The Ideal of P2P Payments, and the Reality of Crypto Cards

How Crypto Cards Expose Information Disconnects in Jurisdiction-Based Tax Systems

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About

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Researcher

Mingu Gordon Park

Corresponding Author

Taemin Oh

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Executive Summary

South Korea's virtual asset income tax framework scheduled for implementation in 2027 is designed to capture the moment assets are converted and withdrawn into Korean won (KRW) through domestic exchanges. However, foreign-issued crypto cards linked to Visa and Mastercard networks sidestep this premise. Users can spend on-chain assets directly for KRW-settled purchases at domestic merchants. This is especially true of the collateral-borrowing model, in which users deposit assets as collateral rather than selling them, then borrow stablecoins against that collateral. Because this model does not involve a disposal of the underlying collateral at the point of payment, its tax treatment remains unclear under current law. Crypto cards could therefore become a gap that determines whether the local 2027 tax regime is effective in practice.

The gap this new spending pathway leaves in tax administration spans both information and taxation standards. Domestic acquiring networks retain only the payment timestamp, amount, and merchant — who paid with what asset remains isolated on the foreign issuer's servers. Authorities can see "how much was spent," but cannot identify "who spent it, using income earned through what means," without international cooperation premised on suspected criminal conduct. Even if this information were obtained, the collateral-borrowing model has no tax standard finalized stage by stage. In the debit-type model, where assets are sold at every payment, each payment constitutes a disposal — but the collateral-borrowing model creates debt rather than disposing of assets, which may effectively defer the point of taxation. Moreover, current law and published tax guidance cannot clearly answer at which stage — vault deposit, collateral pledge, liquidation, or repayment — a taxable event arises. As a result, the collateral-borrowing model creates a gap in the authorities' information and tax controls, offers the possibility of tax deferral, and raises a larger equity problem than the debit-type model as the number of domestic users grows.

We therefore propose three measures. First, the interpretive standard for taxable events should be fixed stage by stage, tailored to the structure of the collateral-borrowing model. It should be specified whether vault deposit constitutes a loan, whether collateral pledge is non-taxable under the doctrine of security by way of transfer, and whether forced liquidation and repayment constitute a disposal — with corresponding filing forms put in place. Second, a point of connection should be built to bridge the disconnected information: an interface should be established linking the Crypto-Asset Reporting Framework (CARF), launching in 2027, with payment information from domestic acquiring networks, and a plan should be developed to obtain data from foreign issuers in proportion to transaction volume. Third, the Financial Services Commission should expand its regulatory sandbox exemptions to designate full-stack crypto card issuers as demonstration subjects, on the condition that they submit tax data. This would help cultivate competitive domestic alternatives that remain within the view of domestic regulators.

FIGURE 01 **Comparison of Tax Information Linkage Structures: Domestically Issued Cards vs. Foreign-Issued Crypto Cards**

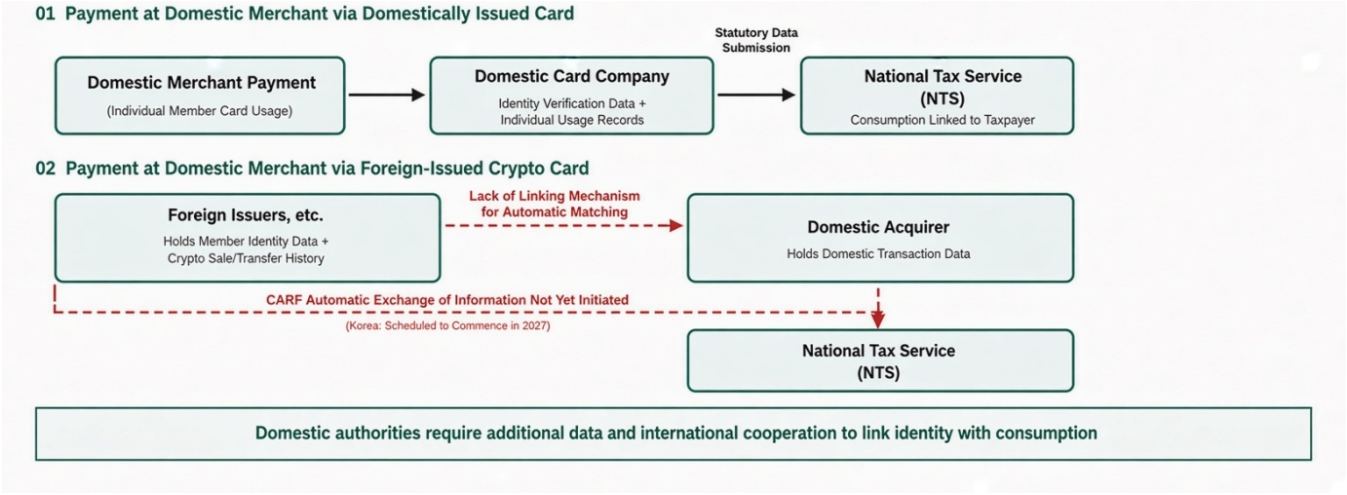
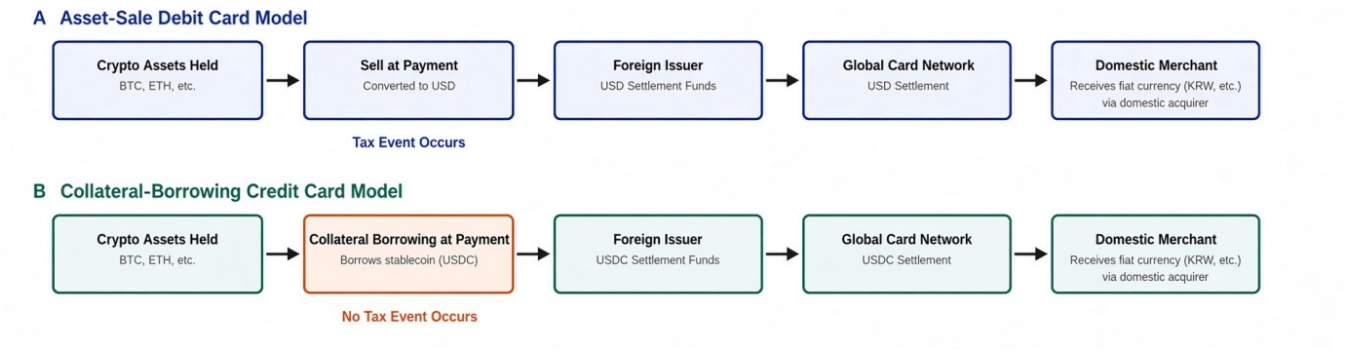


FIGURE 02 **Comparison of Tax Event Occurrence by Crypto Card Model**



Introduction

Contrary to the ideal of a "decentralized peer-to-peer (P2P) electronic cash system" originally proposed by Bitcoin, P2P payments utilizing cryptocurrencies have yet to establish a firm foothold in everyday consumer spending. Although alternative solutions have been sought—such as the Lightning Network to address Bitcoin's slow final settlement and high transaction fees, and stablecoins to mitigate price volatility—they have struggled to replace the institutional foundation accumulated by existing payment systems, including consumer protection frameworks, tax compliance mechanisms, and merchant acceptance infrastructure.

Recently, however, on-chain assets are entering everyday commercial transactions through a fundamentally different path. Rather than constructing new P2P payment networks, "crypto cards"[1)] that leverage the globally established payment rails of Visa and Mastercard are growing rapidly. Consumers holding on-chain assets use these cards in the exact same manner as traditional payment cards, while merchants receive settlement in local fiat currency without even needing to realize that they accepted a crypto-backed transaction. This growth is being reinforced by full-stack infrastructure that integrates card issuance, payment processing, crypto-to-fiat conversion, and settlement into a single platform. Combined with stablecoin-based on-chain settlement, this is accelerating the expansion of crypto cards even further. Whereas P2P payments sought to replace legacy[2)] payment networks, crypto cards instead utilize legacy payment rails to connect on-chain assets to the real economy.

The critical issue is that this transformation extends beyond a mere competitive dynamic within the payment market. As on-chain assets, including stablecoins, can flow into daily consumption via crypto cards without passing through domestic financial institutions, a new gap is opening between capital flows moving across borders and jurisdiction-based financial and tax frameworks. Consequently, the proliferation of crypto cards raises a fundamental policy question beyond the introduction of a novel payment instrument: how jurisdiction-based financial and tax frameworks can address borderless on-chain capital.

1) In this report, "crypto" is used as an umbrella term encompassing cryptocurrency, crypto assets, on-chain assets, and virtual assets. Depending on context, however, the report distinguishes among these terms: "virtual assets," the statutory term, in the context of domestic law and regulation; "crypto assets" or "on-chain assets" when discussing financial and infrastructure structures; and "cryptocurrency" when emphasizing the technical characteristics of blockchain-based currency.

2) In this report, "legacy" refers to the traditional financial system, as distinct from blockchain and Web3 infrastructure. It is used broadly to cover institutional financial infrastructure in widespread use today—bank-centered payment and remittance networks, international financial messaging networks, and credit card networks such as Visa and Mastercard.

This report proceeds from this concern. It first examines the structural limitations of P2P payments and the rise of crypto cards, analyzing how full-stack issuance infrastructure and on-chain settlement underpin their expansion. Through case studies of RedotPay and ether.fi, it explores the precise operational mechanisms through which on-chain assets connect to real-world spending via legacy card networks. Building upon this analysis, the report examines the financial and tax policy implications of crypto card adoption in South Korea ahead of the 2027 virtual asset taxation framework, and discusses the institutional measures required to capture these emerging capital flows while resolving information disconnects in tax administration.

01

From P2P Payments to Crypto Cards: A Shift in Market Dominance in the Retail Stablecoin Payment Market

① Stagnant P2P Payments, Exploding Crypto Cards

Crypto cards refer to prepaid, debit, or credit cards that link a user's stablecoin and crypto asset balances held in wallet or exchange accounts with legacy payment networks—such as Visa and Mastercard—enabling immediate online and offline merchant purchases. Recently, the crypto ecosystem has witnessed an explosive increase in total stablecoin transaction volumes alongside a sharp expansion in crypto card market share. According to data from Artemis, global stablecoin payment volume grew more than fivefold from approximately $1.9 billion in January 2023 to $10.2 billion as of August 2025, representing a steep year-over-year increase of over 137% in August 2025.[3] Within the retail payment sector specifically, the growth divergence between on-chain P2P payments and crypto card payments appears even more pronounced. From January 2023 to August 2025, stablecoin-based on-chain P2P payment volume stagnated at a compound annual growth rate (CAGR) of just 5.3%, while payment volume via crypto cards achieved an explosive CAGR of 106.2%. While the high growth rate of crypto cards is partly attributable to base effects from a lower starting point, their annualized run-rate transaction volume based on August 2025 monthly payments reached approximately $18 billion—rapidly approaching the existing P2P payment volume of approximately $19 billion.[4] Crypto cards, which accounted for a tiny fraction of total retail payments just two years prior, have now grown to rival the scale of P2P payments. These metrics show that cryptocurrency use is rapidly expanding beyond wallet-to-wallet P2P transfers into everyday merchant payments via crypto cards.

3) See Figures 3 and 4. Kim, Patrick. "Stablecoin Payments at Scale: How Cards Bridge Digital Assets and Global Commerce." Artemis Research, January 16, 2026. Accessed August 18, 2026. https://research.artemis.ai/p/stablecoin-payments-at-scale-how

4) The crypto card market figure ($18 billion) and the existing P2P payment market figure ($19 billion) cited in the text are both annualized run-rate estimates, calculated by multiplying the August 2025 monthly payment volume by 12. The underlying August monthly figures for both numbers were calculated directly by the author using Artemis data (see Figure 4).

This recent surge in crypto card payment volume is the combined result of an expanding card issuance ecosystem and intensifying customer acquisition competition among providers. While crypto cards were previously offered primarily through major centralized exchanges, the supply base widened rapidly in 2025 as Visa and Mastercard expanded partnerships with emerging card issuance infrastructure providers and on-chain fintech firms.[5] As market entry barriers lowered and competition intensified, various card programs aggressively offered drastic cashback and reward schemes alongside reduced service fees, driving rapid growth in payment transaction volumes.

② The Consumer Protection Dilemma and the Compromise Strategy of Crypto Cards

Why, then, have stablecoin-based on-chain P2P payments—despite their lower fees and rapid settlement speeds—allowed crypto cards to gain ground rapidly in the retail payment market? To understand the essence of this phenomenon, it must be examined through the lens of the "need for consumer protection."

Solutions such as Base Pay (integrated into Shopify to support wallet-based, one-click USDC payments for millions of merchants), Solana Pay (completing QR payments in 400 milliseconds at a micro-fee of $0.00025 per transaction), and Coinbase Commerce (accepting hundreds of crypto assets with instant USDC settlement) represent on-chain payment solutions directly competing with legacy "end-to-end card payment networks" like Visa and Mastercard. Encompassing authorization, network routing, merchant acceptance, and consumer interfaces, these infrastructures dramatically reduce transaction fees compared to legacy card networks and shift multi-day settlements to 24/7 real-time settlement, offering merchants an alternative they find hard to refuse.[6] However, what these innovative solutions sacrificed for cost and speed was precisely "consumer protection mechanisms." A core reason on-chain P2P payments have failed to achieve widespread adoption in retail payments is that the robust consumer protection safeguards traditionally provided by legacy card networks are not natively built into blockchain protocols. Providing consumer protection in an on-chain environment equivalent to legacy card networks runs into a structural limitation: it requires building separate intermediary, insurance, and dispute-resolution systems from scratch.

5) Green, Jack. "The Future of Payment Systems: Crypto Cards Explained." Medium, February 13, 2026. Accessed August 18, 2026. https://medium.com/@jackgreencrypto/the-future-of-payment-systems-crypto-cards-explained-decb06ae162a

6) Using existing card payment networks such as Visa and Mastercard, merchants typically pay a merchant discount rate (MDR) of 2–3% or more of the transaction amount, plus a fixed per-transaction processing fee. By contrast, one-stop on-chain payment infrastructure such as Base Pay or Coinbase Commerce charges a merchant fee of just 1%, while a purely on-chain QR payment model like Solana Pay charges no percentage-based fee at all—only a minimal network fee (gas fee) of about $0.00025 per transaction.

In B2B (Business-to-Business) transactions between entities that have established mutual trust through prior contracts and dispute resolution capacities, the benefits of on-chain payments—low remittance fees and fast processing—can be fully realized. In contrast, retail payments are inherently transactions with "uncertain and untrusted anonymous counterparties." When a consumer uses a card at a merchant visited for the first time, what is required is not merely payment, but a "safety net" guaranteeing that funds can be recovered in cases of non-delivery, merchant bankruptcy, or fraud. However, given the nature of blockchain transactions—where settlement finality[7] is a defining attribute—replicating card network features such as chargebacks, dispute arbitration, or zero liability protection presents inherent difficulties.[8]

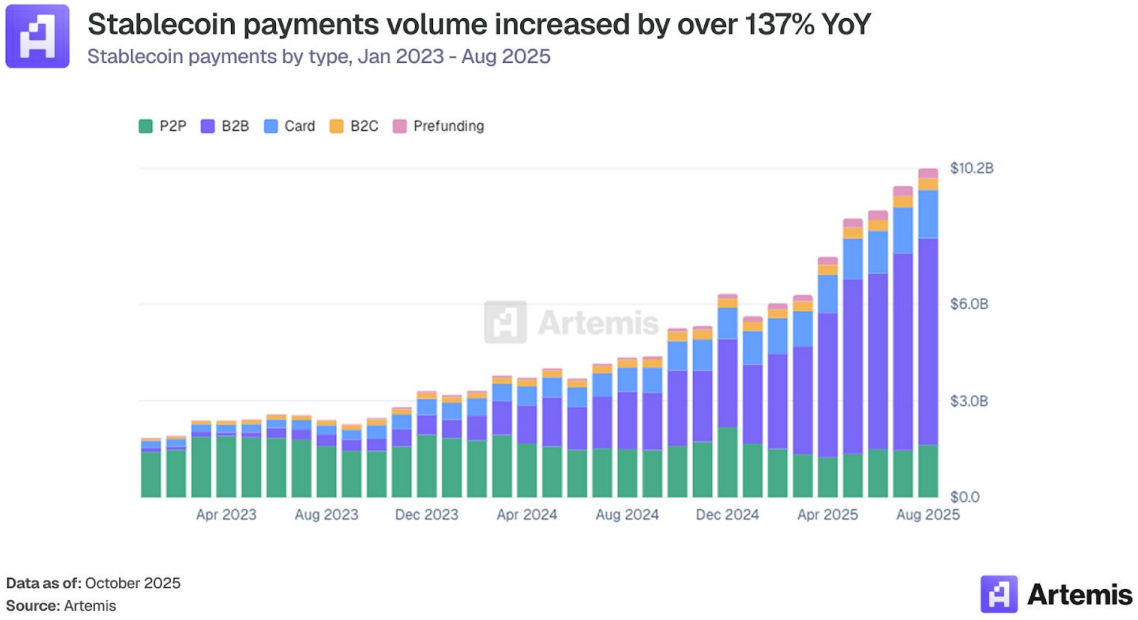
Jorn Lambert, Chief Product Officer (CPO) at Mastercard, noted in an official commentary that "We do this because stablecoins alone do not offer the global acceptance, security, reliability, consumer protections and scale that have made card payments trusted and preferred by billions."[9] For consumers accustomed to multi-layered protective safeguards, there is little incentive to switch to on-chain P2P payments while assuming full counterparty risk. It is precisely at this juncture that the crypto ecosystem selected a pragmatic compromise: the "crypto card." Crypto cards present an ingenious middle ground—utilizing the high liquidity of crypto assets on the backend, while borrowing wholesale the robust consumer protection framework and vast merchant acceptance network that Visa and Mastercard have built over decades on the frontend. In conclusion, until on-chain consumer protection technology matures or institutional improvements are completed, crypto cards that leverage the trust infrastructure of legacy card networks are expected to maintain a strong comparative advantage over on-chain P2P payments in the retail payment market.

7) Settlement finality: the point at which a financial transaction's transfer of ownership is complete and the transaction can no longer be canceled, reversed, or withdrawn, legally or technically. In traditional finance, this is determined by centralized intermediaries (card companies, banks, etc.) under legal and institutional agreement; on the blockchain, irreversible finality is established the moment a transaction is permanently recorded on a block, through a distributed consensus algorithm (PoW, PoS, etc.) and cryptographic verification.

8) Alternatives do exist even in an on-chain environment—conditional escrow based on smart contracts, dispute resolution through a decentralized autonomous organization, or a payment gateway building its own guarantee pool. But paradoxically, the moment one tries to implement on-chain consumer protection in a retail setting, an escrow that locks up a transaction erases the speed advantage of "real-time settlement," and the costs of dispute arbitration and maintaining a guarantee fund undermine the price competitiveness of "ultra-low fees." In other words, building new consumer protection infrastructure on-chain risks diluting the very advantages of on-chain P2P payments, and can end up being inefficient.

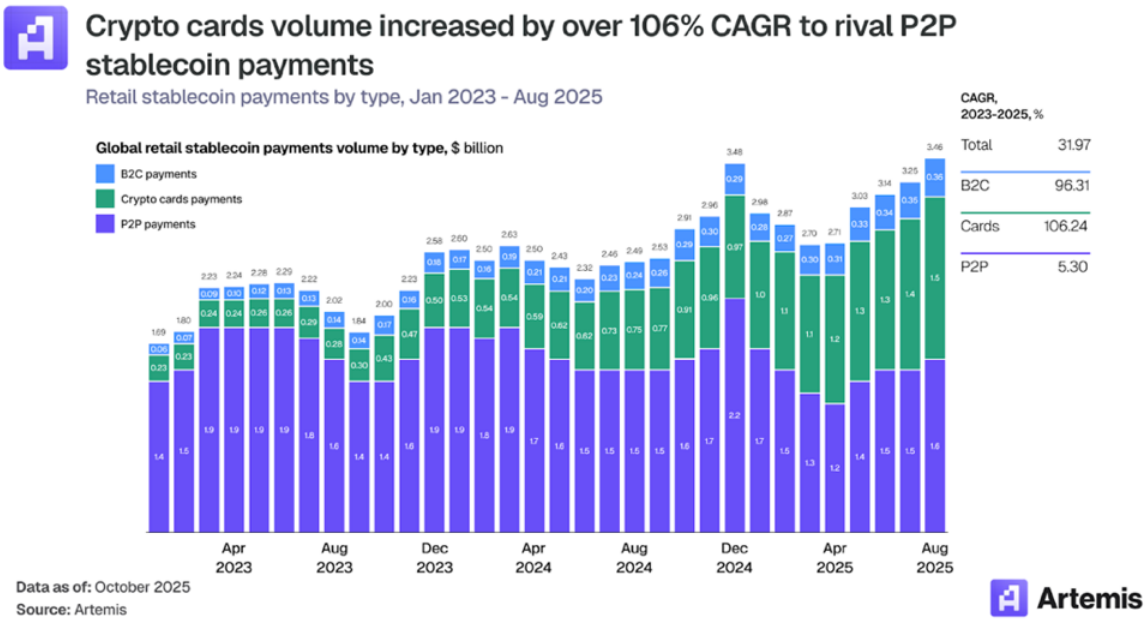
9) Lambert, Jorn. "Bringing real utility and global scale to stablecoins." Mastercard News & Trends, June 23, 2025. Accessed September 3, 2026. https://www.mastercard.com/global/en/news-and-trends/stories/2025/mastercard-stablecoin-utility-and-scale.html

FIGURE 03 **Stablecoin Payment Volume and Trends by Type**



Source: Artemis, Jan 2023 – Aug 2025

FIGURE 04 **Stablecoin Retail Payment Volume and Trends by Instrument**



Source: Artemis, Jan 2023 – Aug 2025

③ Entering the Market Without Disrupting the Familiar

Despite the advantages of rapid settlement times and low transaction fees, on-chain P2P payments face formidable regulatory, tax/accounting, and acceptance infrastructure barriers in the physical retail market. Requiring hundreds of millions of brick-and-mortar merchants worldwide to set up on-chain wallets and manage private keys is practically impossible, and offline payment infrastructure—such as dedicated Point of Sale (POS) terminals designed to directly accept P2P payments—remains scarce. Even if a merchant directly accepts stablecoins on-chain, they must bear not only the operational burden of constantly converting them into local fiat currency, but also the full weight of complex tax reporting and regulatory compliance risks. In an environment where automated bookkeeping—where sales data seamlessly integrates into accounting ledgers like existing POS systems—is unavailable, directly accepting stablecoins represents severe operational uncertainty from the merchant's perspective.

Crypto cards offer the exact solution capable of surmounting this massive operational barrier. The moment a consumer makes a payment with a card at a retail store, the card issuer instantly sells the consumer's crypto balance on the backend to convert it into fiat currency, such as US dollars. Subsequently, through the settlement system of the Visa and Mastercard networks, actual fiat funds are deposited to the merchant via the acquirer. Thanks to this mechanism, store owners receive settlement in their local fiat currency as usual, without even needing to be aware that the customer used a crypto card. Merchants can avoid direct exposure to tax and regulatory risks, eliminating any need to build separate payment systems.

Ultimately, the utility offered by crypto cards is clear. Without altering the existing behavior patterns of either merchants or consumers, crypto cards leverage legacy card networks as a protective shield, enabling stablecoins to safely scale up past regulatory and tax barriers into the physical retail market.

02

Behind Crypto Card Issuance: From Fragmentation to Vertical Integration

Behind the familiar user experience of crypto cards lies the "issuance infrastructure" that connects on-chain assets with legacy card networks. Chapter 2 examines how this infrastructure is structured and how it is evolving behind the consumer-facing card programs and global payment rails. Issuance infrastructure serves as the foundation that determines the costs and scalability of a card program, while simultaneously acting as the core nexus that links and manages user identities alongside transaction data. From a taxation and supervisory perspective, what matters is not merely that payment records are created, but whether regulatory authorities can connect those records to actual end users. Therefore, examining who issues the cards and under which jurisdiction's regulations the relevant data is managed serves as the starting point for understanding both the market structure and the institutional implications of crypto cards.

① The Invisible Gears: Card Issuance Infrastructure

For consumers, paying with crypto is simple and intuitive. Users deposit crypto assets in a card app, then pay at a merchant with a card bearing the Visa or Mastercard logo. Naturally, attention goes to the two most visible players: the crypto card program and the global payment network. But behind this seamless experience, "invisible gears" are at work. In the few seconds it takes a payment to complete, something has to detect the assets in the user's on-chain wallet, authorize the payment, and send the amount to the Visa or Mastercard network. Whose hands does that work?

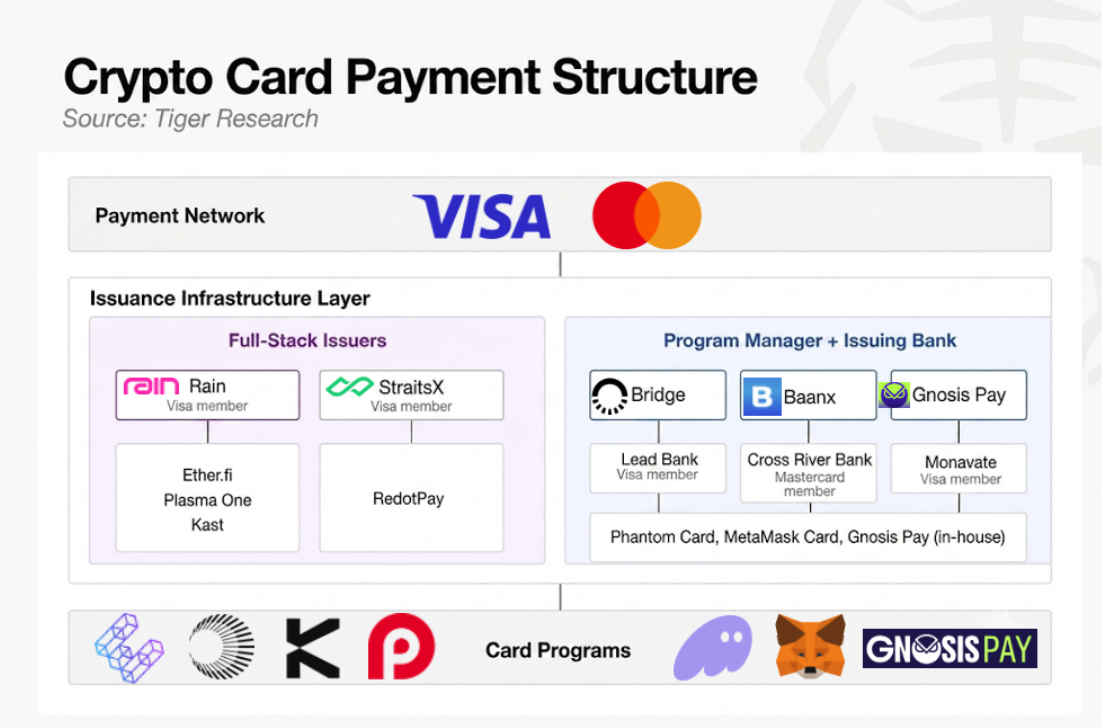
The answer is the "card issuance infrastructure." This issuance infrastructure mints physical and virtual cards while processing real-time authorization and FX conversion so that a user's on-chain wallet balance can be spent across traditional card networks. Throughout this process, it also handles regulatory compliance functions, including Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements. While users interact only with the card application, it is the underlying issuance infrastructure that connects on-chain assets to the existing financial system. Without this infrastructure layer, even the most innovative Decentralized Finance (DeFi) protocols or crypto fintech firms would struggle to launch their crypto cards successfully into the retail payment market. Ultimately, the success of crypto payment mainstreaming depends on how efficiently and securely these systems bridge on-chain assets and legacy payment networks—that is, the pace at which card issuance infrastructure evolves.

② Full-Stack Issuance Platforms Emerge as the New Standard

Issuance infrastructure comes in two main types: program managers and full-stack issuance platforms. Both provide the technical and regulatory infrastructure that makes crypto cards possible.

A program manager typically works with an issuing bank that holds a Principal Membership license from Visa or Mastercard. Because the program manager has no license of its own, the issuing bank provides it with a Bank Identification Number (BIN), which is what makes card issuance possible. The program manager, in turn, offers an application programming interface (API) and card issuance infrastructure to co-brand partners[10)]—companies that already have their own on-chain service platforms and customer bases. This lets a co-brand partner launch a crypto card under its own brand quickly, without building issuance infrastructure from scratch. Program managers also run the card program end to end, handling payment authorization and regulatory compliance as well as currency conversion and settlement with issuing banks and card networks, so that crypto assets in a user's wallet (such as stablecoins) can be spent in physical retail transactions.

FIGURE 05 **Three Interdependent Layers That Enable Crypto Card Payments**



Source: Tiger Research, adapted by Metanomia

10) Centralized exchanges (Binance, Bybit, OKX, etc.), fintechs (Revolut, RedotPay, etc.), Web3 platforms (ether.fi, Ethena Pay, etc.), and non-custodial wallet services (MetaMask, Trust Wallet, Ledger, etc.) all partner with issuance infrastructure as co-brand partners to operate crypto card programs. These co-brand partners typically build the user experience within their own platform—for card applications, viewing payment history, and the like—handle real-time balance checks and deductions in response to payment requests (internal authorization logic), and own the frontline customer relationship, including marketing under their own brand and distributing crypto rewards.

The MetaMask Card, launched in the United States, is a representative example of this structure. MetaMask is the consumer-facing co-brand partner that offers the card service, and Baanx is the program manager that supplies the card issuance and payment processing infrastructure. Cross River Bank participates as the issuing bank, providing the legal and institutional foundation for card issuance, while actual merchant payments run through Mastercard's global payment network.[11)]

Going a step further, full-stack issuance platforms, which combine the roles of program manager and issuing bank, have recently emerged and are driving a transformation. Full-stack issuers such as Rain, Reap, and StraitsX have obtained Principal Membership licenses from Visa directly. This allows them to bring card issuance and network settlement, functions that once depended on sponsor banks, inside their own platforms. As a result, they keep the fee margins that used to flow out to sponsor banks, significantly raising their profitability.

The full-stack model also unifies the entire value chain on a single platform, from card issuance to payment processing, crypto conversion, and final settlement, which fundamentally removes the operational friction of complex multi-vendor setups. With a single point of contact with the card networks and transactions processed on their own systems, these platforms achieve markedly higher payment authorization rates and transaction reliability, along with operational efficiency from shorter settlement cycles.

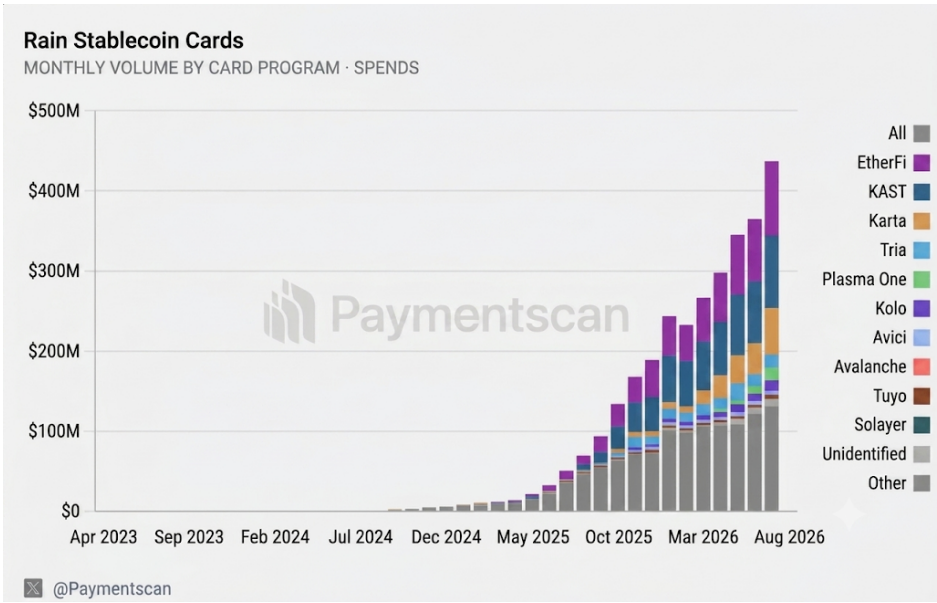
Rain and StraitsX are representative full-stack issuers that support everything on one platform, from card issuance to on-chain settlement in US dollar stablecoins linked to the Visa network. Leveraging this integrated infrastructure, they provide comprehensive backend support for ether.fi and RedotPay’s card programs.

Full-stack infrastructure is also the core foundation for next-generation payment experiences, because advanced features cannot be implemented right away without tight coupling between issuance and payment processing systems. These include integration with Apple Pay, Google Pay, and Samsung Pay, mobile and wearable payments, tokenization services, and AI-driven autonomous payments. Ultimately, as the market matures and payment services demand more sophisticated features, full-stack issuance models—offering system flexibility and control in place of fragmented infrastructure—are establishing themselves as the new standard and a powerful competitive advantage in the crypto card ecosystem.

On the surface, countless crypto card programs seem to be competing fiercely at the front of the market. Look at the issuance infrastructure behind them, however, and a different picture emerges: many card programs depend on a small number of infrastructure providers. Real control over retail crypto payments, along with the enormous value the market represents, is converging on those who control this invisible issuance infrastructure.

11) MetaMask. "MetaMask and Mastercard partner to launch the US MetaMask Card, with first-time availability in New York." MetaMask News, February 26, 2026. Accessed August 18, 2026. https://metamask.io/news/metamask-and-mastercard-partner-to-launch-the-us-metamask-card

FIGURE 06 **Crypto Card Programs Growing Rapidly Through Full-Stack Issuer Rain**



Source: Paymentscan, Apr 2023 – Jul 2026

As crypto cards expand across borders, this full-stack structure calls for new institutional responses. An overseas issuer handles everything itself, from KYC to card issuance, payment authorization, crypto asset conversion, and settlement, yet the cards it issues can be used in many countries through the Visa and Mastercard global networks, wherever the issuer is located. As a result, card payments take place at merchants in individual countries, including South Korea, but the user's identity information and the associated card payment data are managed by the overseas issuer. In other words, the country where a card is actually used and the country where the user's identity and payment data are managed can differ.

03

The Convergence of Crypto Cards and On-Chain Settlement

The expansion of crypto cards discussed above reflects not only a shift in the payment instruments consumers use, but also a structural shift in the settlement mechanics that govern how funds actually move behind the scenes. A substantial share of crypto cards currently in circulation still use a transitional model: crypto assets are converted into fiat currency at the time of payment, with final settlement processed afterward via legacy banking rails. To overcome the delays and cost inherent in legacy settlement networks, however, a foundational infrastructure shift is gaining momentum among global payment networks and major card issuers. This shift retains the card payment rails that connect consumers and merchants, while executing backend settlement directly through always-on USD stablecoins. Indeed, Visa and Mastercard—the twin pillars of global payment networks—are actively integrating major public blockchains and compliance-focused stablecoins into their core systems to build on-chain settlement rails.

① Two Layers of Card Payments: Authorization and Settlement

Market discourse often frames the relationship between stablecoins and traditional payment networks as a rivalry: "Will stablecoins replace Visa and Mastercard?" Proponents of this view often cite annual stablecoin transaction volumes exceeding $20 trillion to predict the demise of the retail payment giants.[12)] But this framing stems from a fundamental misunderstanding of how payment system architecture works. What stablecoins are actually disrupting is not the front-end card networks—Visa and Mastercard—but the backend legacy settlement infrastructure: the Automated Clearing House (ACH) and the Federal Reserve Wire Network (Fedwire). To clear up this confusion, the payment process needs to be understood as two distinct layers: "Authorization" and "Settlement."

12) The text's discussion of the debate comparing stablecoin and traditional card network payment volumes, and of stablecoin transaction volume surpassing $20 trillion, is based on the following article: Ciccomascolo, Giuseppe. "Crypto Goes Mainstream as Stablecoins Beat Visa and Mastercard in Volume: Report." CCN, June 11, 2025. Accessed August 31, 2026. https://www.ccn.com/news/crypto/stablecoins-outpace-visa-mastercard-fortune-embrace-crypto/

At the authorization layer, Visa and Mastercard function as a real-time messaging network, routing authorization requests from the merchant to the issuer and relaying the issuer's approval or decline back to the merchant. So the moment a card payment is authorized, funds are not yet transferred—the issuer simply deducts the amount from the cardholder's available limit, or places a temporary hold on it. The settlement layer, where money actually moves, only happens 1 to 3 business days after authorization. Once the card network completes clearing—calculating the net amount owed between the banks involved—and sends the resulting instructions, the actual transfer of funds runs over legacy rails such as ACH or Fedwire (or SWIFT[13] for cross-border payments). The problem is that this legacy settlement layer is bound by banking hours, which makes it take several days,[14] and it runs through multiple intermediary institutions, generating complex, costly fees.

In an on-chain environment, stablecoins like USDT and USDC settle instantly, the moment a transaction is confirmed on the blockchain. But once integrated into legacy card payment systems, they don't settle every authorized transaction individually in real time.
That is because card transactions frequently involve post-authorization adjustments—cancellations, same-day refunds, added tips. It is also because paying on-chain gas fees for tens of thousands of micro-transactions per second would create serious inefficiency. So real-world crypto card settlement uses a "daily batch settlement" model: millions of transactions between merchants and issuers over the course of a day are netted together, and only the resulting balance is sent on-chain once a day.

Even though it is not real-time on a transaction-by-transaction basis, this model still fundamentally transforms the legacy settlement structure. Traditional banking networks like ACH and Fedwire pause overnight, on weekends, and on holidays, which delays settlement by several days—but blockchain rails run 24/7. In the end, the real value of on-chain settlement in card infrastructure is not eliminating the gap between authorization and settlement entirely—it is freeing the settlement cycle from banking hours altogether, fixing it to a daily settlement with no holidays, and thereby dramatically cutting the multi-day delays that the legacy settlement network used to cause.

In other words, USD stablecoin-based on-chain settlement relieves much of the structural friction built into legacy settlement networks like ACH and Fedwire.
So from Visa and Mastercard's perspective, stablecoins are not a competitor threatening their business—they're a powerful upgrade tool for settlement infrastructure, a high-performance replacement for a backend settlement rail that has stayed slow and inefficient for decades. What's taking shape is an architecture where the front end keeps the

13) SWIFT (Society for Worldwide Interbank Financial Telecommunication): a global messaging network that transmits the payment and remittance messages needed for cross-border financial transactions. Because it is not a payment rail that moves actual funds in real time, but infrastructure that only carries financial messages, final settlement passes through multiple correspondent banks, creating a delay of several days (T+2 to T+5) and multiple layers of fees.

14) Real-time, fiat-based settlement networks recently introduced among large, licensed US banks—such as FedNow or RTP (Real-Time Payments)—operate around the clock, but remain bound by two inherent limitations: (1) they are domestic-only rails, incapable of cross-border transactions, and (2) they lack smart-contract-based programmability. As a result, they face clear structural limits in matching the settlement efficiency of the "single, global stablecoin-based rail" that Visa and Mastercard are currently building—one that operates borderlessly among member institutions on a public blockchain.

merchant network, consumer protections, brand trust, and user experience of the legacy card networks intact, while only backend settlement moves onto blockchain rails. Consumers still pay with their cards, and store owners still look at the same familiar POS terminal—but on the back end, settlement that used to take 2 to 3 days or more is compressed into same-day settlement, with no banking-day constraints. This is not some distant, hypothetical scenario—it is happening right now.

In the end, the debate framed as "stablecoins versus credit cards" completely misses the point of how payment architecture actually works. This is not a case of one replacing the other—it is closer to a complementary fit between the strengths of two different layers. The two technologies are simply solving different problems at different layers of the financial stack. Once the multiple layers of the payment system are seen clearly, the unnecessary confusion falls away, and the real opportunity within this transformation of settlement infrastructure comes into view.

FIGURE 07 **Stablecoin-Based Card Payment and Settlement Flow**



Source: Visa

② Maximization of Capital Efficiency Enabled by On-Chain Settlement

When 24/7 borderless on-chain assets meet crypto cards for retail payments, they encounter legacy bank settlement networks. While front-end payment authorization takes a mere two seconds, the temporal and structural friction enforced by backend settlement infrastructure creates a fundamental dissonance with the on-chain ecosystem. For crypto cards to survive long-term and establish themselves as sustainable real-world financial infrastructure, the "on-chain transformation of backend settlement" is essential. Beyond the symbolic gesture of spending cryptocurrency, on-chain settlement represents the decisive key to resolving the capital inefficiencies that legacy payment networks and banking rails have enforced for decades. When backend settlement rails move onto the blockchain, the most dramatic operational shift is this: idle capital is freed up, and working capital efficiency is maximized as a result.

In traditional fiat settlement environments, the financial cost of guarding against settlement default risk fell entirely on card issuers. Because banking networks (ACH, Fedwire, etc.) cease operations overnight, on weekends, and during public holidays, card payment networks require issuers to deposit prefunding proportional to the duration of these closures, to cover settlement risk during that time. If an issuer's expected daily transaction volume is $1 million, it must deposit $4 million in cash—covering Friday, Saturday, Sunday, and Monday transactions—into a prefunding account by Friday evening ahead of a three-day holiday weekend. As daily payment volume grows to $10 million or $100 million, that frozen idle capital grows to $40 million or $400 million. Working capital that should otherwise go toward R&D or business expansion instead sits frozen, bridging the timing gaps of an outdated banking network. This is historically why the card issuance business remained an exclusive domain reserved for major banks with deep balance sheets.

USD stablecoin-based on-chain settlement, by contrast, operates 365 days a year, with same-day settlement every single day. Whether it is a weekend or Christmas morning, issuers can batch-remit that day's transaction amount to the card payment network in USD stablecoins. Friday transactions settle on Friday, Saturday transactions settle on Saturday, so there's no longer any need to hold days' worth of capital in reserve. The millions of dollars once locked up every weekend convert immediately into available capital, feeding directly into a company's liquidity and profitability.

On-chain settlement also fundamentally removes the "multiple prefunding" barrier that card programs run into when expanding globally. Under the traditional fiat system, building a global card service meant working through the correspondent banking system. For example, if a card issued in Colombia is used to pay for a US company's subscription service, the local issuer had to open an account at a correspondent bank in New York, convert pesos into dollars, and deposit prefunding there. This creates a double prefunding burden, tying up idle capital in both Bogotá and New York at once. Expanding a card service to five regions—say, Mexico, Argentina, and Europe—meant splitting prefunding deposits across five countries' local bank accounts, each in a different currency, which led to serious capital fragmentation and exposure to exchange-rate risk.

Global full-stack issuers are the ones solving this inefficiency, settling with card payment networks on-chain in USD stablecoins. In the world of crypto cards, users hold and spend USD stablecoins in their wallets rather than local currency, no matter where in the world they are—and the backend settlement between the issuer and the card network is completed in that same USD stablecoin. In other words, the entire process, from card payment to settlement, is unified around on-chain dollars. As a result, a full-stack issuer with on-chain settlement rails connected to the global card networks no longer needs to open local bank accounts or split its prefunding across multiple countries. By settling through a single USD stablecoin pool, it can consolidate idle capital that would otherwise be scattered across many countries into one USD stablecoin wallet.

Ultimately, continuous 24/7 USD stablecoin-based settlement reduces the capital tied up in prefunding and lowers dependence on correspondent banking networks, supporting the operation and global expansion of card programs.

04

The Crypto Card Business Landscape Examined Through RedotPay and ether.fi

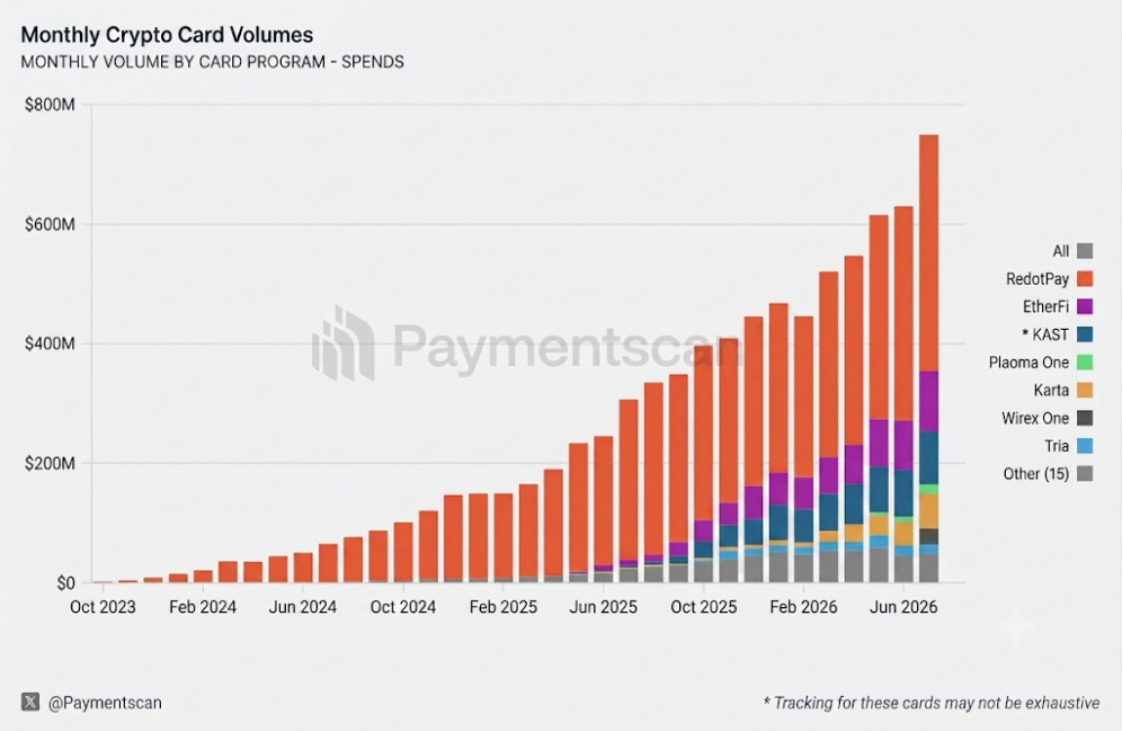
Through what architectural differentiation have RedotPay and ether.fi—two leaders in the global crypto card market—built such distinct business landscapes? According to data from Paymentscan, both services rank among the top in the global crypto card market in both transaction volume and number of payments,[15] covering a broad range of use cases from everyday micro-payments around $100 to large-value transactions exceeding $10,000. Both services also support KYC for South Korean residents, physical and virtual card issuance, and Apple Pay integration, with RedotPay additionally supporting Samsung Pay—making practical use within South Korea possible as well.[16]

However, the two services connect crypto assets to payments in distinctly different ways. RedotPay represents the asset-sale debit card model, whereas ether.fi represents the DeFi-based collateral-borrowing credit card model. This architectural divergence stems from the different economic motivations and demand in each company's target market. RedotPay targets the general public in emerging markets looking to escape local currency instability and gain everyday access to USD spending, while ether.fi targets crypto-native high-net-worth individuals who want to preserve market gains and DeFi yield while minimizing tax friction. Although both projects offer both debit and credit payment options, each has built a markedly different service structure depending on where it places its center of gravity—immediate asset sale for payment, or collateral-borrowing for payment. This chapter uses the interaction between payment mechanism and target market as its analytical framework to assess the structural advantages and limitations of both projects.

15) See Figures 8 and 9.

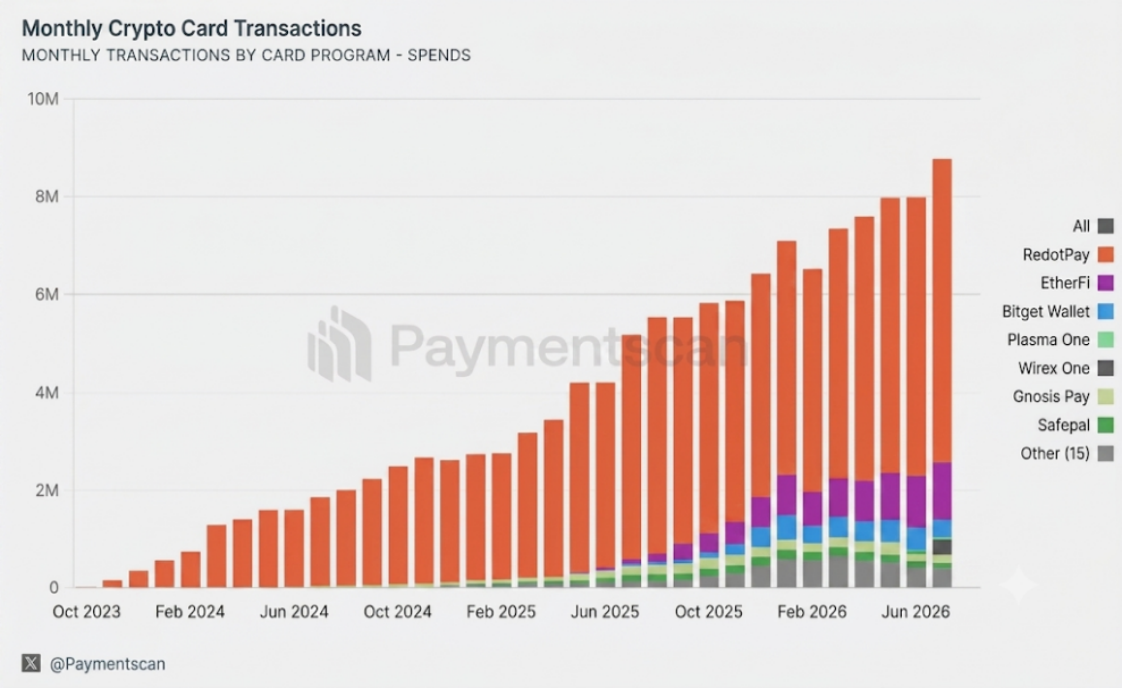
16) According to financial industry sources as of September 15, 2026, RedotPay has fully suspended new issuance of both physical and virtual cards to users in South Korea. Kim Jeong-woo. "[Exclusive] RedotPay Fully Suspends New Card Issuance in Korea." Seoul Economic Daily, September 15, 2026. Accessed September 15, 2026. https://www.sedaily.com/article/20091130

FIGURE 08 **Monthly Payment Volume Trends by Crypto Card Program**



Source: Paymentscan, Oct 2023 – Jul 2026

FIGURE 09 **Monthly Transaction Count Trends by Crypto Card Program**



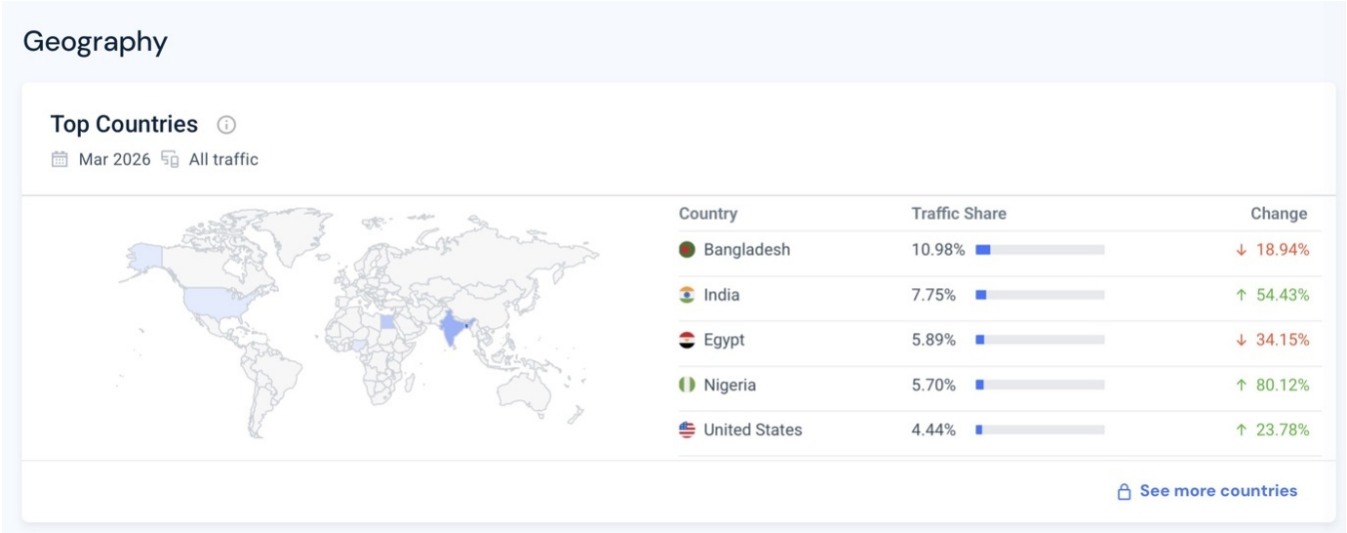
Source: Paymentscan, Oct 2023 – Jul 2026

① RedotPay: Becoming the Digital Dollar Access Infrastructure for Emerging Markets

According to Paymentscan data, RedotPay processed over $2.95 billion (approx. 4 trillion KRW) in annual card transaction volume in 2025, an overwhelming performance that exceeded the combined transaction volume of 13 major competitors by more than fourfold.[17] Despite this scale, RedotPay's brand recognition within Western crypto communities remained relatively modest. This asymmetric growth was the direct result of RedotPay capturing a unique product-market fit (PMF) by addressing the structural deficiencies of emerging market economies rather than Western markets.

Indeed, website traffic data by country from Similarweb (as of March 2026) shows that emerging markets dominate RedotPay's website traffic—including Bangladesh (10.98%), India (7.75%), Egypt (5.89%), and Nigeria (5.70%)—while the United States represents merely 4.44%.[18] This shows that while crypto cards remain a niche, supplementary option in advanced economies with fully developed financial infrastructure, they function as an essential utility filling financial voids in emerging markets. For consumers in emerging economies facing currency devaluation and strict capital controls, USD stablecoins serve as a daily survival tool. RedotPay automated the cumbersome off-ramp process—converting cryptocurrency into fiat—on the backend, connecting it directly to merchant payments. It further integrates internal wallet-to-wallet transfers, cross-border crypto-to-fiat remittances, and local ATM cash withdrawals, letting emerging-market users complete their entire financial journey, from cross-border transfers to everyday cash withdrawal, within a single platform.

FIGURE 10 **RedotPay's Emerging-Market-Centered Web Traffic Share**



Source: Similarweb

17) Jun__Yoo. "Why Emerging Markets Matter: From Crypto Cards to Headless Merchants." X, June 30, 2026. Accessed August 18, 2026. https://x.com/Jun__Yoo/status/2071818971213647992?s=20

18) See Figure 10.

This demand profile in emerging markets, tightly linked to everyday spending, is the decisive reason RedotPay concentrated its core capabilities on a debit-style payment architecture rather than complex financial engineering. What people facing currency instability needed was not yield farming or sophisticated DeFi protocols, but a simple, intuitive tool for spending and sending securely held USD stablecoins in daily life.[19] Tailored to these emerging-market characteristics, RedotPay pursued a distinctive distribution strategy, reaching into grassroots trust networks rather than relying on standard online marketing. By recruiting local P2P traders, over-the-counter (OTC) networks, and regional influencers as official agents, and designing commission structures tied to card activations, RedotPay sparked grassroots, offline virality. In February 2025, it secured StraitsX—a Singaporean issuance infrastructure firm—as its Visa BIN sponsor, rounding out its global merchant acceptance.[20] Ultimately, RedotPay's rapid growth shows that the mainstreaming of crypto payments has its roots not in technological curiosity in developed nations, but in urgent, real demand from emerging markets that lack financial infrastructure.

Leveraging the overwhelming payment velocity it has secured across emerging markets, RedotPay has built a diversified, fee-based revenue model. The platform's primary revenue comes from merchant interchange fees via the Visa network and its own payment processing fees, while multi-currency foreign-exchange spread margins from local currency conversion sustain its core cash flow. On top of that, virtual and physical card issuance fees from new users, ATM cash withdrawal fees, and ultra-short-term borrowing interest from its "Credit Mode" round out a revenue model that scales in lockstep with transaction volume.

Behind these singular achievements in emerging markets, however, lie financial and structural limitations inherent to crypto debit cards as a category. Selling volatile crypto assets—rather than stablecoins—in real time at the time of payment carries an opportunity cost, since the asset is disposed of immediately, forfeiting any potential future upside. More importantly, because assets are sold at every point of authorization to realize fiat currency, every transaction triggers a tax event, creating a substantial tax-management burden. This acts as a structural barrier to attracting high-net-worth crypto holders who prioritize asset preservation and tax efficiency.

19) RedotPay also offers a collateral-based credit payment feature of its own, called "Credit Mode." However, the LTV (loan-to-value) ratio is capped by asset—90% for USDT and USDC, 60% for BTC and ETH, and 40% for the more volatile SOL and TRX—and the borrowing rate runs as high as 0.05% per day (a fixed simple annual rate of about 18.25%). Rather than supporting long-term leverage or capital efficiency the way an on-chain money market would, this structure functions mainly as a vehicle for ultra-short-term, small-value loans repaid within a few days of the purchase. In the end, given that the general public in emerging markets can ill afford high interest rates or the risk of forced liquidation, the debit card—which sells assets in real time to cover spending—was bound to remain the system's real workhorse.

20) Redot. "RedotPay Partners with StraitsX and Visa to Revolutionise Digital Spending." RedotPay, February 10, 2025. Accessed September 10, 2026. https://www.redotpay.com/news/redotpay-partners-with-straitsx-and-visa-to-revolutionise-digital-spending

② ether.fi: An On-Chain Neobank That Overcame Its Limits by Adding Everyday Payments to DeFi

While RedotPay established itself as "survival-driven debit payment infrastructure" for the general public in emerging markets facing local currency instability, ether.fi built an entirely different financial model, tailored for crypto-native high-net-worth individuals seeking to minimize the opportunity costs and tax friction associated with selling digital assets. For wealthy holders who held substantial on-chain assets but had no way to unlock liquidity, since traditional finance refused to recognize crypto as collateral, ether.fi introduced a new alternative: an "on-chain neobank"[21] that lets users "spend without selling."

ether.fi rapidly expanded its platform asset size to approximately $1 billion, establishing itself as one of the most prominent players in the vault-based DeFi asset management sector.[22] In particular, ether.fi's "Earn" product achieved over $500 million in Total Value Locked (TVL) across its ETH-, BTC-, and USD-based vaults, becoming the largest in its category within the crypto industry. But despite attracting this much capital, early ether.fi remained subject to the same structural limitation typical of DeFi protocols: its relationship with users stayed episodic rather than becoming part of daily life. Users showed up only during specific market events—bull market rallies, short-term yield incentives, one-off airdrop farming—and once target yields were realized or rewards ended, they withdrew their funds to external exchanges or bank accounts and left, in a recurring, one-off cycle. ether.fi's central challenge became clear: reduce the large-scale capital flight and user churn that repeated during every downturn, and keep users and liquidity on the platform continuously.

ether.fi solved this persistent problem by embedding a payment layer directly inside the protocol, through a partnership with Rain, a full-stack, non-custodial card issuance infrastructure provider. The insight was that unlike on-chain financial activity, which drops off between market cycles, real-world spending is a daily behavior that creates an ongoing touchpoint with the platform. ether.fi's payment and card service, ether.fi Cash, lets users post various on-chain assets—including non-custodial vault deposits—as collateral, calculates a borrowing limit based on loan-to-value (LTV) ratio, and lets them borrow USDC within that limit to spend on the card. Card issuance and payment processing run through Rain's infrastructure in connection with the Visa network, and settlement between the issuer and Visa uses USDC-based on-chain settlement. The borrowed USDC carries a variable interest rate of around 4% annually. As a result, users can spend via crypto card in daily life

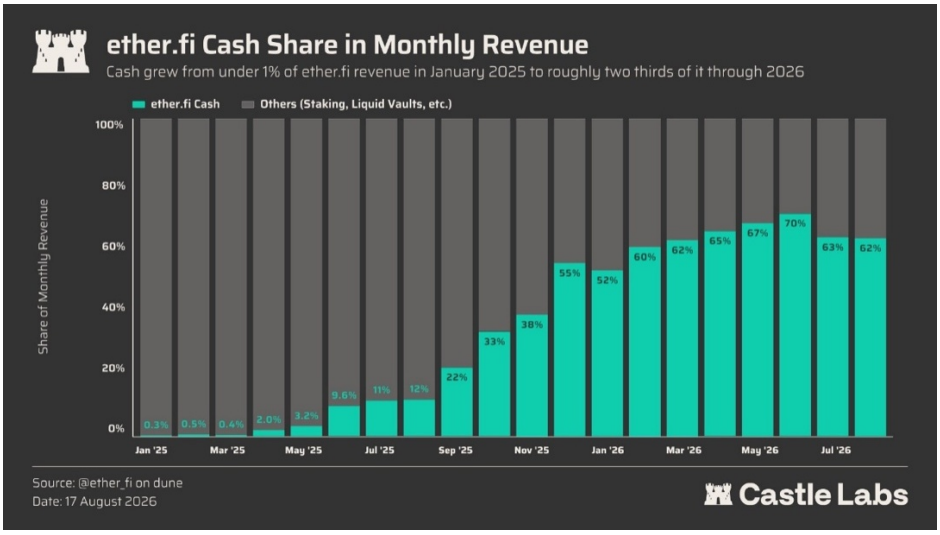
21) On-chain neobank: a next-generation financial service that goes a step further than first-generation neobanks (Revolut, KakaoBank, etc.), which operated purely via mobile and internet with no physical branches, by using blockchain infrastructure and smart contracts as its core banking system. Users retain direct control over their assets through a self-custody wallet or account abstraction, and the service supports stablecoin-based payment cards, DeFi-linked deposits, and instant, borderless remittances.

22) Rain. "From Onchain Assets to Everyday Liquidity: How ether.fi Uses Stablecoin Cards to Drive Engagement, Revenue, and Retention." Rain Resources, 2026. Accessed August 18, 2026. https://www.rain.xyz/resources/from-onchain-assets-to-everyday-liquidity-how-ether-fi-uses-stablecoin-cards-to-drive-engagement-revenue-and-retention

without selling the on-chain assets earning yield in their vaults, and without the hassle of converting to fiat. On top of that, a 3% USDC cashback on every card purchase gave users a powerful reason to spend regularly. Through this, ether.fi succeeded in reducing capital outflow and locking liquidity inside the platform. Built in just four weeks in partnership with Rain, ether.fi Cash proved its rapid growth by surpassing $1 million in transaction volume within 30 days of launch and securing over 75,000 active cards as of March 2026. Once this real-world payment rail was in place, it created a powerful lock-in effect that kept users on the platform regardless of market swings—driving a virtuous cycle in which the TVL of LiquidUSD, ether.fi's USDC-based vault, more than doubled within a year. In the end, by unifying its yield-generating vaults and its everyday-spending card into a single stack, ether.fi became a sustainable, sticky platform—an on-chain primary neobank.

This architectural shift fundamentally reshaped ether.fi's revenue structure. Traditional staking and vault revenue is inherently limited, since it depends on management fees that are low relative to TVL. ether.fi's Cash division, by contrast, generates high-margin, real cash flow that scales with payment volume—merchant interchange fees from card transactions, interest margins on collateralized loans, and multi-currency FX spreads. As a result, the Cash division's share of total platform revenue, under 1% in early 2025, surpassed 60% in 2026, eclipsing traditional staking and vault revenue to become the protocol's core cash cow.[23)]

FIGURE 11 **Change in ether.fi's Revenue Composition by Segment**



Source: Castle Labs, https://x.com/castle_labs/status/2089344374048170081?s=20

ether.fi has taken its integration of on-chain finance with real-world assets (RWAs) further, improving the efficiency of its lending and expanding the range of assets it accepts as collateral. First, by integrating with the Aave V4 money market on Optimism Layer 2, it substantially cut settlement and borrowing costs. Unlike the earlier system, which automatically triggered a micro-loan for every individual card transaction, users can now

23) See Figure 11.

draw down loans freely, whenever they want and in whatever amount they need, within their total assigned LTV limit—resulting in competitive variable rates of 3–4% annually for USDC loans and 1–1.5% annually for wETH loans. ether.fi has also partnered with xStocks to expand its collateral base from crypto assets into traditional financial assets. Users can now trade tokenized RWAs directly within the app—major U.S. stock indices (QQQx, SPYx), physical gold (PAXGx), and short-term U.S. Treasuries (TBLLx)—and use them as collateral. With this, ether.fi has built out a comprehensive portfolio of collateral spanning both crypto and traditional financial assets, further strengthening its asset management and lending capabilities as an on-chain neobank.

The value that collateral-borrowing payments offer crypto-native high-net-worth users is clear, and it centers on the structural separation of "spending" from the "tax event." By taking on new debt instead of selling assets at the time of payment, this model legally defers a tax event[24] that would otherwise be triggered at every authorization. This gives users control over the timing of taxation, which was previously dictated involuntarily by their spending needs. It also gives them the strategic flexibility to selectively sell assets and adjust their LTV whenever their personal tax planning or market conditions make it most advantageous. At the same time, by retaining full ownership of their collateral, they preserve both future capital gains from price appreciation and the ongoing DeFi yield their vault continues to earn. And because they're only borrowing a fraction of their total portfolio's LTV limit to cover everyday spending, the yield the broader portfolio earns easily outpaces the interest owed on that small borrowed balance. In the end, users can expand their everyday spending liquidity flexibly, without touching the collateral base that is building their wealth.

But the collateral-borrowing payment model carries clear structural risks of its own. The most serious is a cascading forced liquidation, driven by volatility in the collateral's price. If a sharp market downturn drives the collateral's value down to the LTV threshold that triggers liquidation under the protocol, a smart contract immediately force-sells the collateral at market price. This does not just lock in a loss of principal—it can also trigger a so-called "tax bomb," where the large taxes that had been deferred all along become due all at once during the forced sale. There's also an architectural risk inherent to this multi-layered DeFi infrastructure: a vulnerability or de-pegging event in just one component of this tangled web—the Aave V4 money market, the Optimism Layer 2 rollup bridge, or the oracle that prices the collateral—could destabilize the entire payment system. In the end, ether.fi's on-chain neobank model is a double-edged sword: it delivers high capital efficiency, but that comes at the cost of real technical complexity and exposure to sharp market swings.

24) Under current tax regimes, a crypto payment is treated not as a simple payment but as a "disposal (transfer)" of an asset. For example, under US Internal Revenue Service (IRS) rules, purchasing goods with cryptocurrency immediately triggers capital gains tax—up to 37% if short-term, or 20% if long-term—on the difference between the acquisition cost and the market price at the time of payment. South Korea's tax law, set to take effect in 2027, follows a similar structure: virtual asset disposal gains exceeding the annual basic deduction of 2.5 million KRW (approx. $1,840) are taxed separately at a rate of 22% (20% other-income tax plus 2% local income tax).

05

Virtual Asset Tax Equity Under Fire, and the Rise of Crypto Cards as an Exit

South Korea is slated for full implementation of virtual asset taxation in 2027. Accordingly, income generated from the transfer and lending of virtual assets will be incorporated into the tax framework; however, as details of the system take shape, strong doubts about "tax equity" have surfaced in the market. This institutional reverse discrimination begins with classifying virtual asset income as "other income"—unlike capital gains from stocks and other financial investments—which prohibits loss carryforwards and caps the basic deduction at just approximately $1,840 (2.5 million KRW) annually. The fact that approximately $34.7 billion (47 trillion KRW) in domestic investor assets migrated to overseas exchanges and self-custodial wallets in the first half of 2026 alone bears out these market concerns.[25)]

This controversy has been further amplified by structural limitations in tax administration. While tax authorities intend to adopt the multilateral Crypto-Asset Reporting Framework (CARF)[26)] to track offshore capital flows, CARF imposes reporting obligations only on centralized service providers that mediate customer transactions. Transactions executed via smart-contract-based decentralized exchanges (DEXs) or self-custodial wallets remain in an administrative blind spot. This has triggered an equity controversy: only investors who keep their assets on domestic exchanges pay taxes transparently, while those who move assets to DEXs or personal wallets escape the tax net. Pushback against this regulatory reverse discrimination has driven investors to look for a new structural "exit" that can bypass tax administration's surveillance. In this context, crypto cards issued by offshore entities are increasingly drawing market attention.

25) Do Ye-ri. "47 Trillion KRW (Approx. $34.7 Billion) Moved Overseas in H1 Alone... Why Korean Crypto Investors Are Leaving." Seoul Economic Daily, August 1, 2026. Accessed September 10, 2026. https://www.sedaily.com/article/20074579

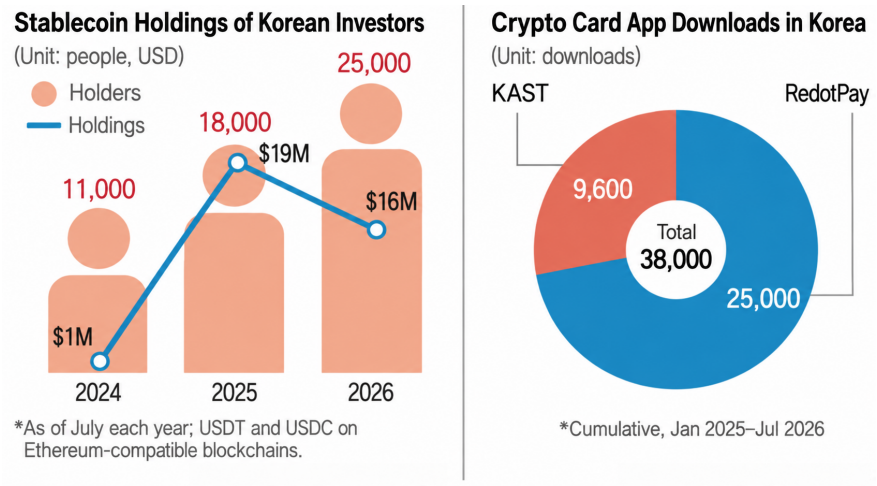
26) Unlike the banking industry's existing Common Reporting Standard (CRS), which collects period-end "account balances," CARF is designed to focus on the annual "flow of trading activity and total disposal proceeds," in order to tax the capital gains realized from virtual asset sales and disposals. Under this framework, Reporting Crypto-Asset Service Providers (RCASPs) are required to compile and automatically report, to the tax authority in each taxpayer's country of residence (the National Tax Service, for Korean residents): (1) the taxpayer's identification number (a resident registration number, for Korean residents); (2) the annual total amount of virtual assets sold for conversion into fiat currency or used for real-world payment; (3) the amount exchanged between different virtual assets; and (4) identifying data on transfers to external personal wallets. Some 40 major countries, including Korea, will conduct their first cross-border automatic information exchange in 2027, but the data subject to that exchange must be collected starting from transactions occurring on or after January 1, 2026—meaning that, in practice, transactions from 2026 onward already fall within tax authorities' tracking net. Unsold asset balances held on a platform, assets simply held in a cold wallet, pure DeFi transactions with no central intermediary, and non-financial NFTs remain outside the current reporting scope.

Investors treat crypto cards as an "exit" precisely because payment transaction data is not automatically linked to taxpayer identity. South Korea's domestic card infrastructure, by contrast, is built to connect payment records to taxpayer identity. When a consumer pays at a domestic merchant using a domestically issued card, that usage record is linked to and managed alongside the identity verification data the card issuer collected when the customer signed up. Individual card spending is reported to the National Tax Service through statutory reporting requirements, giving authorities an information baseline they can use to flag discrepancies between reported income and actual spending, verify the source of funds, and analyze suspected tax evasion.[27)]

Foreign-issued cards, including offshore crypto cards, work differently: only transaction data passes through domestic payment networks, while the cardholder's personal identity stays isolated on the foreign issuer's servers and is never shared with domestic authorities. Even when a crypto card is used at a domestic merchant, the only records left on domestic payment and tax-administration systems are a masked card number, the transaction date and time, the authorized amount, the currency code, and merchant information. The core data that could actually identify the specific person using the card—a passport number, a driver's license, or other identity documents—never crosses into the domestic payment system, because customer identity data is kept exclusively in the offshore issuer's own database. Because payment networks are connected globally while administrative systems remain separated by national borders, authorities cannot identify the actual user from routine transaction records alone—not without requesting individual cooperation from a foreign financial institution or global card network over a specific suspected case of tax evasion.

27) When a domestic resident uses a card issued by a domestic financial institution (a domestic card company) to pay at an overseas merchant or withdraw cash from an overseas ATM (an outbound transaction), certain data-provision and notification requirements to the Korea Customs Service and the National Tax Service apply. Under Article 264-3 of the Customs Act and Article 263-2 of its Enforcement Decree, the Korea Customs Service receives real-time transaction details and personal information whenever a domestic resident uses a domestic card to purchase goods overseas in excess of $800 per transaction, or to take a short-term cash advance or withdraw foreign currency abroad. Separately, under Article 21 of the Foreign Exchange Transactions Act and Article 10-6 of the Foreign Exchange Transactions Regulations, card issuers report each individual's and each corporation's annual outbound payments and overseas foreign-currency withdrawals to the head of the Credit Finance Association, who in turn notifies the Commissioner of the National Tax Service and the Commissioner of the Korea Customs Service by February 20 of the following year, if that individual's or corporation's annual outbound payments (including overseas foreign-currency withdrawals) exceed $10,000. However, when a domestic resident uses a card issued by a foreign business—including a crypto card—at a domestic merchant (an inbound transaction), the transaction structure differs from a domestic card's outbound overseas payments, so it is difficult to say that the same $800-per-transaction reporting framework to Customs, or the same $10,000 annual notification framework to the National Tax Service and Customs, applies in the same way.

FIGURE 12 **Domestic Investors' Stablecoin Holdings and the Trend in Cumulative Domestic Downloads of Major Crypto Card Apps**



Source: Tiger Research, Chainalysis / Re-cited from Seoul Economic Daily, Aug 9, 2026

In effect, a route has formed that lies outside the authorities' surveillance: hiding how assets were accumulated on-chain through DeFi, then spending them offline through a crypto card that blocks identity disclosure. Between January 2025 and late July 2026, cumulative domestic downloads of major crypto card apps approached 40,000.[28] This is likely driven mostly by simple curiosity and convenience among crypto-native early adopters—but it may also reflect, to some degree, a latent demand to convert offshore assets into real-world spending outside the tax net, by taking advantage of this disconnect between payment data and identity data.

Still, this disconnect between payment information and identity information does not permanently place transactions made through foreign-issued crypto cards beyond tax and regulatory reach. In the near term, everyday low-value spending may rank relatively low on tax authorities' priorities, given the administrative cost and effort needed to trace and verify individual transactions. But as cross-border automatic information exchange expands—including through the OECD's CARF—and as foreign issuers and related businesses begin reporting customer and transaction data to tax authorities under their own jurisdictions' laws, it will become easier to verify after the fact whether past transactions and the related income and assets were properly reported. The information disconnect visible today, then, is best understood not as a permanent tax gap, but as a transitional phenomenon—a product of crypto payment technology spreading faster than cross-border information-sharing systems can keep up.

28) See Figure 12. Kim Jeong-woo. "As Dollar-Stablecoin Use Expands... Domestic Crypto Card Holders Approach 40,000." Seoul Economic Daily, August 9, 2026. Accessed September 1, 2026. https://www.sedaily.com/article/20077312

Conclusion

The trajectory of cryptocurrency represents an inevitable evolutionary process in which the ideal of "decentralized P2P payments" confronted the complex realities of the physical economy. Bitcoin envisioned payments with no intermediary at all. Instead of dismantling the legacy financial order in one stroke, though, that vision reached a pragmatic compromise: it penetrated real-world commerce by leveraging the consumer protection and trust infrastructure legacy card networks had spent decades building. Crypto cards stand as the most concrete manifestation of this convergence between ideal and reality.

The fundamental shift brought by crypto cards is clear: users can now directly convert their on-chain assets into everyday purchasing power via global card networks, without manually undergoing crypto-to-fiat conversions on centralized exchanges or bank withdrawals linked to real-name accounts. The front end retains the familiar payment experience of traditional cards, while the back end combines offshore issuance infrastructure with on-chain liquidity. In effect, crypto cards let decentralized capital slip into the real economy by borrowing the universal acceptance of legacy payment rails — a Trojan horse within the financial system that bypasses state controls and channels offshore liquidity directly into everyday spending.

However, the spread of this hybrid payment infrastructure creates new friction with existing regulatory frameworks. The problem is that this hybrid architecture does not align with how financial and tax authorities have traditionally traced capital flows. Full-stack issuance infrastructure vertically integrates card issuance, KYC, payment processing, currency conversion, and settlement into offshore platforms. At the same time, USD stablecoin-based on-chain settlement reduces reliance on local bank accounts and correspondent banking networks. As both of these shift, the touchpoints where capital-movement information used to be captured through traditional financial intermediaries shrink along with them. For businesses, this is innovation in cost reduction and capital efficiency; from a regulatory standpoint, it creates a new information disconnect. Indeed, when a South Korean resident spends a foreign-issued crypto card at a domestic merchant, the transaction record stays within domestic acquiring networks, but linking it to the user's identity data (held by the offshore issuer) and on-chain asset data (held by the co-brand partner) is difficult.

From a risk management standpoint, regulatory authorities could consider direct administrative measures—restricting authorization approvals or blocking merchant acquiring for a specific offshore crypto card issuer. But because the root cause is not any single operator, but the underlying structure itself, where identity records stay on offshore issuance infrastructure while funds move on-chain,

blocking one service would only let the same information disconnect resurface under a different issuer, BIN, or card program. So focusing policy on banning individual services one at a time does not get at the real problem. The goal of regulation shouldn't be to eliminate crypto cards, but to re-establish the 'person-asset-transaction' link that gets severed when on-chain assets convert into domestic spending through offshore infrastructure. Three policy priorities are worth considering toward that end.

First, South Korea needs to strengthen its information-capture framework for domestic use of foreign-issued crypto cards. The current International Tax Adjustment Act requires residents to report offshore financial accounts—including accounts opened with foreign virtual asset service providers—by June of the following year, if the total balance across those accounts exceeds 500 million KRW on the last day of any month during the year.[29] Cross-border virtual asset information exchange will also be implemented through CARF, as discussed earlier. But offshore account reporting relies on self-reporting above a set balance threshold, and CARF is limited to cross-border exchange of annual totals for asset sales and conversions. Both have structural limits: neither can capture itemized crypto card transaction details, let alone the actual user's identity or the flow of funds through a card-linked wallet. Going forward, South Korea should build on existing international information-exchange mechanisms, while strengthening cooperation and data-access arrangements with foreign issuers and brand partners. The scope of required reporting should then scale with transaction size, frequency, and the risk of money laundering or tax evasion.

Second, tax standards need to be clarified to reflect how crypto cards actually function economically. The Income Tax Act, set to take effect in 2027, taxes income from the transfer or lending of virtual assets as 'other income,' calculating that income by subtracting acquisition cost and related fees from the transfer amount. Under this, a debit-type crypto card—which sells held virtual assets to cover a payment—may trigger existing virtual asset taxation on the income realized during that sale. A credit-type model, by contrast, works differently: virtual assets are pledged as collateral rather than sold, and stablecoins or fiat currency are borrowed against them. Card use alone does not clearly constitute a 'transfer or lending' of virtual assets under this model. Instead, the tax treatment may vary depending on what happens later, such as liquidation or repayment of the collateral.

The problem is that current tax law does not yet offer criteria specific to these particular crypto card payment structures, especially once complex DeFi-linked transactions are involved. So rather than taxing the outward act of "using a crypto card" uniformly, clear interpretive standards are needed for which specific actions at each stage—asset sale, posting collateral, borrowing, and collateral liquidation or repayment—constitute a tax event, along with a matching reporting and data-submission framework.

29) Choi Wook. "If Your Overseas Account Balance Exceeds 500 Million KRW, Report by the End of This Month... Overseas Trusts Included Starting This Year." Yonhap Infomax, June 4, 2026. Accessed September 22, 2026. https://news.einfomax.co.kr/news/articleView.html?idxno=4418273

Third, a concrete path for regulatory sandbox testing should be laid out, so that compliant crypto card payment and settlement infrastructure can emerge domestically. The Specialized Credit Finance Business Act currently places credit card business under Financial Services Commission authorization in principle, requiring entry conditions such as specialized personnel, IT infrastructure, and a business plan. Separately, virtual asset service providers are subject to reporting and anti-money-laundering rules under the Act on Reporting and Using Specified Financial Transaction Information. Meanwhile, the innovative financial service designation under the Special Act on Support for Financial Innovation already allows regulatory exemptions that temporarily set aside parts of existing financial regulation. The problem is that there's no clear institutional path for which combination of licenses and liability structure would allow a full-stack crypto card business—combining card issuance, virtual asset conversion, and stablecoin settlement into one service—to operate.

In particular, compliant crypto card infrastructure could do more than simply make payments more convenient for domestic virtual asset investors. It could also help bring demand that existing financial services haven't adequately served—like cross-border remittances for foreign residents in Korea, or USD-based stores of value—into the formal financial system. Doing so, however, requires clearly sorting out the roles and responsibilities across virtual asset service provider regulation, foreign exchange transaction rules, and specialized credit finance regulation, since each separately governs the custody and conversion of virtual assets, cross-border transfers, and card issuance and payments respectively.

Rather than immediately creating a new regulatory category, then, it would be preferable to use the existing financial regulatory sandbox to validate the business model within defined limits first. Core requirements—such as KYC/AML, segregation and protection of user assets, submission of tax data, and payment/settlement stability—should be strictly enforced. Within those limits, operators that meet the requirements should be given broad room to experiment with how card and on-chain settlement are combined. This kind of principle-based, risk-proportional regulation does more than block foreign services: it fosters competitive domestic alternatives that stay visible to regulators, while giving them a supervisory foothold in this new payment infrastructure.

Ultimately, the question crypto cards pose to South Korea is not a binary choice between permitting and blocking them. The more fundamental issue is how to resolve the information disconnect that arises when financial administration, designed around the premise of borders, fails to adequately capture the flow of on-chain capital that moves without them. How capital moves has already changed, moving beyond the boundaries of the traditional financial network—but the regulatory systems meant to track, tax, and supervise it haven't yet caught up with that change. What's needed, then, is not forcing these new capital flows back inside the old financial borders, but redesigning the regulatory infrastructure to capture the changed flow, while securing both tax equity and financial innovation at the same time.

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The Ideal of P2P Payments, and the Reality of Crypto Cards

How Crypto Cards Expose Information Disconnects in Jurisdiction-Based Tax Systems

Researcher

Mingu Gordon Park mingupark1221@gmail.com

Corresponding Author

Taemin Oh

Editor

Sunghoon Jin

Translator

Samuel J. Hahn

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