences inclusive of chat commerce.

**Client Feedback**

ACI client feedback was mostly positive overall. The following is notable client commentary:

- “Main highlight are the people, really skilled, dedicated team”
- “They try to stay ahead/keep up in payments for merchants.”
- “Volume increased significantly during pandemic, caused some issues but now stable”
- “A weakness is ACI upgrades, as they are introducing new solutions to replace existing legacy they have. For instance, their fraud solution”

Table J shows the company’s strengths and challenges.

**Table J: Key Strengths and Challenges, ACI**

Strengths	Challenges
The ACI platform is a stable product with a broad client base. Clients were pleased with the product overall and highlighted reliability as a key value proposition.	The Payment Orchestration space is just emerging. ACI has been managing payments for years, and it may have difficulty positioning the company as a direct competitor to payment orchestrator startups.



Strengths	Challenges
ACI supports a wide range of payment providers and payment types, helping to ensure that its clients can create a portfolio of payment alternatives that will meet their business needs.	
ACI has the scale and the reach to support enterprise clients worldwide, and that's its strength.	

Source: Datos Insights

# Conclusion

Payment orchestration applies intelligence to payment processing to dramatically improve the capabilities that can be offered to merchants. As the space expands, traditional acquirers, processors, and PSPs will be challenged to offer a competitive solution to payment orchestration. At the same time, it will be increasingly difficult for payment orchestrators to differentiate their offerings from competitors. The result of these two factors is that payment acceptance will continue to be a highly dynamic, rapidly changing ecosystem. Every participant in the ecosystem needs to prepare for this step change and capitalize on the opportunities that it provides for creating differentiable value.

## For merchants:

- If payment orchestration is not being used, explore the potential value of the payment orchestration model for your enterprise in terms of the ability to serve customers, lower costs, and increase available data for analysis.
- If payment orchestration is in use, ensure that your enterprise has optimized the relationship with the provider, using all the available tools that can enhance the customer experience and increase the value of payment orchestration for the company.

## For acquirers, processors, and PSPs:

- Several payment orchestrators offer a white-label product that can be integrated into the acquirer/processor solution. Implementing a payment orchestration capability will help acquirers and processors remain competitive as the space evolves.
- Ensure that your solution is included on the list of providers for all major payment orchestrator companies so merchants have the opportunity to connect with your solution through the orchestrator's platform.

## For payment orchestrators:

- Continue to broaden available connections in payments and value-added services in your solution to remain competitive and to improve your value proposition for merchants.
- As the space expands (current CAGR is 11%), it will be increasingly difficult to differentiate from competitor solutions. Explore creating payment orchestration solutions for specific retail verticals such as hospitality, restaurants, or healthcare.

# About Datos Insights

Datos Insights is an advisory firm providing mission-critical insights on technology, regulations, strategy, and operations to hundreds of banks, insurers, payments providers, and investment firms—as well as the technology and service providers that support them. Comprising former senior technology, strategy, and operations executives as well as experienced researchers and consultants, our experts provide actionable advice to our client base, leveraging deep insights developed via our extensive network of clients and other industry contacts.

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