White paper

Payments unstitched..

Stablecoins and the four-party model:

Bridging on-chain value with real-world commerce.

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Contents:

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Foreword.

Stablecoins are rapidly gaining global momentum, particularly across the Asia-Pacific (APAC) and Latin American (LAC) regions. While early B2C use cases such as remittances and crypto trading have driven significant transaction volumes, B2B adoption is accelerating at a rapid pace, fuelled by the demand for more efficient cross-border treasury and payment flows.

However, the inherent fragmentation across different blockchains, varying compliance frameworks, and token standards continues to pose a significant challenge to their widespread, real-world usage.

To overcome this, traditional card infrastructure, particularly the four-party model — the end customer, the merchant, the acquirer, and the issuer — remains essential. Global networks like Visa and Mastercard bring unparalleled reach, established regulatory trust, and reliable settlement mechanisms. By linking stablecoin balances to these familiar card rails, fintechs can deliver a scalable, compliant, and universally accepted spending experience.

Drawing on the expertise of industry leaders from Thredd, Reap and Fireblocks, this white paper explores the current landscape of stablecoin adoption, the vital role of modern issuer processors and card networks in enabling real-world use cases, and the immense opportunity for innovation, particularly within the APAC region.

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01

The new payment frontier.

Stablecoins move into the mainstream.

The use of stablecoins is no longer a niche phenomenon; it is a global movement. These digital assets, which combine the borderless, 24/7 nature of cryptocurrency with the stability of a fiat currency, are redefining the mechanics of value transfer.

But their adoption is not one-dimensional. While the initial surge in volume was driven by B2C use cases like remittances, retail trading, and play-to-earn gaming, a new front is rapidly emerging.

B2B use cases are catching up fast, driven by a global corporate demand for programmable, cross-border value transfer.

Companies are seeking a way to eliminate the friction, cost, and time delays inherent in legacy payment systems like SWIFT. However, there is a core challenge: how to connect the speed and innovation of stablecoins with the real-world infrastructure required for widespread scalability? The answer, increasingly, lies in leveraging the very payment rails that have defined global commerce for decades.

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Who's spending stablecoins today?

A real-world view.

Not all stablecoin volume is created equal.

While the stablecoin market has a total transfer volume that has surpassed that of Visa and Mastercard combined, a significant portion of this is attributed to inorganic, on-chain trading activity.

When focusing on "organic" use cases like payments, the landscape reveals a clear distinction between B2C and B2B adoption.

(Artemis Analytics, Token Terminal, Visa, Mastercard 2025).

Who's spending stablecoins today? A real-world view

B2C adoption:

Led by remittances and retail trading.

While B2B payments are now the fastest-growing segment, B2C use cases have traditionally been the largest drivers of organic stablecoin volume. This is especially true in regions where traditional financial services are either expensive, inefficient, or both (The Block 2025).

Remittances
The average cost of a traditional remittance payment remains high, often exceeding 6% of the transaction value. Stablecoins offer a low-cost, near-instant alternative. This use case is particularly prevalent in the Asia-Pacific (APAC) and Latin American (LAC) regions, where large populations of overseas workers send money home **(Coinbase 2024).**

Retail trading and play-to-earn
Stablecoins are the "go-to" asset for funding accounts on crypto exchanges and for micro-transactions in Web3 applications, particularly in play-to-earn games. This is especially pronounced in markets like the Philippines, Vietnam, Korea, and Indonesia, where a vibrant crypto gaming and Web3 scene has emerged. A report from Fintech News Singapore confirms that APAC is at the forefront of this shift, with regulators in the Philippines, South Korea, and Singapore laying out clear frameworks to accommodate this growth **(Fintech News Singapore 2025).**

Who's spending stablecoins today? A real-world view

B2B flows:

Smaller but growing faster.

While still representing a smaller share of overall stablecoin volume, B2B payments are the fastest-growing segment, with an annualised run rate of $36 billion as of early 2025 (The Block, May 2025).

This marks a major shift from the peer-to-peer (P2P) dominance of prior years. Companies are increasingly using stablecoins to:

- **Replace SWIFT-based payments:** Stablecoins offer a faster, cheaper, and more transparent alternative to traditional correspondent banking, which can involve multiple intermediaries and significant delays.
- **Fund multi-currency wallets:** Companies can use stablecoins to centralise and manage treasury in a predictable, stable form, especially in regions with high currency volatility.
- **Streamline FX and treasury operations:** Stablecoins reduce foreign exchange (FX) risk by allowing businesses to hold and transact in a stable, digital U.S. dollar, avoiding costly currency conversions.

> There's a clear pattern of B2B businesses supporting sectors that are actively adopting stablecoins," **says Amy Zhang, Head of APAC at Fireblocks, a digital asset infrastructure provider that enables financial institutions, banks, fintechs, and large corporations to build, manage, and scale their digital asset operations.** "For example, corporates that are underserved by the transaction banking industry are increasingly looking at ways in which stablecoins can help them enhance yields and streamline treasury flows."

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03

Why card infrastructure still matters.

Traditional rails still matter.

Despite the promise of a fully decentralised, blockchain-native future, traditional card infrastructure – with its provisions for chargebacks, consumer dispute resolution, and fraud protection mechanisms, all backed by legal contracts and decades of case law – remains a cornerstone for real-world stablecoin adoption for three critical reasons:

- **Trust**
- **Global acceptance**
- **Compliance**

Why card infrastructure still matters

As Jonathan Vaux, Head of Propositions & Partnerships for Thredd, points out,

> **"The real opportunity lies in bridging the innovation of on-chain assets with the trusted, scalable infrastructure of card networks."**

- **The four-party model provides global acceptance:** The four-party model is the foundation of global commerce. Networks like Visa and Mastercard have built a universal system of trust over decades, ensuring that a card issued in one country is accepted at millions of merchants worldwide. This global reach is something no single blockchain can provide on its own.
- **Built-in controls and regulatory frameworks:** Card networks offer built-in, trusted mechanisms for fraud control, chargebacks, and regulatory compliance. Modern issuer processors are experts in enforcing these rules, including Know Your Customer (KYC) and Anti-Money Laundering (AML) checks, which are vital for a transparent and secure financial system. The regulatory clarity provided by these networks is a significant barrier to entry for opaque, fully off-chain systems.
- **Trusted off-ramps:** When an individual or business needs to convert their stablecoin holdings to a local fiat currency, a trusted off-ramp is essential. Network settlement via regulated exchanges remains the most reliable and secure way to perform this. This on-chain to off-chain transition, managed by a regulated issuer processor, is crucial for preserving liquidity and trust.

In short, card networks enable controlled scale. They allow for the gradual, compliant, and secure integration of a new technology (stablecoins) into an existing, trusted infrastructure.

04

The future state:

Native stablecoin spend via card rails.

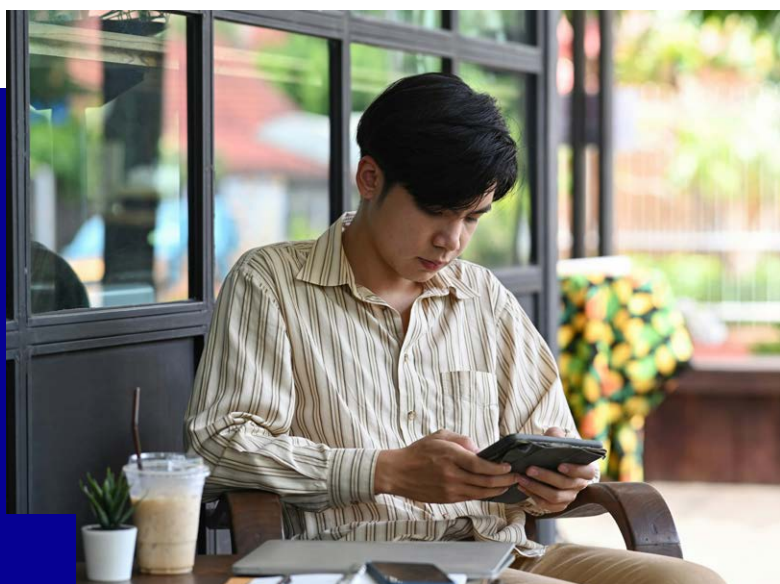
Direct stablecoin spend is becoming a reality.

If the ultimate future vision is to allow end customers to spend directly from their stablecoin balances without the need for a separate, front-end conversion to fiat, then the future vision is not just a theoretical concept; it is an emerging reality.

The future state: Native stablecoin spend via card rails

> **"Companies like Reap which offer Card-as-a-Service infrastructure are now allowing businesses to unlock the value of their stablecoin holdings directly. By bridging on-chain liquidity with off-chain spending capabilities, we're now helping users to put their digital assets to work seamlessly."** – Harris Leow, Head of Cards, Reap

- **Vision:** A cardholder, perhaps a remote worker, holds their salary in USDC. When they use their card to buy a coffee, the transaction is authorised in real-time against their USDC balance. There is no pre-conversion; the stablecoin itself is the funding source.
- **Building on network interest:** Both Visa and Mastercard have already run pilot programmes using stablecoins for settlement, demonstrating their interest in this future state. Visa's pilot programme uses stablecoins to prefund cross-border payouts on its Visa Direct network, aiming to unlock liquidity and modernise treasury operations for businesses (PYMNTS 2025).
- **Transaction and settlement:** In this future state, a transaction authorises off-chain in familiar ISO 8583 format (the global messaging format for card transactions). Card networks and issuer-processors use this messaging standard to route payment data from the merchant to the issuer. The issuer-processor then communicates with the stablecoin custody platform to approve or decline the transaction based on the stablecoin balance. The value settles on-chain, with the stablecoins moving from the user's wallet to the issuer's account. This eliminates the need for expensive and slow fiat settlement between a crypto exchange and a traditional bank, while preserving the merchant's experience of receiving fiat.
- **Friction elimination:** This process eliminates unnecessary off-ramping friction. Instead of a multi-step process involving an exchange, a bank transfer, and then a card load, the entire flow is seamless, providing speed and cost-efficiency to the end user.



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How it could work:

The architecture behind stablecoin-backed cards.

The next phase requires hybrid architecture.

The architecture behind this future state is a sophisticated blend of on-chain and off-chain technologies.

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How it could work: The architecture behind stablecoin-backed cards

Stablecoin custody:
The stablecoin custody and wallet management typically sit with a regulated partner, off-chain from the card network. This custody solution is linked to the card funding logic.

Modern issuer processors:
A modern issuer processor acts as the central processing hub. It manages real-time authorisation rules, monitors balances, and enforces spend parameters. It is the bridge between the on-chain value of a stablecoin and the trusted merchant acceptance of a card network.

Key differences from fiat models:

- **Real-time price indexing:** For stablecoins, this is straightforward as the value is pegged.
- **Wallet-based funding:** The funding source is a digital wallet, not a traditional bank account, requiring the processor to have a direct API connection to the wallet provider.
- **Alternative settlement rails:** The settlement is not with a traditional bank's ledger but a blockchain, requiring the processor to integrate with the relevant smart contracts and exchange APIs.
- The processor's role is to act as a bridge between stable value and trusted merchant acceptance, abstracting away the complexity of the underlying blockchain.

06

APAC as the launchpad for innovation.

APAC is primed to lead.

While stablecoins have global relevance, the APAC region is particularly well-positioned to be a launchpad for innovation. This is due to a confluence of forward-thinking regulatory approaches, high digital adoption rates, and a real-world need for more efficient payment rails.

Stablecoin-friendly regulatory frameworks: Governments and regulators across APAC are proactively creating frameworks to foster stablecoin innovation.

"Regulatory clarity is the foundation for real-world stablecoin adoption. When businesses have confidence in the framework, this allows them to commit capital and build long-term infrastructure. The evolving regulations around stablecoins from APAC and across the world is creating the trust layer that allows stablecoins to move from speculative assets to essential business tools." – Harris Leow, Head of Crypto Cards, Reap

APAC as the launchpad for innovation

- **Singapore's licensing initiatives:** The Monetary Authority of Singapore (MAS) has a clear regulatory framework for single-currency stablecoins (SCS) pegged to the SGD or G10 currencies. This framework requires issuers to hold 100% reserve assets and meet stringent capital and disclosure requirements (Advomi 2025).
- **Japan legalising fiat-backed stablecoins:** Japan has been a leader in legalizing fiat-backed stablecoins, defining them as "currency-denominated assets." This legal recognition, which came into force in June 2023, allows regulated banks and other financial firms to issue them (Nation Thailand 2025).
- **Hong Kong embracing Web3 infrastructure:** Hong Kong is moving forward with a licensing framework for fiat-referenced stablecoin issuers, with the Stablecoins Ordinance taking effect in August 2025. The city expects to issue its first licenses in early 2026 (Caixin Global 2025).
- **Australia token mapping initiatives:** Australia has undertaken "token mapping" to identify and classify digital assets and is moving to regulate digital asset platforms by introducing them as new financial products, subjecting them to existing licensing and consumer protection laws (ASIC 2025).
- **Fertile ground for adoption:** High mobile usage, widespread digital wallets, and a significant volume of remittance flows create a perfect environment for stablecoin adoption. Use cases like play-to-earn and crypto payments are already part of the regional payment fabric.

> **"When we look at the catalysts driving the industry's maturity, two stand out: increasing regulatory clarity, and the organic growth of both primary and secondary liquidity in the stablecoin market. As major stablecoin issuers become more regulated, users are gaining confidence in holding and using stablecoins - whether for spending or off-ramping - rather than feeling the need to constantly de-risk,"** says Zhang.

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APAC as the launchpad for innovation

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Amy Zhang – Head of APAC for Fireblocks

APAC as the launchpad for innovation

Reap and Thredd.

By leveraging Thredd's modern issuer processor capabilities, Reap is well-positioned to launch and scale stablecoin-backed card programmes in APAC and beyond.

This partnership showcases how modern issuer processors act as the critical bridge, enabling a crypto-native firm to launch a compliant, globally accepted card product.

"Companies in the Web3 space, often holding large stablecoin reserves, are increasingly seeking ways to spend or leverage those assets. Reap's approach allows businesses to use stablecoins to pay bills or as a credit line, with conversion and settlement managed in the background." – Damien Gough, Head of Asia Pacific for Thredd

"Companies like Thredd play a crucial role as the access layer, enabling clients like Reap to move seamlessly between fiat and stablecoin. This hybrid approach delivers on the promise of stablecoins—reduced risk, lower costs, and enhanced speed—while maintaining the security, compliance, and global reach that only the four-party card model can provide." – Jonathan Vaux, Head of Propositions & Partnerships for Thredd

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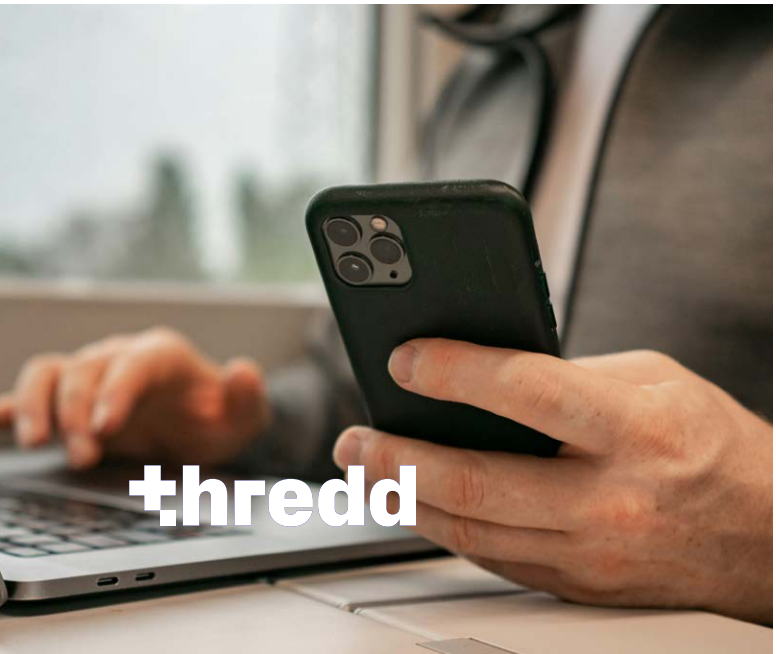
07 Conclusion.

Stablecoins are rapidly transforming the way value moves, not just in the digital realm but in the real world.

"If I'm using a wallet, how can I ensure it's always available, highly resilient, secure, and capable of keeping up with the speed at which customers are transacting?" Amy Zhang, Head of APAC at Fireblocks, on the types of wallet infrastructure conversations partners should be having.



Damien Gough, Head of Asia Pacific for Thredd, summarises:

"As the technology matures and integrates with trusted global payment networks, we'll see stablecoins become an invisible but essential part of everyday finance—delivering speed, stability, and lower costs to markets that need it most. This is how we will unlock the next phase of digital payments for both financial and non-financial organisations."

Meet the authors.

- **Damien Gough,** Head of Asia Pacific, Thredd
- **Harris Leow,** Head of Crypto Cards, Reap
- **Jonathan Vaux,** Head of Propositions & Partnerships, Thredd
- **Amy Zhang,** Head of APAC, Fireblocks

About Reap.

Reap was an early leader in Asia to incorporate stablecoins into our solutions. In 2024, Reap processed billions in stablecoin-funded transaction flows. From stablecoin-enabled corporate cards to cross-border payments, we streamline financial operations and empower companies to scale with our integrated business accounts and embedded finance solutions. Founded and headquartered in Hong Kong, Reap employs over 200 people worldwide. More information about Reap can be found at reap.co.

About Fireblocks.

Fireblocks is the world's most trusted digital asset infrastructure company, empowering organisations of all sizes to build, manage and grow their business on the blockchain. With the industry's most scalable and secure platform, we streamline stablecoin payments, settlement, custody, tokenisation, and trading operations across the largest ecosystem of banks, payment providers, stablecoin issuers, exchanges and custodians. Thousands of organizations trust Fireblocks to secure more than $10 trillion in digital asset transactions across 120+ blockchains.

About Thredd.

Thredd is the trusted next-generation payments processing partner for innovators looking to modernise their payments offerings worldwide. We process billions of debit, prepaid and credit transactions annually, serving over 100 fintechs, digital banks, and embedded finance providers, from consumer to corporate, based across 47 countries.

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