



Annual Report

Arcot 2026 Payments Report



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Arcot 2026 Payments Report

To our customers, partners, and the broader payments community:

Arcot continues to secure the digital economy at scale. The Arcot Network processed over 2.85 billion transactions valued at more than \$487 billion on over 208 million unique cards across 247 countries and territories in partnership with more than 5,500 financial institutions.

2025 signaled a shift in the e-commerce economy toward a “data-first” model, transforming authentication from a friction point into an optimization engine. With Arcot, our mission is to build the adaptive infrastructure that connects the historically siloed domains of 3-D Secure (3DS) and Authorization. By leveraging the global scale of the Arcot Network and the rich metadata capabilities of the EMV 3-D Secure protocol, we have forged a technical bridge to issuer authorization tools.

Over the last 12 months, we introduced the Arcot Smart Ruleset, an advanced machine-learning engine that replaces static, manual rules with dynamic, adaptive logic. Now deployed across 176 portfolios on the Arcot Network, this innovation is driving measurable gains for financial institutions. It maximizes fraud savings, increases approvals, and systematically eliminates cardholder friction. Crucially, it empowers fraud teams to focus on high-level strategy rather than manual rule-writing and analysis, all while keeping pace with compliance requirements.

The YoY Performance Comparison

In comparing the performance of 2025 and 2026, the data indicates a strong upward trajectory of 3-D Secure (3DS) transactions in both volume and value. The Total 3DS Volume saw a healthy 10.4% increase, while the Total 3DS Value surged by 15.2%, validating increased adoption of 3DS overall and as a primary channel for high-value digital commerce.

YoY Trend Analysis: 2025 vs. 2026

Metric	Feb 2025	Feb 2026	Progress
ASR (Overall)	87.8%	89.5%	+1.7pp
Frictionless Approval %	55.7%	58.5%	+2.8pp
Challenge Rate (CR)	40.8%	39.1%	-1.7pp
CSR (Overall)	78.8%	79.5%	+0.7pp

**FRICTIONLESS APPROVALS
(NO-CHALLENGE)
INCREASED FROM
55.6% TO 58.4%**

Volume and Value Growth: The Arcot network reached a new scale. In Feb 2026, we processed 223,540,550 transactions, a 10.4% increase over Feb 2025. Total value secured by our network grew 15.2% to \$39.7B.

Efficiency Improvements: Frictionless Approvals (No-Challenge) increased from 55.6% to 58.4%. This drove an overall ASR lift of 1.75 percentage points YoY (landing at 89.5% in Feb 2026 vs. 87.8% in Feb 2025), generating billions in protected transaction value.

Frictionless Routing Success: The global ASR lift is driven by a 10x surge in Data Share Only (DSO) volumes and the implementation of advanced risk signals that allow issuers to approve more legitimate volumes with higher confidence. We predict continued investments in intelligent 3-D Secure routing and adaptive ruleset will drive next year's growth.

2025 Regional Performance Summary

Overall, the global daily transaction volume on the Arcot Network maintained a steady growth trajectory, consistently exceeding baselines for the vast majority of 2025. While the global aggregate demonstrates healthy and stable authentication volume, regional data reveals a dynamic year characterized by high growth in North America.

- **U.S. Market:** The U.S. was the standout performer this year. While early-year growth was strong, volumes saw a massive, sustained surge starting in late June, which accelerated rapidly through the second half of the year. 10.4% volume growth YoY indicates a major market expansion of 3DS. This expansion was largely driven by the adoption of Data Share Only flows and the success of Arcot Smart Ruleset in reducing false declines and allowing a higher volume of legitimate transactions through the system.
- **United Kingdom vs. Ireland:** These are mature market leaders. ASR remains above 90% for the UK. Ireland leads with 99.19% ASR. From a market perspective, the UK market remains highly stable YoY, pointing to a mature e-commerce environment that has fully adapted to Strong Customer Authentication (SCA) mandates. Conversely, Ireland experienced a distinct step-up in May, with steady growth culminating in a 1.5x YoY increase toward the end of the year. The contrast in performance and volumes perfectly highlights how different regions are still actively tuning their payment security postures to improve conversion rates over time.
- **APAC:** Australia started the year with high YoY ratios and gradually smoothed out to a consistent range. This data showcases how the region is moving from a phase of rapid adoption and change into a period of sustained, optimized transaction routing and stable merchant behavior.

As is customary, the year concluded with a predictable, global surge in transaction volumes throughout the late December holiday shopping season. When transaction volumes rise dramatically, network resilience and dynamic, real-time fraud prevention are absolutely necessary. Intelligent systems that can adapt instantly to volatility, distinguishing between holiday traffic surges and coordinated fraud attacks, are critical now and in the future.

Fraud Trends

Across 2.8 billion transactions processed by Arcot in 2025, roughly 8 million were later confirmed as fraud. These amount to \$11.47 billion USD of confirmed fraud value that hit our system, the vast majority of which was challenged or denied. Fraud rates overall were down and improved in every region between January and December 2025.

**ACROSS 2.8 BILLION
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AS FRAUD**

AFTER RUNNING ARCOT-MANAGED SMART RULESETS IN PARALLEL FOR OVER A YEAR, DATA SHOWS THEY CAN REDUCE ALLOWED FRAUD BY UP TO 30%

What worked

- North America led prevention with the strongest catch rate in the portfolio—and the monthly fraud rate fell from 1.68% in January to 1.02% in December.
- Europe (PSD-2) had the lowest fraud rate all year, improving further from ~0.16% in January to ~0.11% by December. Its slightly lower case-based catch rate reflects a long tail of small-dollar attempts on a very large denominator.
- Australia/New Zealand kept declining. AUS/NZ cut its fraud rate by ~40% over the year.

What to watch

- Allowed fraud is concentrated. More than two-thirds of allowed fraud sits in PSD-2, driven by volume, a reminder that even a strong prevention rate leaves real exposure when the portfolio is this large.
- Case-based catch rate lags value-based everywhere. The gap is widest in AUS/NZ (cases vs value), signaling that smaller-dollar fraud attempts are the biggest improvement opportunity going forward.
- Smart Ruleset adoption presents additional upside. Customer-managed rulesets, powered by Arcot's RAN and Merchant Alert scores, handled over 98% of decisioning, and are therefore responsible for our high catch rates. However, there is still material upside: After running Arcot-managed Smart Rulesets in parallel for over a year, data shows they can reduce allowed fraud by up to 30%. Early adopters in late 2025 and early 2026 are already proving this out in production.

Bottom line

- 2025 was a year of broad-based improvement and strong catch performance. Nearly every fraudulent dollar that tried to land was stopped, and the residual exposure is both small in proportion and concentrated where we know to look. The 2026 focus is driving adoption of the Arcot Smart Ruleset to close the remaining gap in allowed fraud.

Bridging Authentication and Authorization

- Historically, 3DS and Authorization operated as independent events. [Arcot Smart Authorization](#) enables bi-directional (two-way) data sharing between the Arcot authentication system and the card issuer's authorization system. By returning ACS-generated 3-digit risk scores (000–999) via EMV 3DS message extensions, we now provide issuer authorization hosts with a single numeric trust signal. Issuers adopting this integrated approach report a 1.5–3% lift in final approval rates on low-risk Data Share Only volume.

How Authentication Segmentation Has Changed

Segmentation—the ability to dynamically decide if, when, and how to authenticate a cardholder—has transitioned from a blunt instrument to a granular, data-driven science. Today, there is the ability to segment how authentication is applied, making the 3DS protocol a critical optimization tool in the payments stack.

- **Rise of “Data Only” Flows:** Merchants are increasingly segmenting their trusted, high-value customers into a “data only” flow. In this scenario, the merchant sends all the rich background data to the issuer to help inform their risk models but explicitly does not request a challenge or a liability shift. This approach gathers risk intelligence and builds trust with the issuer without introducing any friction for VIP shoppers.

2025 WAS A YEAR OF BROAD-BASED IMPROVEMENT AND STRONG CATCH PERFORMANCE

How Authentication Segmentation Has Changed

- **Smart Exemption Routing (Issuer vs. Acquirer TRA):** Under regulations like Europe's PSD2, certain transactions are exempt from Strong Customer Authentication (SCA), such as low-value payments or those covered by Transaction Risk Analysis (TRA). In the past year, merchants have started using dynamic routing to segment traffic based on issuer behavior. If a system knows that a specific issuing bank rejects exemption requests 80% of the time, the merchant's gateway will automatically segment that traffic and trigger 3DS upfront, avoiding the latency of a rejected exemption and a retried payment.
- **Delegated Authentication and Passkeys:** Merchants and digital wallets are increasingly taking authentication into their own hands. Instead of letting the bank segment the user and send an SMS code, merchants use biometric Passkeys (via WebAuthn) to authenticate the user locally on their device. They then pass the cryptographic proof of this authentication to the issuer through the 3DS protocol. This shifts the liability without the user ever leaving the merchant's checkout environment.
- **Granular Value and Context Thresholds:** Because there is fear that a 3DS "challenge" flow can drop conversion rates, merchants are heavily segmenting by context. For example, a merchant might build rules to bypass 3DS for domestic transactions under \$50, but mandate a 3DS challenge for cross-border transactions, digital goods, or first-time buyers using a new device. We encourage merchants to send more transactions, accompanied by rich data, particularly on low-risk transactions, to 3DS.

The Future of 3DS and Best Practices: How More Collaboration and Better Data Exchange Between Merchants and Issuers Will Reshape Approvals and Fraud

Strategic Value: Data Only (RCI 06) and Acquirer TRA (RCI 05)

We frequently ask the ecosystem two fundamental questions: Would more data make risk-based authentication better or worse? And if merchants and issuers shared more data, would payments be safer? The answer is unequivocally yes. More data and more signal equal safer payments.

Many merchants have routed transactions directly to authorization without passing rich, accompanying data because it was hard to justify too much friction and too little control of authorization outcomes. This, however, has resulted in staggering decline rates hovering between 15% and 20%.

There are two primary mechanisms for achieving "Challenge-Free" cardholder journeys by sharing merchant intelligence with issuers in real-time.

- **Data Only (RCI 06) in the U.S. Market:** Allows merchants to send low-risk transactions to the issuer authorization stream with a guaranteed frictionless outcome. Enhanced data (device fingerprints, IP addresses) leads to higher approval rates. [Arcot Brief: Data Share Only \(RCI06\)](#).
- **Acquirer TRA (RCI 05) under PSD2 Strong Customer Authentication (SCA) mandate in Europe:** A European exemption where the merchant indicates the transaction has passed internal risk checks. Arcot issuers accept these at rates exceeding 99%. [Arcot Brief: Acquirer Transaction Risk Analysis \(TRA\) exemption \(RCI 05\)](#).

Alignment across the ecosystem yields significant operational advantages.

- **Validated Trust:** Merchants can conclusively identify low-risk, trusted transactions that should not be challenged.
- **Frictionless Processing:** Merchant confidence is transmitted directly to the issuers, helping ensure genuine customers are neither unnecessarily challenged nor falsely declined.
- **Improved Outcomes via Data Enrichment:** Data simultaneously builds issuer confidence and enriches risk and decisions models.

This alignment is no longer just a best practice; it is an economic imperative. Visa's major overhaul of its Acquirer Monitoring Program (VAMP) and its new framework effective April 1, 2026 are changing the landscape. Previously, merchants could use alert networks to refund customers before a dispute became an official chargeback. This is no longer possible under VAMP. Now these resolved disputes count toward a merchant's overall fraud rate unless they are protected by Compelling Evidence 3.0 or a 3DS liability shift.

Because the financial penalties for exceeding fraud thresholds have become much more severe, merchants should lean on 3DS to protect their standing with card networks. Furthermore, Visa has reduced interchange fees for large merchants who successfully optimize their data flows using frameworks such as Visa's Digital Consumer Authentication Program (DCAP) which went into effect on April 18th. Arcot is actively working with our partners to ensure they have the exact intelligence and technical posture required to capitalize on these reduced fees while maintaining pristine security. [Arcot Brief: VAMP](#).

3D Secure in the AI Superintelligence Era

What's often missed in the current AI conversation is that AI didn't start overnight. In payments and specifically within Arcot, we've been using machine learning for well over a decade. As a protocol capable of carrying 150+ data points per transaction, 3D Secure is already well-suited for the AI superintelligence era, acting as a critical layer that processes vast complexities that humans simply cannot. At scale, that data has always required advanced models to interpret it. And Arcot has been providing Risk Scoring for over 15 years.

What's changed isn't the presence of AI, but its scope and accessibility. Large language models and advanced AI systems are taking already powerful machine learning and turning it into something far more expansive.

The solution to balancing fraud and conversions isn't to deploy more aggressive, high-friction mechanisms; it's to enrich the data flow. By promoting a data-rich environment, we create a powerful flywheel effect: better intelligence shared between merchants and issuers builds a smarter infrastructure where fraud is resolved earlier, and authorization rates increase. Vital intelligence makes risk-based authentication significantly smarter.

Leveraging Adaptive Intelligence: The Arcot Smart Ruleset

The Arcot Smart Ruleset is our machine-learning engine that learns from fraud feedback to optimize transaction outcomes. Instead of relying on static, manual rules and reactive fraud tuning, we leverage a continuous data stream to make highly accurate transaction decisions in milliseconds. The Arcot Smart Ruleset continuously learns across the network and dynamically routes transactions to optimize for approvals, fraud prevention, and customer experience simultaneously. The Arcot Smart Ruleset consistently outperforms human-led rule management across performance metrics. It also reduces operational overhead for fraud teams and compliance teams, enabling them to focus on strategy as opposed to rule-writing and analysis or compliance requirements.

In 2025, the Arcot Smart Ruleset transitioned from a concept to a reality for an initial pioneering issuer. By year-end, many issuers followed suit, deploying a best-in-class ruleset ready to address current and future fraud trends. It was also the year that AI-enabled fraudsters met their match. Interestingly, rollout strategies varied across the board. Some conservative issuers took a phased approach, deploying the Arcot Smart Ruleset to their default allow-only transactions, while gradually ramping up adoption by relaxing custom rules. Others opted to route a much larger volume of transactions from the start. Regardless of the approach, the Arcot Smart Ruleset stopped significant volumes of fraud and yielded exceptional results.

And we are just getting started. As more transactions are directed to the Arcot Smart Ruleset, this powerful ruleset will continue to optimize decisions across transactions. [The Arcot Smart Ruleset](#).

Hardening Arcot Security Infrastructure with Frontier AI models:

In 2026, Arcot began integrating frontier AI models directly into our 3DS platform to continuously analyze our codebase and reinforce our authentication security infrastructure. This proactive deployment ensures our software architecture is hardened by the same tools trusted by the world's leading technology providers.

Strategic Priorities for 2026

- 1. Data Only and TRA Acceleration:** We are scaling the use of RCI 06 (Data Only) in the U.S. and RCI 05 (Acquirer TRA) in Europe. These flows remove cardholder challenges entirely, utilizing 3DS as a silent data-sharing rail to enrich authorization decisioning.
- 2. Arcot Smart Ruleset Expansion:** We are replacing manual “if/then” logic with dynamic decision trees that learn from fraud feedback. Early adopters are benefiting from a reduction of fraud losses and cardholder friction while lifting approval rates.
- 3. Closing the Loop between Authentication and Authorization.**
- 4. Hardening Arcot Security Infrastructure with Frontier AI Models.**

Strategic Action Plan

Category	Key Finding	Strategic Recommendation
Merchant	High false declines in standard authorization.	Adopt RCI 06/05: Shift to broad data-sharing to enrich issuer risk models.
Issuer	55.4% of failed challenges result from Timeouts.	Integrated Auth: Use ACS-generated risk scores in authorization host rules to reduce false declines.
Processor	App CSR (73.4%) lags Browser CSR (80.0%).	Smart Ruleset: Deploy dynamic routing to manage app-channel risk and reduce unnecessary step-ups.
Scheme	Merchant Overrides (MOR) cause 12.8% of failures.	Review MOR: Align override logic with SCA requirements to ensure consistent signals.
Arcot	Volume grew 10.4% YoY; latency is critical.	Scale Infrastructure: Maintain 99.99% processing under 2.0s to support increasing transaction density.

Closing Comments

A data-enriched payment ecosystem is the future of a smarter, safer payments ecosystem. We will continue to publish our network insights, share benchmarking data, and build the infrastructure necessary to make 3DS the industry standard. When 3DS works better, all parties benefit. Merchants and issuers see reduced fraud and higher authorization rates, and consumers experience a frictionless, safer digital shopping environment.

If you find yourself in Dublin or London this fall, I'd like to welcome you to Arcot's 2026 3-D Secure Summits in October, where we will continue this discussion live as we do each year.

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