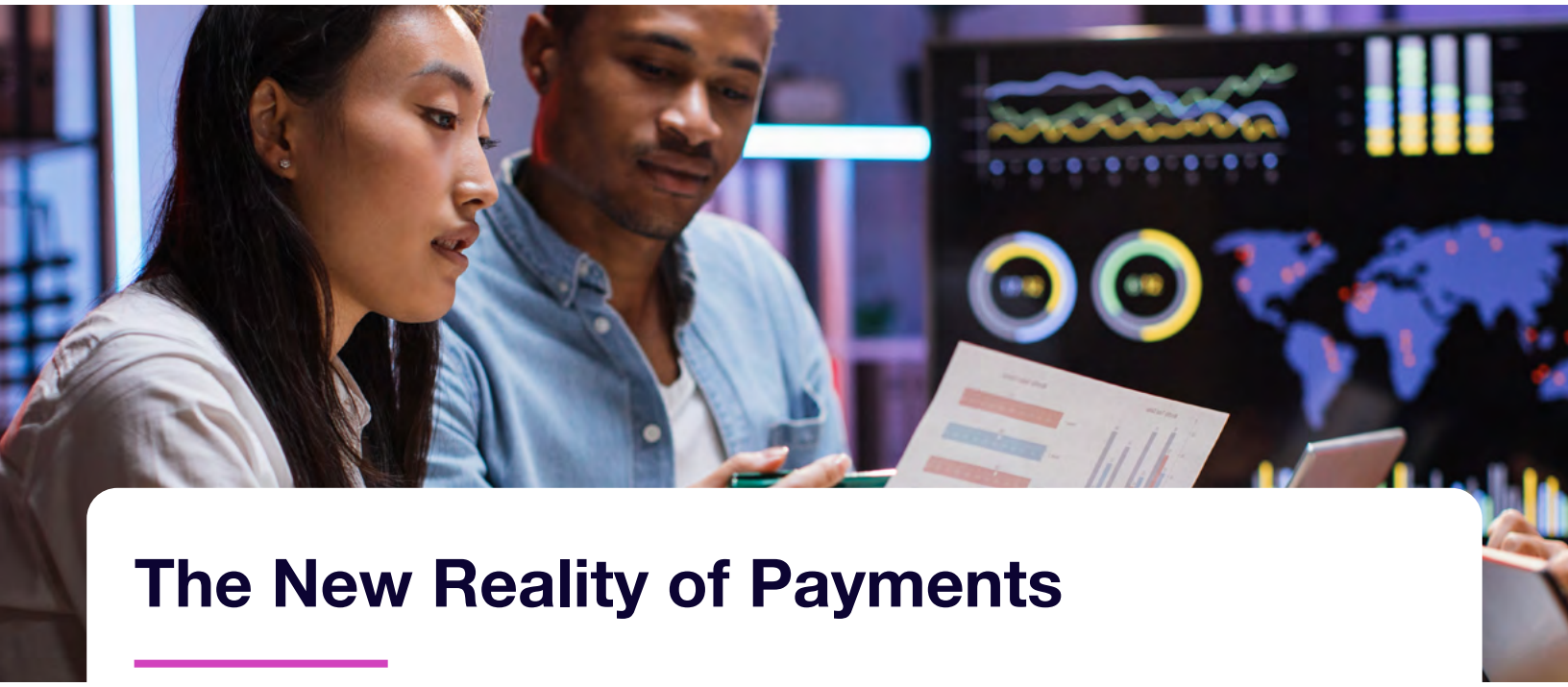
FraudNet

Real-Time Payments: The Definitive Guide for Payments Leaders



The New Reality of Payments

The digital transformation of financial services has reshaped customer expectations, driving a demand for faster, more efficient, and transparent transactions.

At the forefront of this shift are **real-time payment (RTP) systems,** which empower individuals and businesses to transfer money within seconds, 24/7. It's a revolution in how payments are made, unlocking revenue opportunities and forcing a new standard for payments companies under intense pressure to compete.

For businesses, RTP systems mean reduced settlement delays, improved cash flow management, and the ability to offer customers a seamless payment experience. By meeting the modern expectation of instant financial interactions, companies can enhance loyalty and trust. However, for payment providers, that expectation comes with an unforgiving demand for speed, precision, and control.

The instantaneous nature of RTP leaves little room for error and demands a robust, secure infrastructure.

It opens the door to increased risks as fraudsters exploit rapid transaction speeds to bypass traditional fraud detection measures, leaving financial institutions and their customers vulnerable. Legacy tools can't keep up, and without modern safeguards, fraud losses can escalate before anyone even knows a breach occurred. RTP providers could face significant losses and reputational damage due to sophisticated and evolving fraud tactics.

As RTP systems continue to gain traction globally, understanding their mechanisms, benefits, and risks is essential. By implementing advanced fraud prevention strategies that combine AI, behavioral analytics, and real-time monitoring, payments companies can strike a balance between innovation and security and avoid becoming the next cautionary tale in the race to modernization.

Understanding Real-Time Payments and the New Landscape

What is a Real-Time Payment?

A **real-time payment (RTP)** is the instantaneous transfer of funds from one account to another, supported by a highly efficient payment infrastructure that operates without interruptions. Unlike traditional payment methods, which may take hours or even days to process, RTP systems settle transactions in real time, ensuring that funds are immediately accessible to the recipient. This eliminates delays and offers a transformative solution for businesses, individuals, and governments. For payment providers, it's not just a feature. It's a foundational shift in customer expectations.

Key Features at a Glance

Speed: Payments are processed within seconds, regardless of the time or day, including weekends and holidays. This is a game-changer for refund automation, merchant settlements, gig worker payouts, and time-critical transactions.

Transparency: RTP systems offer complete visibility into the transaction lifecycle, providing the sender and recipient with instant updates. This transparency reduces guesswork and builds trust between parties.

Certainty: Funds are available immediately after the transaction is completed. Both parties receive simultaneous confirmation, eliminating the uncertainty of pending payments in traditional systems.

Why Real-Time Payments Matter

RTP is more than just a faster way to transfer money—it is reshaping the global financial landscape. For businesses, RTP systems improve cash flow, streamline operations, and enable faster supplier payments. For individuals, they bring convenience and peace of mind, whether paying for emergencies, splitting a bill, or receiving a paycheck. In regions with limited access to traditional banking, RTP systems have become lifelines for financial inclusion, fostering economic growth and empowerment.

As the demand for speed, transparency, and certainty in payments continues to rise, RTP is no longer a luxury. It is becoming the standard for modern financial ecosystems, and for payment companies, keeping pace means rethinking risk, compliance, and operational agility.

Comparing Real-Time Payments to Legacy Systems

	Real-Time Payments	ACH Transfers	Wire Transfers	Checks
Speed	Seconds	1-3 Business Days	Same Day (Manual)	2-5 Business Days
Accessibility	24/7/365 Availability	Business Hours Only	Business Hours Only	Physical Submission
Cost	Minimal Flat Fees	Low Fees (varies)	High Fees	Mailing & Banking Costs

The Cost of Relying on Legacy Systems

In today's landscape, legacy systems don't just slow you down - they put your business at a disadvantage. For example, an enterprise working with international suppliers using wire transfers, often faces delays of a day or more before payment clears, holding up shipping schedules and impacting supply chains. RTP eliminates this lag. Suppliers can receive payments instantly, at any time of day, allowing shipments to move faster and businesses to keep operations running smoothly.

RTP shines in speed and accessibility. Unlike ACH transfers that take days to process or wire transfers that require manual intervention, RTP offers efficiency at a fraction of the cost of traditional methods. Checks, while familiar, pale in comparison due to slow processing and higher associated overheads like mailing and handling.

Take, for example, The Clearing House's RTP Network in the United States. This innovative platform allows banks to process instant, direct account-to-account transfers, improving efficiency for both businesses and consumers. Similarly, Brazil's Pix, launched by the Central Bank of Brazil, has revolutionized payments by enabling real-time transfers, even for the unbanked population. Pix's accessibility has made it a vital tool for expanding financial inclusion, while demonstrating the scale and impact RTP systems can have when adoption is widespread.

Advantages of Real-Time Payments for Payment Firms

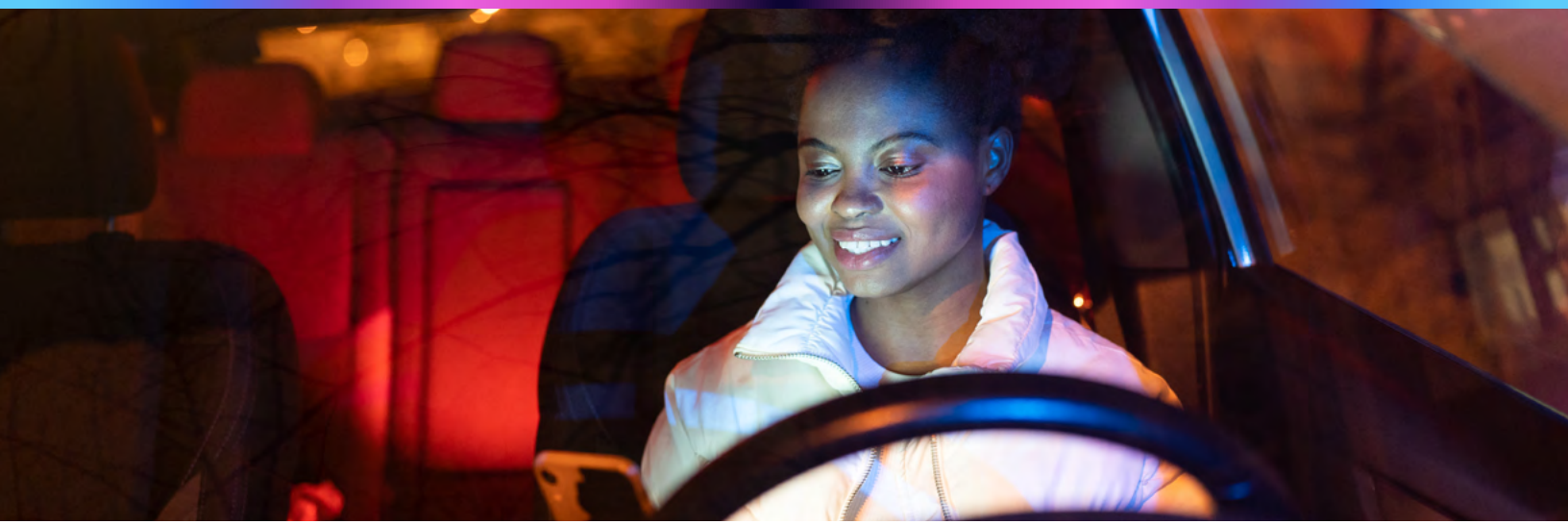
The benefits of RTP go far beyond convenience. They transform payment companies' operations, delivering measurable ROI, and reshaping customer expectations in the digital era. For firms managing high transaction volumes and complex compliance obligations, RTP can become the engine of growth.

Core Benefits

Customer Experience: RTP enables instant refunds, drastically reducing churn rates. According to ACI Worldwide, **42% of customers** are more likely to stay loyal to a brand if they receive refunds immediately. Immediate rewards also drive a stronger emotional connection, boosting long-term brand loyalty. For payments firms managing multiple merchants, this can be the difference between customer retention and churn.

Cost Efficiency: RTP offers significantly lower transaction fees compared to traditional card networks, which can charge up to 3% per transaction. By leveraging RTP, businesses can save thousands annually, improving operating margins. NACHA reported that businesses using RTP saw a **25-30% reduction** in overall payment processing costs. At scale, this represents millions in savings.

Competitive Edge: Payment companies that integrate RTP attract more clients by offering faster, more efficient services. In fact, McKinsey found that **60% of businesses** are actively seeking partners that provide real-time transaction capabilities, giving forward-looking payment providers decisive market advantages. Firms that lag in real-time capabilities risk falling behind as buyer expectations shift permanently.



How Industries Are Leveraging RTP:

Gig Economy: Platforms like Uber have transformed the driver experience by enabling instant earnings disbursements after trips. This immediacy reduces financial strain for workers and fosters long-term loyalty, as drivers increasingly seek platforms that value their time and effort.

Consumer Lending: Borrowers can access loan funds in seconds instead of days, alleviating financial stress during critical moments. For lenders, this speed increases competitiveness in a highly crowded market by offering unparalleled convenience.

E-commerce: RTP is redefining online shopping through "Pay by Bank" at checkout, minimizing the need for credit cards and reducing merchant processing fees while giving customers a more straightforward, cost-effective payment option.

B2B Reconciliations: Real-time visibility into receivables and payables empowers businesses to optimize cash flow. Corporations can reconcile accounts instantly, improving financial decision-making and productivity while reducing errors in payment tracking.

International Commerce: Small exporters and businesses now avoid the high costs and delays of traditional cross-border payments. This democratization of international trade levels the playing field and enables smaller players to compete globally.

RTP's Impact on Consumer Behavior:

Research by Deloitte found that RTP **increases customer satisfaction by 73%**, reducing waiting times and improving the purchasing experience.

Additionally, a report by McKinsey highlights that 60% of consumers are more likely to choose retailers that offer RTP options. This shift in behavior underscores a deeper truth: convenience is now non-negotiable. Customers gravitate toward companies that prioritize convenience and responsiveness, and payments firms that enable this

Inside the Ecosystem: The Platforms Powering Real-Time Payments

Key Players in RTP Systems

RTP systems have transformed the global financial landscape, with numerous players driving innovation to meet the needs of their respective regions. Here's a deeper dive into some of the most influential players and their contributions to the industry:

The Clearing House (U.S.):
As the operator behind the RTP Network, The Clearing House has been a pioneer in modernizing the U.S. payment ecosystem. Launched in 2017, the RTP Network provides real-time clearing and settlement for financial institutions of all sizes. It aims to enhance efficiency and transparency, offering features like immediate fund availability, payment tracking, and data-rich messaging.

FedNow (U.S.):
Launched in 2023 by the Federal Reserve, FedNow is designed to broaden access to real-time payment infrastructure, especially for smaller financial institutions. It provides instant settlement capabilities, helping businesses improve cash flow and enabling consumers to access funds immediately. FedNow complements the RTP Network, giving financial institutions more options to adopt RTP.

SWIFT and Cross-Border Innovations:
The SWIFT network continues to play a prominent role in facilitating international payments. Recent innovations, including SWIFT gpi (Global Payments Innovation), have improved cross-border payments' speed, transparency, and traceability. These advancements are driving efficiency for banks and businesses involved in global trade.

Brazil's Pix:
Introduced by the Central Bank of Brazil in 2020, Pix has become a revolutionary force in promoting financial inclusion. Designed for instant payments 24/7, it enables seamless peer-to-peer transfers, bill payments, and even payments to government entities. By eliminating fees for individuals and offering low-cost solutions for businesses, Pix has been instrumental in reducing reliance on cash and expanding access to digital financial services in underserved areas.

India's Unified Payments Interface (UPI):
UPI is perhaps one of the most successful RTP systems globally, processing over 10 billion transactions monthly as of 2023. Developed by the National Payments Corporation of India (NPCI), UPI enables interoperable payments across banks and apps. Its success lies in its simplicity, allowing users to transfer money using just a phone number or virtual payment address. UPI has also integrated advanced features like recurring payments, international transactions, and QR code compatibility, driving its widespread adoption.

Europe's SEPA Instant Credit Transfer (SCT Inst):
The European Payments Council (EPC) launched SCT Inst to enable instant euro transfers across participating countries. With a maximum processing time of 10 seconds, it supports cross-border payments within the Single Euro Payments Area (SEPA). This initiative has laid the foundation for more efficient regional trade and economic integration.

Singapore's FAST (Fast and Secure Transfers):
FAST is a real-time payment platform that enables instant bank-to-bank transfers in Singapore. Managed by the Association of Banks in Singapore (ABS), it supports various use cases, including peer-to-peer transactions, merchant payments, and business disbursements. Its integration with PayNow, a customer-friendly overlay service, has boosted adoption.

Australia's New Payments Platform (NPP):
Launched in 2018, NPP is Australia's real-time payment infrastructure designed for speed, convenience, and data-rich transactions. With features like PayID, which links bank accounts to easy-to-remember identifiers such as phone numbers, NPP offers a user-friendly payment experience. It powers the country's "Osko" service, enabling consumers and businesses to make and receive payments instantly.

China's Payment Giants (WeChat Pay and Alipay):
While not traditional RTP systems, WeChat Pay and Alipay dominate China's digital payments ecosystem, facilitating real-time transfers between users and merchants. These platforms integrate with various services, from e-commerce to transportation, and have set a high standard for speed and convenience in mobile payments.

UK's Faster Payments Service (FPS):
Introduced in 2008, FPS was one of the earliest real-time payment systems. It allows instant transfers between UK banks, and its underlying infrastructure has been continuously updated to support growing demand. FPS has been a critical enabler of innovation in the UK's fintech ecosystem.

South Africa's Real-Time Clearing (RTC):
Operated by BankServAfrica, RTC facilitates instant interbank transfers, helping to support the country's growing digital economy. It has been a key driver in reducing reliance on cash and improving financial inclusion in South Africa.

Mexico's SPEI (Interbank Electronic Payment System):
Launched by the Bank of Mexico, SPEI allows real-time interbank transfers and has been instrumental in driving financial inclusion. It supports a wide range of use cases, from peer-to-peer payments to payroll and supplier payments for businesses.

Canada's Real-Time Rail (RTR):
RTR is Canada's upcoming real-time payment system, developed by Payments Canada. Expected to launch soon, it focuses on speed, data-rich payments, and interoperability and aims to modernize Canada's payment infrastructure and support economic growth.

Other Players in the RTP Space

Banks, Credit Unions, and Financial Services:
Traditional banks are increasingly integrating real-time payment solutions to meet consumer and business demands. By adopting advanced payment systems and enhancing digital capabilities, financial institutions aim to remain competitive while providing enhanced user experiences.

Consumer Fintechs (Zelle, Venmo, PayPal, etc.):
Consumer-focused fintech platforms like Zelle, Venmo, and PayPal have transformed the way individuals transfer money. These platforms enable peer-to-peer payments with near-instantaneous speed, creating a user experience that makes them indispensable for daily financial interactions.

Crypto and Blockchain Solutions:
Cryptocurrencies and blockchain technology are revolutionizing the payments landscape through decentralized, secure, and real-time transaction capabilities. Innovations like stablecoins and blockchain-based payment networks offer new possibilities for cross-border payments, reducing costs and eliminating intermediaries while enhancing speed and transparency. These emerging technologies, while disruptive, bring both opportunity and risk, especially as fraudsters adapt just as quickly as the markets.

Emerging Technologies Shaping RTP's Future

AI and ML models serve as the backbone of fraud detection in RTP systems. These predictive technologies analyze transaction patterns in real time, flagging risks before damage occurs. For example, a payment processor using behavioral analytics can detect unusual spending patterns, such as a customer making numerous high-value purchases in quick succession. ML models compare this with historical behavior, prompting a query or blocking the transaction if fraud is suspected.

The Dark Side of Real-Time Payments

Despite widespread enthusiasm, significant challenges must be addressed regarding RTP adoption.

Technology investments remain necessary as many financial institutions and payments companies still rely on outdated legacy systems that require extensive and costly upgrades to support RTP integration. These overhauls often involve infrastructure changes and retraining teams while reconfiguring existing processes, which can significantly delay implementation timelines.

The complexity of fraud associated with RTP presents other challenges. The speed of instant payments makes them attractive targets for fraudsters, as there is less time to identify and prevent fraudulent activity. Weak systems are particularly vulnerable, and as tactics grow more sophisticated, payment providers face increasing pressure to adopt advanced tools and strategies to mitigate these risks. The traditional model of "detect and respond" now needs to operate in milliseconds to keep up with the speed of modern fraud, and without real-time, automated decisions, it can cause significant damage before it's flagged.

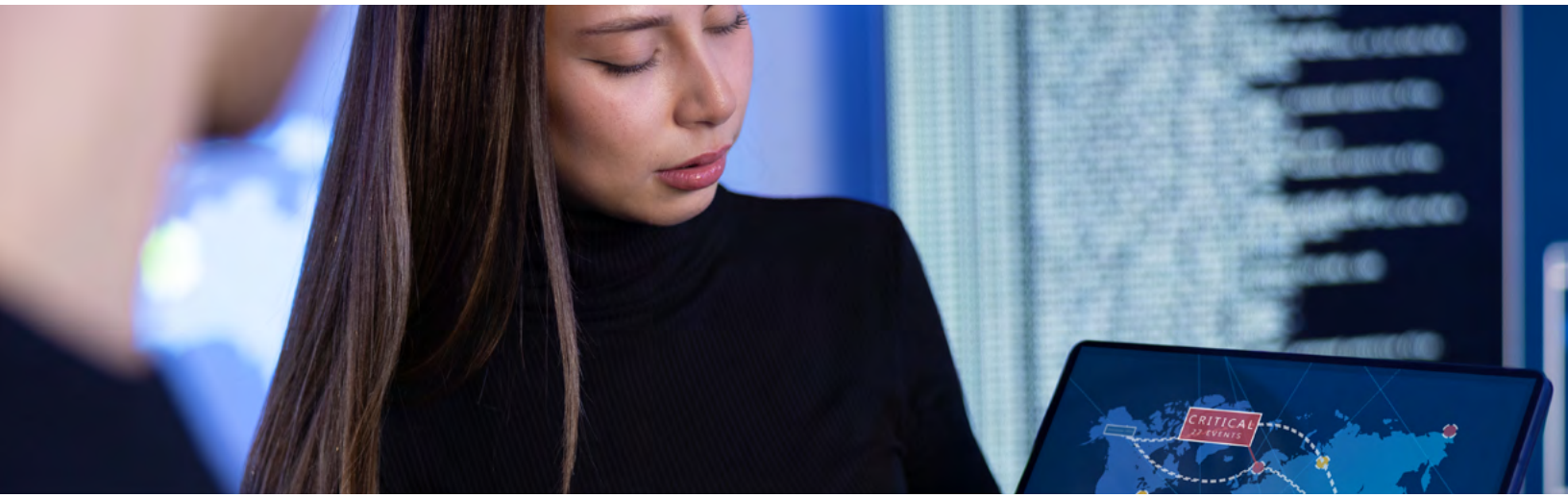
Key Fraud Risks in RTP:

Synthetic Identity Fraud: Fraudsters create fake identities using stolen or fabricated information to open accounts and conduct unauthorized transactions. These fake profiles are difficult to detect and can remain active for months, enabling large-scale fraud.

Impersonation Fraud: Criminals pose as trusted individuals or entities to manipulate victims into authorizing payments. This can occur through phishing emails, phone scams, or even social engineering tactics targeting employees.

Account Takeovers: Fraudsters gain access to legitimate accounts through stolen credentials or compromised devices and use them to initiate unauthorized transactions.

Transaction Laundering: Illicit activities, such as money laundering, are disguised as legitimate RTP transactions, making it challenging to identify and prevent.



Compliance Challenges:

Evolving Regulatory Requirements: Payment providers face challenges in keeping up with constantly changing regulations, such as the new rule from the UK's Payment Systems Regulator for authorized push payment fraud cases, putting direct liability on the providers.

AML Compliance: Adhering to AML regulations requires robust transaction monitoring and reporting systems. The rapid speed of RTP makes real-time tracking of suspicious activities more difficult.

KYC (Know Your Customer) Complexities: The rise of synthetic identities has made KYC procedures more complex. Payments companies need advanced verification tools that balance security with a seamless user experience.

Data Privacy Regulations: Laws like GDPR and CCPA require businesses to handle customer data responsibly. Companies must comply with strict protection laws, aiming for transparency, auditability, and efficient dispute resolution processes.

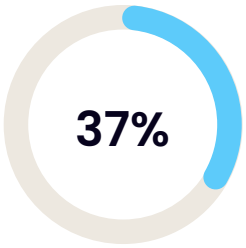
Risk Factors and Vulnerabilities:

E-commerce accounts represent **57% of global vulnerability**, as fraudsters increasingly target online transactions' high volume and fast-paced nature. The convenience and scale of e-commerce make them attractive targets for criminal activities, exposing systems to significant risk.
The speed of RTP transactions leaves little time for traditional fraud checks, making them more vulnerable to criminal exploitation. This creates a critical need for robust detection mechanisms that can keep up with them.

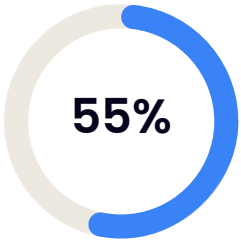
Weak authentication processes exacerbate these risks. Inadequate identity verification and the use of ineffective multi-factor authentication (MFA) solutions allow unauthorized access, putting systems and users at greater risk. This presents a threat to platform integrity, regulatory standing, and client trust. Strengthening authentication protocols is essential to mitigate these vulnerabilities.

Emerging Technologies Pose a Risk

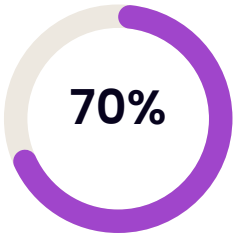
Fraudsters are increasingly **weaponizing emerging technologies** that bypass traditional controls, and payments companies are feeling the impact.



of global interet traffic is now bots.



are moderate or higher sophistication.



higher open rate for spear fishing emails, compared to generic.

For example, automated bots are frequently used to scrape sensitive data, launch credential stuffing attacks where stolen login details are tested across multiple platforms, or spread misinformation at scale through fake accounts. In a recent report, **bots accounted for 37% of global internet traffic**, with 89% deemed unwanted. The use of AI has increased bots' sophistication, according to the 2025 Bad Bot Report by Imperva, which stated 55% of current bot attacks are considered moderate or advanced. Furthermore, a study by Akamai found that credential stuffing attacks increased by 98% year-over-year, with billions of login attempts targeting platforms globally.

Fraudsters have also leveraged deepfake technologies to create highly convincing fake videos or audio clips, enabling scams such as impersonating CEOs to authorize fraudulent transactions, often called "deepfake voice fraud." A 2024 report by Gartner found that 85% of executives consider deepfakes a significant security threat, and a recent report notes that **deepfakes currently represent 6.5% of total fraud attempts**, a 2137% increase over previous years.

Similarly, AI-generated phishing emails are now highly personalized. They use information harvested from social media or breached data to trick individuals into disclosing sensitive information or transferring money. A study by Symantec found that **spear-phishing emails had a 70% higher open rate** than generic phishing emails, largely due increased personalization enabled by AI. AI generates fraudulent customer support chats as well, manipulating victims into providing personal details or payment information under the guise of solving a problem.

AI tools have been leveraged to **manipulate stock markets** as well by generating fake news articles or press releases to influence investor behavior. The U.S. Securities and Exchange Commission (SEC) has prioritized AI-related oversight, focusing on the misuse of AI in financial disclosures and the potential for AI-driven disinformation to influence market behavior.

These advancements make fraudulent activities harder to detect,

Six Essential Solutions for Mitigating Fraud and Risk:

To mitigate fraud effectively in the fast-paced world of RTP, payment companies must implement a multi-layered approach that combines advanced technologies, adaptive controls, and compliance-aligned processes. Below are six critical focus areas that enable firms to stay ahead of threats while preserving the speed and convenience RTP offers.

01. **Predictive AI and Machine Learning for Real-Time Detection:** Traditional fraud rules alone struggle to keep pace with RTP transactions. Machine learning models offer a more agile and effective solution, analyzing real-time behavioral patterns to flag suspicious anomalies, such as unusual spikes in transaction activity, sudden changes in geolocation, or previously unseen device fingerprints. These models improve over time by learning from evolving fraud patterns, reducing false positives and increasing detection accuracy, allowing payment firms to intercept threats at speed, before losses, brand reputation damage, or compliance failures occur.

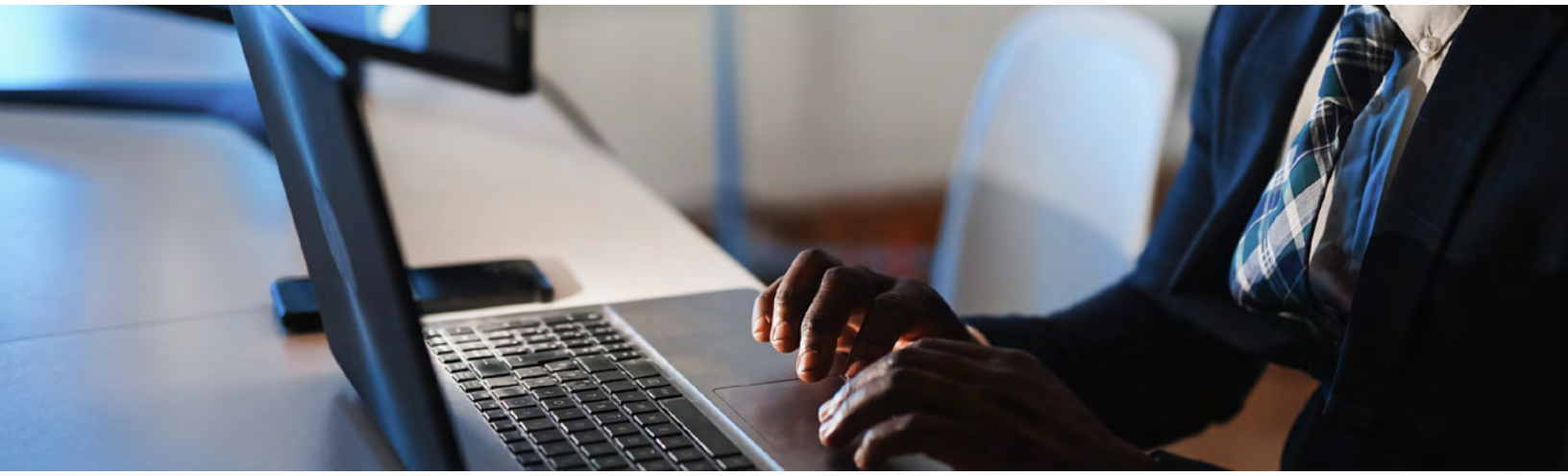
02. **Strengthened Identity and Entity Verification:** Payment companies must deploy advanced identity verification methods, including document verification with liveness checks, biometric authentication, and database lookups to validate user identity. For businesses and merchants, Know Your Business (KYB) checks are essential to screen for fake or shell entities by referencing global sanctions lists, PEP data, and adverse media. These verifications should not be a one-time event—they must be part of ongoing monitoring to flag changes in risk profile throughout the customer or merchant lifecycle. This is especially critical for firms onboarding thousands of small merchants or partners (entities) in real-time.

03. **Multi-Layered Authentication and Session Risk Scoring:** Firms can leverage adaptive multi-factor authentication (MFA), which adjusts based on contextual risk signals such as login location, device ID, and user behavior. Session-level risk scoring adds another layer of protection by continuously analyzing user interactions, monitoring for indicators including bot-like behavior, inconsistent navigation, or credential stuffing attempts - helping payment firms remain resilient as attacks become more automated, targeted, and evasive.

04. **Advanced Rules and Automated Decisioning:** Risk teams can automatically flag or block suspicious activity by establishing flexible rules around transaction size, velocity, location, and more. No-code or low-code platforms empower fraud managers to create and modify rules without developer support, reducing time-to-response. These systems can trigger secondary actions such as escalating transactions to manual review or requiring additional identity verification, allowing proactive intervention before an incident occurs. Rule impact reporting allows teams to analyze rules' effectiveness over time, ensuring the system remains well-tuned and adaptive to emerging threats.

05. **Transaction Reconciliation and Risk-Based Monitoring:** Real-time reconciliation ensures that funds moving in and out of the system match expected behaviors, helping prevent issues like duplicate transactions or accounting mismatches. Risk-based monitoring frameworks allow payment companies to dynamically adjust oversight based on the risk level of the transaction, sender, or recipient. This prioritization reduces alert fatigue and enables fraud teams to focus attention where it's most needed, with increased accuracy and fewer false positives

06. **Real-Time AML Monitoring:** Payment providers must implement real-time Anti-Money Laundering (AML) monitoring tools to identify suspicious patterns such as structuring, layering, or unusual flows between counterparties. When integrated with case management platforms, alerts become actionable investigations, with documentation, user history, and audit trails. A link between fraud detection and compliance reporting is essential for reducing regulatory exposure and enabling transparent operations. This is particularly important considering the liability shift onto payment firms due to emerging reimbursement regulations.



Fraudnet's End-to-End Platform for Real-Time Fraud, Risk, and Compliance

To help payment firms navigate these challenges, Fraudnet's advanced risk management platform equips them to confidently adopt real-time payments by combining AI-driven tools with robust data insights.

The platform features intelligent **Entity Screening** and ongoing KYB/KYC verification, with integrated global sanctions, PEP, and adverse media sources. **Policy Monitoring** helps teams identify anomalous behavior, credit risk, and merchant policy violations, and more, actively evaluating and updating risk profiles of entities across the payment lifecycle. Real-time **Transaction Monitoring** leverages custom machine learning models and behavioral analytics to detect high-risk transactions, prevent account takeovers, and stop fraud before funds are transferred.

Unlike siloed systems or reactive tools, Fraudnet's platform unifies risk management, compliance, and policy enforcement into one cohesive, real-time engine. Whether managing a global merchant base, screening in seconds, or handling millions of transactions daily, Fraudnet helps teams scale with confidence, without sacrificing security or control.

With its innovative approach, Fraudnet delivers a comprehensive solution for managing RTP fraud and compliance, giving businesses the tools to stay ahead of evolving risks while ensuring seamless, secure payment processes.

Discover how Fraudnet can fortify your payment systems with modern, scalable, and precise fraud prevention solutions. Contact us today to schedule a free demo!

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