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Growth of Stablecoin Cards in Southeast Asia: Infrastructure, Economics, and Regulatory Implications

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Abstract

Stablecoin-linked payment cards have emerged as one of the fastest-growing segments of the digital payments ecosystem, with global monthly transaction volumes rising from approximately $100 million in early 2023 to over $1.5 billion by late 2025, a compound annual growth rate of 106%. This paper examines their development in Southeast Asia, a region that has become a critical laboratory for stablecoin-based retail payment infrastructure. Focusing on Singapore-based StraitsX and its partnerships with Visa, RedotPay, KBank (Thailand), and Grab, the analysis integrates global growth metrics, Singapore's regulatory trajectory from Project Orchid through Project BLOOM, and the fee economics of stablecoin cards for merchants and consumers. The paper contrasts Singapore's proactive, sandbox-driven regulatory clarity with more enforcement-oriented or restrictive approaches in Thailand, Indonesia, the Philippines, and Vietnam. It further situates Southeast Asia within the global stablecoin landscape, contrasting the MAS model with the U.S. GENIUS Act (signed July 18, 2025). Drawing on blockchain analytics, official regulatory disclosures, and industry data, the paper argues that Southeast Asia's experience offers key lessons for policymakers, merchants, and consumers regarding the future of digital retail payments. The paper concludes with implications for regulatory design, consumer protection, and the competitive dynamics between incumbent card networks and new blockchain-native entrants.

Keywords: *Stablecoins, Digital payments, Fintech, Blockchain, Southeast Asia, Payment systems, StraitsX, MAS, Regulatory policy*

1. Introduction

When a traveler from Bangkok taps their Thai e-wallet to pay for a meal in Singapore, few pause to consider the infrastructure behind the transaction. For Singapore-based StraitsX, however, that seamlessness is precisely the point: a stablecoin pegged one-to-one with the Singapore dollar may be settling the payment in real time, with local currency arriving instantly on the merchant's side. This 'invisible' use of stablecoins, hidden

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beneath familiar payment interfaces, represents one of the most consequential developments in the evolution of digital retail payments.

Stablecoins, cryptocurrencies engineered to maintain a stable value relative to fiat currencies, have grown into a critical component of the digital asset ecosystem. By early 2026, the global stablecoin market exceeded $270 billion in circulation (Reuters, 2026). Yet academic literature has focused primarily on stablecoins as tools for cryptocurrency trading, arbitrage, and Decentralized Finance (DeFi). Far less scholarly attention has been paid to their rapidly emerging role in everyday retail commerce, a gap this paper seeks to address.

Stablecoin-linked payment cards bridge the cryptocurrency ecosystem with mainstream commerce. Users hold stablecoins in a digital wallet; at the point of sale, those stablecoins are converted to fiat currency so that merchants receive standard card payments without any change to their existing infrastructure. Monthly transaction volumes in the global crypto card sector rose from roughly $100 million in early 2023 to over $1.5 billion by late 2025, implying an annualized run rate exceeding $18 billion (Artemis Analytics, 2026). Stablecoins now fund approximately 78% of all crypto card transactions, reflecting consumer preference for price stability (Reynolds, 2026).

Southeast Asia has emerged as a leading laboratory for this transition. The region combines rapid digital adoption, fragmented regulatory frameworks, high cross-border payment costs, and intense competition among payment providers, conditions that make it an unusually revealing test case. Singapore, through the Monetary Authority of Singapore (MAS), has taken the most coherent and globally visible regulatory posture, anchoring the region's innovation ecosystem.

This paper makes five contributions to the literature. First, it synthesizes global growth data on stablecoin card spending from blockchain analytics and industry sources. Second, it provides an in-depth case study of StraitsX, examining its business model, key partnerships, and strategic vision. Third, it analyzes Singapore's regulatory trajectory from Project Orchid through Project BLOOM and contrasts it with approaches in Thailand, Indonesia, the Philippines, and Vietnam. Fourth, it evaluates fee economics and their implications for merchants and consumers across the region. Fifth, it situates Southeast Asia within the global stablecoin regulatory landscape, with particular attention to the US GENIUS Act and its extraterritorial implications. The paper concludes with policy recommendations and directions for future research.

2. Global Growth of Stablecoin Card Spending

2.1. Transaction Volume Trajectory

Recent data from Artemis Analytics, a blockchain data platform, document a remarkable expansion in crypto-linked card spending. Monthly volumes grew from approximately $100 million in early 2023 to more than $1.5 billion by late 2025, a compound annual growth rate of roughly 106% (Artemis Analytics, 2026). At this pace, the sector operates at an annualized transaction volume exceeding $18 billion (Reynolds, 2026). This figure approaches parity with peer-to-peer stablecoin transfers, estimated at approximately $19 billion annually, suggesting that card-based channels have become one of the primary modes of stablecoin usage in the real economy (Artemis Analytics, 2026).

The Wirex platform exemplifies how rapidly individual providers can scale. Wirex reported that its stablecoin card volumes increased tenfold on a month-over-month basis in early 2026, surpassing an $850 million annualized run rate within months of product launch (Benzinga, 2026). These growth rates, across both aggregate market data and individual platforms, indicate broad-based adoption rather than idiosyncratic outlier performance.

Visa's own stablecoin settlement activity has reached an annualized run rate of approximately $4.5 billion (Reuters, 2026). Visa currently processes more than 90% of on-chain crypto card transaction volume, a concentration reflecting its early partnerships with cryptocurrency platforms and card program managers (Reynolds, 2026). By late 2025, spending through Visa-linked stablecoin cards had reached approximately $3.5 billion in annualized transaction volume, representing 19% of the total crypto card market (Bambysheva, 2026).

2.2. Stablecoin Dominance Within Crypto Cards

Although early crypto cards allowed users to spend volatile assets such as Bitcoin or Ether, stablecoins have become the dominant funding source. Approximately 78% of crypto card transaction volume is now funded by stablecoins, primarily Tether (USDT) and USD Coin (USDC) (Reynolds, 2026). Three factors explain this shift: price stability reduces spending hesitancy, high liquidity across exchanges ensures availability, and near-instantaneous blockchain settlement reduces counterparty risk for card issuers.

Regional variation exists in stablecoin preferences. In most markets, USDT dominates due to its larger global supply and exchange support. However, in India and Argentina, USDC accounts for approximately 47% of stablecoin card payments, likely reflecting local regulatory environments, exchange access patterns, and macroeconomic pressures such as currency instability (CryptoNews, 2026). Within Southeast Asia, XSGD, StraitsX's Singapore dollar-pegged stablecoin, holds more than 70% of the non-USD stablecoin market in the region (CoinDesk, 2026).

2.3. The Role of Traditional Card Networks

Although stablecoin cards depend on blockchain technology for settlement, their commercial growth has been closely tied to the infrastructure of established payment networks. Most stablecoin cards operate on the rails of Visa or Mastercard, allowing consumers to spend stablecoins at millions of merchants worldwide without requiring any change to merchant-side infrastructure.

Visa's engagement with stablecoin settlement represents more than passive processing volume. The company has publicly framed stablecoin settlement as a viable complement to its existing network operations. Adeline Kim, Visa's Singapore and Brunei country manager, described stablecoin-backed cards as akin to electric cars on the same highway: different engine, same rules (CoinDesk, 2026). This framing positions Visa as essential infrastructure rather than a competitive casualty, a strategic posture that will be examined further in Section 6.

Despite this rapid growth, stablecoin card volumes remain modest relative to Visa's broader network, which processes trillions of dollars annually. Nevertheless, the trajectory suggests that blockchain-based payment instruments could become a more significant component of the global payments ecosystem over the medium term.

3. Southeast Asia as a Growth Hotspot: The StraitsX Case Study

3.1. Company Overview and Regulatory Standing

StraitsX is a Singapore-based fintech company that provides regulated stablecoin infrastructure. Licensed as a Major Payment Institution under the Monetary Authority of Singapore, StraitsX issues XSGD (pegged to the Singapore dollar), XUSD (pegged to the US dollar), and XIDR (pegged to the Indonesian rupiah). Both XSGD and XUSD have been recognized by MAS as 'substantially compliant' with the upcoming Single-Currency Stablecoin (SCS) regulatory framework, among the first stablecoins in Singapore to achieve this designation (StraitsX, 2026a).

Rather than building a consumer-facing product, StraitsX positions itself as infrastructure: a Bank Identification Number (BIN) sponsor and settlement layer that enables partners to issue stablecoin-backed cards and payment products. Reserve transparency is central to the firm's compliance posture. Monthly attestation reports, issued twice per month by an ISCA-listed auditing firm, confirm that XSGD and XUSD are backed 1:1 by liquid reserves held in Tier-1 banks including DBS and Standard Chartered (StraitsX, 2026b). As of early 2026, StraitsX had processed nearly $30 billion in cumulative stablecoin transactions and was supported by more than 120 digital asset platforms and financial institutions globally (StraitsX, 2026c; Bambysheva, 2026).

3.2. Growth Metrics in Southeast Asia

StraitsX's growth figures in the stablecoin card segment are among the most striking in the regional industry. Between the fourth quarter of 2024 and the same period in 2025, the company saw its card transaction volume surge 40-fold and the number of cards issued grow 83-fold (Liu, 2026). Context is important here: one of

StraitsX's major partnerships, with RedotPay, only soft-launched in late 2024, so the Q4 2024 baseline was relatively low. Nevertheless, the growth trajectory aligns with, and in some dimensions exceeds, the broader global trend documented by Artemis Analytics.

RedotPay, a key partner enabled by StraitsX's BIN sponsorship and settlement infrastructure, processed over $2.95 billion in card volume in 2025, more than four times the combined volume of its 13 closest competitors (CoinDesk, 2026). This positions StraitsX's infrastructure at the center of the category's dominant regional player. Beyond RedotPay, StraitsX's infrastructure also powers card programs for UPay and OKX Singapore, among others. StraitsX has also reported a 400% increase in merchant transaction volume and a sixfold jump in the number of unique users transacting with those merchants on a month-over-month basis (CoinDesk, 2026).

3.3. Strategic Vision: Invisible Infrastructure

The strategic logic animating StraitsX is captured in the words of its co-founder and CEO, Tianwei Liu: 'No user cares about whether a payment runs on stablecoins or fiat; they only care if the payment goes through. The best stablecoin infrastructure is one people don't see' (CoinDesk, 2026). Liu likens the ambition to fiber-optic internet cables, present everywhere, powering seamless connectivity, but invisible to users.

This philosophy has significant strategic implications. By remaining a B2B infrastructure provider rather than a consumer-facing brand, StraitsX can serve multiple card issuers, each with their own marketing, rewards programs, and customer bases, while providing a unified, compliant settlement layer. The model avoids the costly consumer acquisition and brand-building challenges faced by direct-to-consumer competitors, while benefiting from the growth of all partners.

In December 2025, StraitsX announced a collaboration with the Solana Foundation to launch XSGD and XUSD on the Solana blockchain by early 2026. This deployment, supporting the x402 interoperability standard for machine-to-machine and AI-agent micropayments, marks the first time both tokens will operate natively on a single high-performance public chain (StraitsX, 2025b). "Stablecoin adoption is increasingly driven by users and businesses who expect payments to be instant, low-cost, and available everywhere," observed Liu. "It also brings us closer to a world where digital money moves across networks as easily as information does today" (StraitsX, 2025b). When transaction fees approach zero, Liu observed, 'payments start to look more like internet data flows, continuous, low cost, and embedded directly into applications' (CoinDesk, 2026).

3.4. Key Partnerships and Real-World Applications

StraitsX's partnerships illustrate the practical integration of stablecoin infrastructure into Southeast Asian commerce across multiple contexts:

- **RedotPay:** As noted, StraitsX's BIN sponsorship underpins RedotPay's card issuance and settlement, enabling what has become the dominant stablecoin card program in Southeast Asia by volume.
- **OKX Singapore and Grab (November 2025):** StraitsX partnered with OKX Singapore and Grab to launch Singapore's first stablecoin scan-to-pay service. Users pay with USDT or USDC via SGQR codes at thousands of merchants; merchants receive settlement in Singapore dollars, with XSGD serving as the settlement bridge behind the scenes (StraitsX, 2025a). In December 2025, StraitsX also signed a strategic memorandum of understanding with Grab to explore the next generation of Web3-enabled payment infrastructure across Asia, potentially integrating stablecoin settlement into the Grab super-app's payment and wallet products for millions of users and merchants across the region (CoinTelegraph, 2025).
- **KBank Thailand (Project BLOOM, Q2 2026):** Under Singapore's Project BLOOM initiative, StraitsX and KASIKORNBANK will enable real-time, FX-transparent cross-border QR payments between Thailand and Singapore. Thai users will be able to pay Singapore merchants in baht via KBank's Q Wallet; behind the scenes, automatic conversion between Q-money and XSGD will complete settlement (MAS, 2025b; CoinDesk, 2026). Similar rollouts are planned for Japan, Taiwan, and Hong Kong.
- **DeCard (March 2026):** DeCard launched a multi-country promotional campaign covering 11 Asian markets including Singapore, Thailand, Vietnam, Malaysia, and the Philippines, demonstrating stablecoin QR

card acceptance at thousands of merchants and illustrating the breadth of the regional acceptance network (DeCard, 2026).

These examples confirm that stablecoin card usage in Southeast Asia is no longer theoretical. The infrastructure is embedded in daily commerce, and the growth pipeline includes partnerships with some of the region's most significant consumer platforms.

4. Regulatory Landscape: Singapore's Lead and ASEAN's Fragmentation

4.1. Singapore's Regulatory Architecture

Singapore has constructed the most coherent stablecoin regulatory framework in Southeast Asia through a deliberately iterative, sandbox-driven approach. The process began with Project Orchid, launched in 2021, which explored use cases for a digital Singapore dollar and conducted more than ten industry trials over four years. These trials culminated in practical real-world applications: DBS Bank's programmable rewards (launched July 2025) and OCBC's conditional payment solution for construction projects (November 2024) are among the commercial deployments that emerged directly from the Orchid process (MAS, 2025a).

Building on Project Orchid, MAS launched Project BLOOM, Borderless, Liquid, Open, Online, Multi-currency, in October 2025. BLOOM extends settlement capabilities to tokenized bank liabilities and well-regulated stablecoins across multiple currencies (G10 and Asian), domestic and cross-border payments, and wholesale use cases including corporate treasury and agentic payments (MAS, 2025b). Initial BLOOM members include Circle, DBS, OCBC, Partior, Stripe, UOB, Ant International, StraitsX, Coinbase, and others. As MAS Chief FinTech Officer Kenneth Gay stated: 'BLOOM takes this further, enhancing the range of settlement asset options for participants... By addressing the operational and implementation challenges of settlement assets, BLOOM helps financial institutions enhance their digital asset capabilities' (MAS, 2025c).

MAS's stablecoin regulatory framework for Single-Currency Stablecoins (SCS), finalized in August 2023 and moving toward draft legislation as of November 2025, imposes strict requirements on issuers: 100% reserve backing by high-quality liquid assets, prompt redemption rights, independent audits, and issuer-only business restrictions (MAS, 2023; Blockhead, 2025). Only stablecoins meeting all requirements may carry the 'MAS-regulated stablecoin' label, a designation that StraitsX's XSGD and XUSD were among the first to approach, having been acknowledged by MAS as substantially compliant with the forthcoming framework (StraitsX, 2026a).

XSGD's market position reflects this regulatory advantage. It leads the non-USD stablecoin market in Southeast Asia with more than 70% market share, and its relevance was amplified in early 2026 when the Singapore dollar reached an eleven-year high against the US dollar (CoinDesk, 2026). Singapore's combination of regulatory clarity, institutional partnerships, and open experimentation has created conditions in which firms can test and scale products that would face far greater friction in neighboring markets.

4.2. Thailand: Enforcement-Oriented Oversight

Thailand presents a sharp contrast. The Bank of Thailand has adopted a more enforcement-oriented stance, focused on monitoring and controlling crypto activity rather than facilitating regulated experimentation. In January 2026, BOT Governor Vithai Ratanakorn announced intensified monitoring of 'grey' crypto transactions, specifically targeting stablecoin activity. The Governor noted that approximately 40% of stablecoin sellers operating on Thai platforms are foreigners 'who should not be trading' in the country, and warned that unresolved issues 'will affect macroeconomic stability in the long term' (Forklog, 2026). Daily crypto trading in Thailand averages approximately 2.8 billion baht (roughly $80 million), and new surveillance measures were expected by end-January 2026, including a national data bureau to centralize financial information for real-time tracking of suspicious transactions.

Importantly, this enforcement posture coexists with regulated innovation in specific corridors. The KBank-StraitsX partnership under Project BLOOM demonstrates that cross-border payment use cases can proceed within a supervised framework even where Thailand's general retail crypto environment is tightening. The

key distinction is between regulated bilateral corridors, where KYC, transaction monitoring, and settlement governance are clearly defined, and unregulated grey-market activity that the BOT is explicitly targeting.

4.3. Indonesia, the Philippines, and Vietnam: Cautious or Restrictive Approaches

Indonesia's approach reflects caution rather than active promotion. The Financial Services Authority (OJK) permits cryptocurrency trading but restricts its use as a payment instrument. No dedicated stablecoin regulatory law exists, and payment use of crypto assets remains constrained by existing e-money regulations. Given Indonesia's status as one of Southeast Asia's largest remittance corridors, with substantial worker flows from Singapore and Malaysia, the potential for stablecoin-based remittance cost reduction is significant, but regulatory recognition for retail payment use remains absent.

The Philippines has taken a more progressive stance in certain respects. The Bangko Sentral ng Pilipinas (BSP) has developed virtual asset service provider regulations and a well-established e-money framework. However, stablecoin-specific rules remain nascent, and the regulatory pathway for stablecoin cards is less clearly defined than in Singapore. The Philippines' large Overseas Filipino Worker (OFW) population, which generates substantial remittance flows, creates a compelling use case for stablecoin-based payment and remittance products, and this corridor may attract increasing attention from providers as the regulatory framework matures.

Vietnam presents the most restrictive environment in the group. Crypto payments are not legally recognized as a means of payment under Vietnamese law, and the regulatory framework for digital assets remains under study. Until Vietnam provides clearer legal recognition, stablecoin card acceptance for retail transactions cannot be formally offered, though informal usage may persist.

4.4. Comparative Regulatory Summary

Table 1: Cross-Jurisdictional Comparison of Stablecoin Regulation and Card Market Prospects

Jurisdiction	Regulatory Stance	Key Framework/Action	Stablecoin Card Prospects
Singapore	Proactive/ Innovation-led	MAS SCS Framework; Projects Orchid & BLOOM; XSGD/XUSD substantially compliant	High: Clear framework, active pilots
Thailand	Enforcement-oriented	BOT tightening 'grey' crypto monitoring (Jauary 2026); foreign trader restrictions	Moderate: Regulated corridors (KBank/BLOOM), but retail constrained
Indonesia	Cautious/Selective	OJK permits crypto trading but limits payment use; no dedicated stablecoin law	Low-moderate: Payment use restricted
Philippines	Progressive but fragmented	BSP virtual asset regulation; e-money framework; stablecoin rules nascent	Moderate: Remittance corridor potential
Vietnam	Restrictive	Crypto payments not legally recognized; regulatory framework under study	Low: Regulatory recognition absent
United States	Bank-centric/ Compliance-heavy	GENIUS Act signed July 18, 2025; OCC/Fed oversight; 1:1 reserve requirement	High for domestic use; foreign issuer access limited

Note: Regulatory stances reflect conditions as of Q1 2026. 'SCS' = Single-Currency Stablecoin; 'BOT' = Bank of Thailand; 'OJK' = Otoritas Jasa Keuangan (Indonesia); 'BSP' = Bangko Sentraling Pilipinas.

4.5. Singapore Versus the United States

The contrast with the United States is instructive for understanding Singapore's global positioning. On July 18, 2025, President Trump signed the GENIUS Act, the Guiding and Establishing National Innovation for US Stablecoins Act, into law, establishing the first federal stablecoin regulatory framework in US history (Mayer Brown, 2025). The Act was passed and signed into law in July 2025 (GENIUS Act, 2025).

The GENIUS Act imposes strict requirements: 1:1 reserve backing using US dollars or equivalent low-risk assets, mandatory audits, AML and sanctions compliance programs, and the ability to seize, freeze, or burn tokens upon lawful order (Arnold & Porter, 2025). Stablecoin issuers above $10 billion in issuance face federal oversight through the OCC; smaller issuers may operate under state frameworks if their state regime is certified as substantially similar to the federal standard.

For foreign issuers such as StraitsX, the GENIUS Act's extraterritorial provisions are significant. Foreign stablecoins may only be offered to US persons if the Treasury Secretary makes a 'comparability determination' that the issuer's home jurisdiction meets equivalent regulatory standards, and the issuer must hold reserves sufficient to meet US customer liquidity demands in a US financial institution (Latham & Watkins, 2025). This creates both an opportunity, Singapore's SCS framework could qualify for comparability recognition, and a compliance burden that may limit how freely Southeast Asian stablecoin issuers can access the US market.

Fundamentally, the GENIUS Act reflects a more bank-centric, compliance-first regulatory philosophy than Singapore's sandbox-driven model. Singapore offers speed within supervision; the US offers federal clarity with more friction and institutional gatekeeping. For Southeast Asian firms operating across borders, Singapore's framework has permitted faster market entry and experimentation, a structural advantage that may persist even after US implementation matures.

5. Fee Economics for Merchants and Consumers

5.1. Merchant Fee Structures in Southeast Asia

Merchant fees for digital payments remain a significant cost across Southeast Asia. Based on commercial payment data, domestic transaction fees in Singapore, Malaysia, Thailand, Vietnam, Indonesia, and the Philippines average approximately 3.4% plus a fixed fee, while international transaction fees average approximately 4.4% plus a fixed fee (Law Insider, 2025). These rates reflect the traditional interchange structure that funds rewards programs, processing, and fraud prevention.

In contrast, the average effective fee for stablecoin card transactions is approximately 1.87% (FinchTrade, 2025), roughly half the domestic rate and less than half the cross-border rate. The underlying blockchain transaction cost on high performance networks like Solana is dramatically lower, often less than $0.001 per transaction (Visa, 2023), though card issuers and program managers add their own fees on top of the network layer.

Table 2: Economic and Operational Comparison of Legacy Credit Networks and Stablecoin Payment Systems

Fee Type	Traditional Credit Card	Stablecoin Card (Southeast Asia)
Average merchant fee	1.5%-3.5% (domestic); up to 4.4%+ (cross-border)	~1.87% effective avg.; underlying blockchain cost <$0.001
Settlement time	1-3 business days	Minutes; often under 10 minutes
Chargeback/Dispute risk	High; consumers may dispute charges	Very low; transactions are typically irreversible
Cross-border premium	Additional FX spread + correspondent bank fees	Minimal; stablecoin avoids FX intermediation
Remittance cost analog	Average 6.49% globally (World Bank, 2025)	~1.9% total (blockchain fee + card program fee)

Note: All figures are approximate and reflect conditions as of late 2025/early 2026. 'Effective avg' includes card program fees. Blockchain-layer costs for stablecoin payments are typically under $0.001; total effective cost depends on issuer fee structures.

For merchants, this fee difference represents a material economic incentive. A Singapore retailer with $1 million in annual card sales could save between $15,300 (switching from 3.4% to 1.87%) and $25,300 (switching from a 4.4% cross-border rate) annually, meaningful cost reductions in competitive retail environments. Shopify's integration with stablecoin payments, including a 1% USDC cash-back incentive for customers, illustrates how merchant adoption can be accelerated through payment-side incentives (Ryssdal, 2025).

5.2. Remittance Costs and the SDG Opportunity

The fee advantage is particularly significant in the remittance context. According to the World Bank's Remittance Prices Worldwide database, sending $200 internationally still costs an average of 6.49% globally (World Bank, 2025), well above the UN Sustainable Development Goal target of 3%. For migrant workers in Southeast Asia, Filipinos in Singapore, Indonesians in Malaysia, Thais in Japan, these costs represent a meaningful tax on labor income.

Stablecoin-based remittances, facilitated by cards such as those powered by StraitsX, can compress these costs substantially. On-chain transaction fees are typically under $0.001; adding card program fees of 1.87% yields a total effective cost of approximately 1.9%, a reduction of more than 70% compared to the global average. If the KBank-StraitsX corridor under Project BLOOM achieves its projected Q2 2026 go-live, it will provide one of the first regulated stablecoin-based cross-border payment corridors in the region, potentially serving as a template for Thailand-to-Singapore and broader ASEAN remittance channels.

5.3. Consumer Fee Structures and Model Variation

For consumers, fee structures vary by card model. Three primary models exist in the Southeast Asian stablecoin card market (DeCard, 2026):

Pre-Funded Debit Cards: The user loads stablecoins, which are converted at point of sale. The key cost risk is the exchange rate spread applied during conversion, a card may advertise zero FX fees while applying an unfavorable conversion rate, resulting in an effective cost of 2.5% or more. Consumers should evaluate the full conversion cost, not merely the stated fee schedule.

Credit-Linked Cards: These function more like traditional credit cards, with credit limits repayable in stablecoins or fiat. They may carry annual fees (one example product charges $388 for the premium tier) and overseas transaction fees of approximately 1.8%. The advantage is broader acceptance for payment holds and more transparent fee disclosure.

Self-Sovereign Debit Cards: These connect directly to a user's self-custody cryptocurrency wallet via smart contract. The primary cost is the blockchain gas fee, which varies with network congestion and can make small frequent transactions uneconomical. Daily spending limits are typically lower, making these cards best suited to experienced users conducting larger, less frequent transactions.

5.4. Rewards Programs and Consumer Behavior

Rewards programs in the stablecoin card market take several forms. Some issuers offer rewards in proprietary cryptocurrency tokens, producing high headline reward rates but exposing users to token price volatility. Other issuers offer stablecoin-denominated rewards, which provide a more transparent and stable value proposition. Shopify's one-percent USDC cash-back program exemplifies this approach (Ryssdal, 2025). A third approach, exemplified by DeCard's KrisFlyer miles integration, blends stablecoin infrastructure with conventional loyalty systems, combining blockchain-based settlement with familiar consumer reward structures (DeCard, 2026).

Consumer adoption faces several behavioral hurdles beyond fee structures. Cardholders accustomed to fraud protection, charge dispute rights, and revolving credit may not readily substitute stablecoin debit instruments, which typically lack these protections. Bridging this gap will require continued product development, regulatory standardization on consumer protection, and consumer education. The 'invisible' infrastructure model, where the stablecoin layer is entirely hidden behind familiar card and QR interfaces, may be the most effective adoption strategy, as it requires no change in consumer behavior.

6. Competitive Dynamics and Strategic Positioning

6.1. Visa's Embrace of Stablecoin Settlement

Visa's strategic response to stablecoin cards illustrates how incumbent payment networks are adapting rather than resisting. By processing more than 90% of on-chain crypto card volume and forming active partnerships with issuers including StraitsX, Visa has positioned itself as indispensable infrastructure for blockchain-based payments (Reynolds, 2026). The 'electric car' analogy articulated by Adeline Kim captures the approach: the settlement asset changes, but the road signs, toll booths, and consumer protections remain the same (CoinDesk, 2026).

This strategy protects Visa's interchange revenue to some extent while allowing it to capture volume growth in the stablecoin card segment. However, it raises structural questions. If stablecoin cards continue to scale and merchant fees compress further, will Visa be able to maintain revenue per transaction? The company appears to be wagering that volume growth will offset fee compression, a bet that depends heavily on continued rapid adoption. Visa's own stablecoin settlement run rate of $4.5 billion annually (Reuters, 2026) suggests the bet is already generating meaningful returns.

6.2. StraitsX as Infrastructure vs. Full-Stack Competitors

StraitsX's B2B infrastructure model contrasts with those of full-stack crypto card issuers that manage both settlement and consumer acquisition. Rain, which holds direct Visa principal membership, has scaled to over $3 billion in annualized volume; Reap has scaled to over $6 billion (CoinDesk, 2026). These competitors manage their own settlement operations and have grown rapidly by investing in direct consumer channels.

StraitsX's approach, remaining in the background as a BIN sponsor and settlement provider, trades direct consumer relationships for broader reach across multiple partner platforms and lower customer acquisition costs. The strategy has demonstrably succeeded in the short term, given the 40x card volume growth and the positioning of StraitsX infrastructure at the center of RedotPay's dominant market position. Whether this model remains advantageous as the market matures will depend on whether infrastructure providers can maintain pricing power against competitors that control both the settlement layer and the consumer relationship.

6.3. Long-Term Implications for Interchange Revenue

The most structurally disruptive implication of stablecoin card growth concerns the traditional interchange model. Merchants, attracted by materially lower effective fees, may increasingly prefer stablecoin card acceptance over traditional card products. If this preference becomes widespread, it would create competitive pressure on interchange rates across the industry, potentially forcing a renegotiation of the economics that have historically funded consumer rewards programs and processing infrastructure.

The presence of Visa and Mastercard as gatekeepers ensures they will capture a portion of the new ecosystem's value regardless, whether through network fees, settlement services, or data monetization. But the long-term trajectory of interchange revenue in a world of maturing stablecoin payment infrastructure remains an open empirical question, one with significant implications for banks, issuers, card program managers, and merchants alike.

Morph projects that stablecoins could facilitate between 5 to 10% of all global cross border payments by 2030 (Morph, 2026), though such estimates originate from industry sources and should be treated with appropriate caution. Even if actual penetration falls well short of these projections, the directional trend is consistent with a broader structural shift toward lower cost, faster settling payment instruments.

7. Risks, Challenges, and Critical Perspectives

7.1. Regulatory Fragmentation and Cross-Border Compliance

The most immediate operational risk for stablecoin card providers in Southeast Asia is regulatory fragmentation. Stablecoin card providers operating across ASEAN borders must simultaneously navigate Singapore's emerging SCS framework, Thailand's enforcement-oriented monitoring, Indonesia's payment use restrictions, the Philippines' nascent stablecoin rules, and Vietnam's non-recognition of crypto payments as legal tender. This

patchwork creates compliance costs, limits product standardization, and makes cross-border scaling more complex.

The KBank-StraitsX corridor under Project BLOOM illustrates one path forward: structuring cross-border payment use cases as bilateral regulated arrangements with clear KYC, AML, and settlement governance, rather than attempting broad retail expansion across heterogeneous regulatory environments. This approach sacrifices scale for compliance certainty, a trade-off that may be necessary in the near term.

7.2. De-Pegging and Reserve Risks

Stablecoins are only as stable as the reserves backing them. The collapse of TerraUSD in 2022 remains a cautionary precedent, demonstrating that algorithmic stablecoins with inadequate reserve backing can fail catastrophically. StraitsX's monthly attestation reports, issued twice monthly by an ISCA-listed auditor, provide a high level of assurance that XSGD and XUSD maintain genuine 1:1 reserve backing in Tier-1 banks (StraitsX, 2026b). But not all stablecoin card issuers in the region maintain comparable transparency, and regulators and consumers should evaluate reserve practices carefully before extending trust to newer entrants.

7.3. Consumer Protection Gaps

Stablecoin debit cards typically lack the fraud protection, charge dispute rights, and revolving credit features of conventional credit cards. This creates potential consumer vulnerability, particularly in markets where consumer financial education around digital assets is limited. Regulators developing stablecoin frameworks should consider whether existing e-money consumer protection standards are adequate for stablecoin card products, or whether additional requirements, such as mandatory chargeback mechanisms or fraud insurance, are warranted.

7.4. Opacity in Fee Structures

The challenge for regulators is to preserve the convenience and cost advantages of stablecoin cards without allowing fee opacity to become a business model. As noted in Section 5, pre-funded debit cards may advertise zero FX fees while embedding unfavorable conversion spreads; rewards programs denominated in volatile tokens may inflate headline rates; and annual fee structures may not be prominently disclosed. Standardized fee disclosure requirements, analogous to the Total Annual Cost (TAC) disclosures applied to consumer credit products in some jurisdictions, would help consumers make informed comparisons between stablecoin card products and conventional alternatives.

8. Policy Implications

8.1. For Regulators

Singapore's experience demonstrates that proactive regulatory engagement, through iterative sandbox experimentation, reserve transparency requirements, and bilateral corridor-based cross-border arrangements, can foster innovation while maintaining financial stability. The MAS model, centered on the SCS framework and Project BLOOM, offers a replicable template for jurisdictions that wish to capture the economic benefits of stablecoin card adoption without sacrificing regulatory control.

For Thailand, Indonesia, the Philippines, and Vietnam, the critical policy question is not whether stablecoin cards will arrive, they already have, but whether governments will shape their integration proactively or reactively. Proactive engagement, including clear reserve requirements, consumer protection standards, and bilateral corridor frameworks, is likely to produce better outcomes than blanket restriction or regulatory neglect.

The GENIUS Act's comparability determination process also creates a potential mechanism for mutual recognition between US and Singapore stablecoin frameworks. If Treasury determines that Singapore's SCS framework meets comparable standards, StraitsX and other MAS-regulated issuers could gain access to US markets, a significant prize that would further validate Singapore's regulatory approach.

8.2. For Merchants

Merchants across Southeast Asia should evaluate stablecoin card acceptance as a cost-reduction strategy,

particularly in cross-border and remittance-adjacent contexts where traditional payment costs are highest. The fee differential, approximately 1.87% versus 3.4-4.4% for conventional cards, represents a meaningful impact on operating margins in competitive retail environments. Adoption barriers are low where stablecoin card programs operate on existing Visa or Mastercard rails, as no change to merchant-side infrastructure is required.

8.3. For Consumers

Consumers should evaluate stablecoin card products by examining total cost of ownership, including conversion spreads, annual fees, rewards program terms, and consumer protection provisions, rather than relying on headline fee disclosures. Cards that advertise zero FX fees may embed conversion spreads that offset this advantage. Rewards denominated in proprietary tokens carry price risk. Consumers who prioritize fraud protection and dispute rights may find credit-linked stablecoin card models more suitable than pre-funded debit alternatives.

9. Conclusion

Stablecoin-linked payment cards are transitioning from a cryptocurrency niche into a meaningful component of retail payment infrastructure, and Southeast Asia is at the center of this transition. Global monthly transaction volumes have grown from $100 million in early 2023 to over $1.5 billion by late 2025, with an annualized run rate exceeding $18 billion. Stablecoins now fund approximately 78% of all crypto card transactions, and Visa processes more than 90% of on-chain crypto card volume, underscoring the continued centrality of established networks even as blockchain-based instruments gain traction.

Singapore has emerged as the region's regulatory anchor. Through Project Orchid, the SCS framework, and Project BLOOM, MAS has constructed a model in which regulated experimentation is not only permitted but actively facilitated. StraitsX, operating within this framework as a licensed Major Payment Institution, has become one of the most important stablecoin infrastructure providers in the region, processing nearly $30 billion in cumulative transactions and enabling partners like RedotPay to achieve dominant market positions. The company's partnership pipeline, Grab, KBank, OKX Singapore, DeCard, and the Solana Foundation, illustrates how a commitment to invisible, interoperable infrastructure can achieve broad reach without direct consumer acquisition.

The contrast with neighboring ASEAN markets is sharp. Thailand has tightened oversight of grey-market crypto activity; Indonesia restricts stablecoin payment use; Vietnam does not legally recognize crypto payments; the Philippines is developing its framework. Regulatory fragmentation remains the primary obstacle to regional scale. The KBank-StraitsX corridor under Project BLOOM offers a promising template: bilateral, regulated, and transparent arrangements that enable innovation within defined governance structures.

The US GENIUS Act has introduced federal regulatory clarity for stablecoins, but its bank-centric, compliance-heavy architecture differs meaningfully from Singapore's sandbox-first approach. For Southeast Asian firms, Singapore's framework has permitted faster market entry and product iteration, a structural advantage that should be recognized by policymakers designing stablecoin regulations in other jurisdictions.

Future research should examine consumer adoption determinants in specific Southeast Asian markets, the competitive response of traditional card issuers as stablecoin card volumes scale, the systemic implications of privately-issued digital dollars operating within mainstream payment infrastructure, and the long-term sustainability of interchange economics in a world of maturing stablecoin payment alternatives. The invisible infrastructure that StraitsX and its peers are building today may prove to be among the most consequential developments in the evolution of global retail payments.

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