

BLOCKCHAIN IRELAND

Response to National Payments Strategy - Public Consultation

14th February 2024



STAKEHOLDERS

Blockchain Ireland Members

The Blockchain Ireland ecosystem fosters an open innovation approach within a distributed innovation ecosystem to nurture homegrown talent, foster partnerships and support new businesses, by spotlighting disruptive decentralised business models and successful commercial ventures with global ambitions.

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Irish Department of Finance, Ireland for Finance, and their stakeholders including financial service providers and the customers they serve.

OVERVIEW

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1. QUESTIONS

1.1 Context

- From a strategic planning perspective, it is difficult to ascertain the number and value of crypto-assets which are used as a means of payment as opposed to speculative purposes.
- It is important to distinguish between investment and payment to understand the importance of crypto-asset payments in the context of the Irish payments ecosystem.

1.2 Question 1

4.12 What are the advantages and disadvantages of paying with crypto-assets as compared to other means of payment?

1.3 Question 2

4.13 Can you provide specific use-cases of a crypto-asset as a form of payment?

In respect of the response, Blockchain Ireland is particularly focused on Payments as recognised by the Department of Finance but we would note that there may be some overlap in regard to Investments given the nature of these items. For the purposes of the response we are focused on payments.

2. RESPONSE TO QUESTION 1 - ADVANTAGES & DISADVANTAGES

2.1 Crypto-asset Advantages

Using crypto assets for payments offers several potential advantages compared to traditional means of payment.

2.1.1 Global Accessibility

Linked to Interlocking Principle - Access & Choice

- Cryptocurrencies can be sent and received anywhere in the world, allowing for cross-border transactions without the need for traditional banking systems. This can be particularly advantageous for international business transactions.

2.1.2 Faster Transactions

Linked to Interlocking Principle - Access & Choice & Sustainability and Efficiency

- Cryptocurrency transactions often occur more quickly than traditional bank transactions, especially for cross-border payments. This speed can be particularly beneficial in situations where rapid settlement is required.

2.1.3 Lower Transaction Costs

Linked to Interlocking Principle - Access & Choice

- Cryptocurrency transactions can have lower fees compared to traditional payment systems, especially for international transfers. This can result in cost savings for both consumers and businesses.

2.1.4 Financial Inclusion

Linked to Interlocking Principle - Innovation and Inclusion

- Cryptocurrencies have the potential to provide financial services to unbanked or underbanked populations. People without access to traditional banking systems can use cryptocurrencies for financial transactions using only a smartphone and an internet connection.

2.1.5 Security

Linked to Interlocking Principle - Security and Resilience

- Cryptocurrencies use cryptographic techniques to secure transactions, providing a high level of security. Blockchain technology ensures transparency and

immutability of transactions, reducing the risk of fraud.

- This contrasts with traditional banks where users often rely on the bank to manage their funds securely.

2.1.6 Ownership and Control

Linked to Interlocking Principle - Innovation and Inclusion

Users have greater control over their funds with cryptocurrencies. They can own and manage their private keys, which are crucial for accessing and managing their crypto-assets. This contrasts with traditional banks where users often rely on the bank to manage their funds securely.

2.1.7 Financial Privacy

Linked to Interlocking Principle - Security and Resiliency

- Cryptocurrency transactions can offer a higher degree of privacy compared to traditional payment methods. While the level of privacy varies between different cryptocurrencies, some provide enhanced privacy features.
- For example Zcash is a simple and secure digital currency that protects user privacy. Recommended for everyday purchases, sending money to a friend, and use in crypto applications. Zcash (Link: http://zerocash-project.org/about_us) is the commercially developed protocol from the Zerocash proposal.
- Crypto operators in “regulated” sectors can mitigate the privacy barrier by only allowing access to goods/services if wallets are “whitelisted” i.e. approved for KYC and wallet screening
- Privacy, whilst an innate characteristic, can be defended against by imposing full KYC on regulated entities

2.1.8 Programmable Money

Linked to Interlocking Principle - Sustainability & Efficiency

- Smart contracts, a feature of some blockchain platforms, enable programmable money. This allows for the creation of self-executing contracts with predefined rules and conditions, automating certain aspects of financial transactions.
- ERC-5725: Transferable Vesting NFT : An interface for transferable vesting NFTs which release underlying tokens over time. Projects that implement EIP-5725 are able to use their NFTs to represent unvested tokens that belong to the holder of the NFT. In other words, this standard allows projects to either integrate with an existing NFT marketplace, or create their own, to be used as a secondary market for vesting tokens. Link: <https://eips.ethereum.org/EIPS/eip-5725>

2.1.9 Decentralisation

Linked to Interlocking Principle - Innovation and Inclusion

- Cryptocurrencies operate on decentralised blockchain technology, which means they are not controlled by any central authority, such as a government or financial institution.
- Banking the unbanked, giving persons who would not otherwise qualify as accredited investors in traditional finance, access to investment opportunities, i.e. widening the market reach

2.1.10 Liquidity

Linked to Interlocking Principle - Access and Choice

- Provides liquidity in Institutional banking use cases; faster settlement and access to cash reduces friction in the time required to execute and settle trades; enabling faster access to the underlying asset and increasing the opportunity to trade a security; thus enhancing market efficiency and liquidity.
- ERC-3643: Token for regulated exchanges An institutional grade security token

⁴E. Ben Sasson et al., “Zerocash: Decentralized Anonymous Payments from Bitcoin,” 2014 IEEE Symposium on Security and Privacy, Berkeley, CA, USA, 2014, pp. 459-474, doi: 10.1109/SP.2014.36.

²ERC-3643 Token for Regulated Exchanges

³<https://eips.ethereum.org/EIPS/eip-4337#sa=D&source=docs&ust=1706710288906004&usg=A0vVaw0Ys6p332YgaihZokF-Z0rCS>

contract that provides interfaces for the management and compliant transfer of security tokens. It provides a comprehensive framework for managing the lifecycle of security tokens, from issuance to transfers between eligible investors, while enforcing compliance rules at every stage. The standard also supports additional features such as token pausing and freezing, which can be used to manage the token in response to regulatory requirements or changes in the status of the token or its holders.

2.1.11 Availability

Linked to Interlocking Principle - Innovation and Inclusion, Access and Choice

- 24/7 availability; typically crypto-assets as a means of payment are not limited to traditional operating/banking hours and can operate and settle 24-7 without being restricted.

2.1.12 Evolution of the Industry

Linked to Interlocking Principle - Innovation and Inclusion

- The reduction of intermediaries (who charge a fee for validating payments e.g., Visa) can help to improve competition in the industry as crypto assets can facilitate new fintech providers offering challenger services to larger banks/payments companies as well as facilitating more direct peer-peer payments while still offering consumer protection that typically banks offer.
- An example of this evolution is the Account Abstraction standard: ERC-4337 Account Abstraction via Entry Point Contract specification.
- This (draft) standard, in addition to facilitating the use of smart contract (SC) wallets instead of externally owned accounts (EOA) as the primary user account, it also introduces a paymaster mechanism that enables users to pay gas fees in ERC-20 tokens (e.g. USDC) instead of ETH.
- This simplification of the payment flow enables third-party (e.g. DApp service) sponsorship of gas fees and empower

customer bonuses (e.g. 5 free transactions or up-sell transaction bundles).

2.1.13 Recordkeeping

Linked to Interlocking Principle - Security and Resiliency

Blockchains are available to anyone, at any given time, and all transactions are recorded on the public ledger, it allows for transparency and accountability

2.1.14 One Currency / Financial inclusion / Inflation Protection

Linked to Interlocking Principle - Innovation and Inclusion

Certain coins/tokens/assets only have a number of coins that could be mined/minted throughout the entire life span of the coin. Therefore, there cannot be an increase in supply after all coins have been minted/mined. A user does not need to go through exchanging funds from one currency to another, and therefore losing % of the transfer, as you directly transfer the relevant asset.

2.1.15 Traceability and Source of Funds Tracing

Linked to Interlocking Principle - Security and Resiliency

With the use of service providers such as Chainalysis, Elliptic and TRM, funds can be traced to the original source, far better than any FIAT currency. Therefore, patterns, behaviour and red flags are much more identifiable than in FIAT.

2.1.16 Immutability

Linked to Interlocking Principle - Security and Resiliency

Overall immutability is a fundamental property of blockchain technology that underpins its trustworthiness and enables applications such as cryptocurrencies, smart contracts, and decentralised finance (DeFi).

2.2 Crypto-asset Disadvantages

While cryptocurrencies offer several advantages, they also come with certain disadvantages when compared to traditional means of payment. We discuss below disadvantages and potential disadvantage reduction strategies.

2.2.1 Volatility

- Cryptocurrencies are known for their price volatility. The value of a cryptocurrency can fluctuate in a short period, which can pose a risk for both buyers and sellers. Merchants may be hesitant to accept cryptocurrencies due to the potential for sudden and substantial changes in value.
- However, we note the context statement that “It is important to distinguish between investment and payment to understand the importance of crypto-asset payments in the context of the Irish payments ecosystem” and this disadvantage is primarily an investment related point, which can be, we believe, satisfactorily mitigated in a payments environment.
- Potential Mitigation to reduce the impact of the disadvantage:

The use of regulated fiat-backed stablecoins. Stablecoins enable people and institutions to move around the globe cheaper, better and faster than traditional payments rails. According to a World Bank report⁴ published in September 2023, sending remittances costs an average of 6.20 percent of the amount sent. Stablecoin fees are typically

Cheaper

For example, accepting stablecoin payment enables businesses to avoid the typical 2% to 3% processing fee that is charged by financial institutions on fiat transactions.

Eliminating third-party services greatly reduces transaction costs. In fact, the average stablecoin transaction cost is 98% cheaper than the average cross-border payment cost (0.1% vs. 6.2%)

Better

They're more efficient: The blockchain provides near-instant settlements for peer-to-peer stablecoin transactions.

Faster

Stablecoin settlements provide a major use case for entities working around the clock as they operate on the blockchain, which runs 24/7 and enables near instant settlements globally. Fiat settlements, on the other hand, are limited to banking hours or a centralised financial institution's business hours.

2.2.2 Security Concerns

- While blockchain technology is generally considered secure, there are still concerns related to cryptocurrency exchanges, wallets, and private key management. Hacks and fraud in the cryptocurrency space have occurred, leading to the loss of funds for users; while not directly attributable to the technology and more related to cyber security the nature of blockchain and key management means should a bad actor be successful in hacking a blockchain based infrastructure (e.g., through Password, or retrieving Keys) there are means to recover mis-appropriated crypto-assets.
- Potential mitigation to reduce the impact of the disadvantage:

Two-Factor Authentication: Many crypto debit cards come with advanced security features, such as two-factor authentication, providing an extra layer of protection for users.

Verified wallet storage

Data encrypted solutions

- A concern that is raised is in relation to custody and the importance of key lifecycle management. This is especially evident when we look at large companies being the main custodian for many of the Bitcoin ETFs Potential mitigation to reduce the impact of the disadvantage:

An element of enhanced security mitigation and consumer protection, is to have an in-built on chain 3rd party notary for the

⁴The World Bank Remittance Prices Worldwide - [Link here](#)

signing and approval of transactions, introducing a small window of approval time to ensure the safety of the transactions for consumers.

2.2.3 Irreversible Transactions

- Cryptocurrency transactions are typically irreversible. Once a transaction is confirmed on the blockchain, it cannot be undone. This lack of reversibility can be a disadvantage in cases of accidental or fraudulent transactions.
- Potential Mitigation to reduce the impact of the disadvantage:
Users should send a very small test amount before transferring funds

2.2.4 Regulatory Uncertainty

- The regulatory environment for cryptocurrencies is still evolving in many jurisdictions. This uncertainty can lead to challenges for users and businesses, including legal and tax-related issues. However, this disadvantage is, arguably, less of an issue in the EU/EEA, with its digital services focused legislative programme, than other worldwide jurisdictions.
- Potential Mitigation to reduce the impact of the disadvantage:
Consider holistically Financial policy, regulation and standards (e.g., MiCAR, VASP, MiFID); in the context of topics such as GDPR., EU Digital Identity., EU Digital Identity., Cyber Resilience Act., Digital Services Act / Digital Markets Act., Digital Commons., Web4.0 and Virtual Markets., Disinformation Measures & EU Digital Rights and Principles.

2.2.5 Lack of Consumer Protections

- Traditional payment systems often come with consumer protection measures, such as chargebacks and fraud prevention. Cryptocurrency transactions, being irreversible, lack these protections, which could make users more vulnerable to scams or disputes.
- Potential Mitigation to reduce the impact of the disadvantage:
AML checks, fiat transaction screening as well as onchain transaction analysis, enables

companies and law enforcement agencies to track every single onchain transaction. This sets a higher standard than the traditional financial services system that exists today. Based on Chainalysis' 2023 report, their research showed 5% of global GDP is laundered every year through the traditional financial system. This compares to 0.05% for crypto.

2.2.6 Complexity for Users

- For individuals unfamiliar with blockchain technology, using cryptocurrencies can be complex and intimidating. Managing private keys, understanding wallet security, and dealing with technical aspects may be challenging for some users.
- Potential Mitigation to reduce the impact of the disadvantage:

The reduction of intermediaries (who charge a fee for validating payments e.g., Visa) can help to improve competition in the industry as crypto assets can facilitate new fintech providers offering challenger services to larger banks/payments companies as well as facilitating more direct peer-peer payments while still offering consumer protection that typically banks offer.

An example of this evolution is the Account Abstraction standard: ERC-4337 Account Abstraction via Entry Point Contract specification.

This (draft) standard, in addition to facilitating the use of smart contract (SC) wallets instead of externally owned accounts (EOA) as the primary user account, it also introduces a paymaster mechanism that enables users to pay gas fees in ERC-20 tokens (e.g. USDC) instead of ETH.

This simplification of the payment flow enables third-party (e.g. DApp service) sponsorship of gas fees and empower customer bonuses (e.g. 5 free transactions or up-sell transaction bundles).

2.2.7 Environmental Concerns

- Some cryptocurrencies, such as Bitcoin, have faced criticism for their environmental impact due to the energy-intensive process

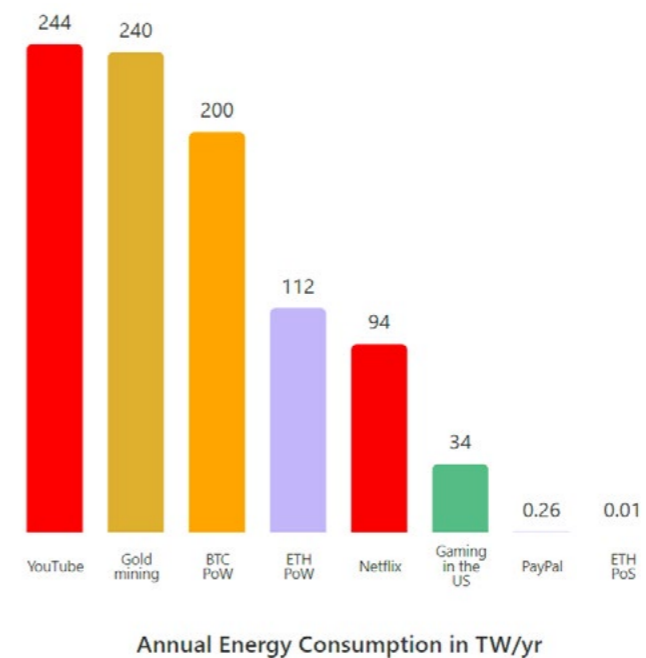
of mining. Concerns about the ecological footprint of certain cryptocurrencies may influence their acceptance in the long run. This is noted as an important point for high potential but high-compute technologies such as AI and Quantum Computing.

- Potential Mitigation to reduce the impact of the disadvantage:

Promoting the innovation of the technology through incentive based schemes in order to produce viable alternative models & protocols to reduce the environmental intensive nature of certain forms of processing on blockchain (proof of work vs proof of stake).

Important to note that proof of stake blockchains are 99.9% more energy efficient than proof of work blockchains. For example, the Ethereum blockchain uses 0.01 terawatts of energy per year in comparison to YouTube, which uses 244 terawatts per year.

Approximately 36% of the total market capitalization of the universe of cryptocurrencies use proof of stake for validation, with this number increasing steadily.



2.2.8 Limited Scalability

- Some blockchain networks face scalability issues, leading to slower transaction processing times and higher fees during periods of high demand. This can hinder the efficiency of cryptocurrency transactions, particularly for microtransactions.
- Potential Mitigation to reduce the impact of the disadvantage:
Blockchains are becoming faster. For example, Algorand can process 7,500 transactions per second. Hedera can process 10,000 transactions per second. In comparison, Visa can process 65,000 transactions per second.

2.2.9 Loss of Access

- If a user loses access to their cryptocurrency wallet or forgets their private keys, they may permanently lose access to their funds. Unlike traditional banking systems, there is no central authority to help recover lost passwords or access credentials.
- Potential Mitigation to reduce the impact of the disadvantage:

Account abstraction could be deployed as a tool to enable account restoration; reducing the impact of bad actors/entities and allowing the user to have greater control over their assets.

2.2.10 Limitation of Acceptance

- Not all vendors, suppliers, funds etc. take in / accept crypto as a form of payment yet. Therefore, relying on crypto to pay could lead to non-acceptance by some of the above mentioned.
- Potential mitigation to reduce the impact of the disadvantage:
However, those using retail or debit cards linked to exchanges will be able to pay for any good or service, in the same way they use their debit/credit today

2.2.11 Lack of Identity

- As crypto is anonymous and no one knows who sits behind a wallet (in theory), there are more risks of accepting crypto as

payment from someone else than who is portrayed at the payment gate. There is not a link to a card (i.e. your details on a credit card) that identifies the payor to the payment.

- Without proper KYT on wallets, it would be easier for a service provider to take in dirty funds than would be in FIAT, as you can create intermediary wallets from i.e. a sanctioned wallet to the paying wallet.
- Potential mitigation to reduce the impact of the disadvantage:
Introducing a compliance solution that tracks and monitors payments.

2.2.12 Public Perception of Crypto

- Crypto is still being seen as a higher risk to the public and has a negative stigma behind its use.
- Potential mitigations to reduce the impact of the disadvantage:
Most of the red flags and high risks are similar to those of FIAT and are not unique to crypto

Regulatory compliance:

Robust regulatory frameworks are being rolled out and developed in Ireland, across Europe and around the globe. These will enhance transparency, security, and consumer protection within the cryptocurrency ecosystem. Compliance with anti-money laundering (AML) and know your customer (KYC) regulations will help build trust and legitimacy.

Industry Standards and Best Practices:

Blockchain Ireland and our partners are establishing industry-wide standards and best practices for cryptocurrency exchanges, wallets, and other service providers.

Security Measures:

Prioritising cybersecurity measures to protect against hacks, fraud, and other security threats. Implement multi-factor authentication, encryption protocols, cold storage solutions, and regular security updates to safeguard users' assets and data.

Transparency and Accountability:

Fostering transparency and accountability within the cryptocurrency community by encouraging open communication, disclosing relevant information, and addressing concerns in a timely manner. Building trust through transparent operations and accountable governance structures can help mitigate negative perceptions.

Use Cases and Adoption:

Highlighting real-world use cases and examples of how cryptocurrencies and blockchain technology are driving innovation and solving real-world problems. Encouraging adoption by showcasing success stories and promoting partnerships with reputable organisations and institutions.

Community Engagement and Support:

Foster a supportive and inclusive community that prioritises education, collaboration, and responsible use of cryptocurrencies. Engage with stakeholders, listen to feedback, and address concerns to build a positive reputation and foster trust among users and the general public.

Risk Management and Investor Protection:

Providing clear guidelines and resources for investors to assess and manage risks associated with cryptocurrency investments. Encourage diversification, due diligence, and responsible investment practices to mitigate potential losses and protect investors' interests.

2.2.13 Lack of Chargeback Protection

- Once a transaction is confirmed, it cannot be reversed or cancelled. This lack of chargeback protection can be problematic in cases of fraud or dispute resolution.
- Potential mitigations to reduce the impact of the disadvantage:

Confirmation Screens:

Implementing confirmation screens or pop-ups in your cryptocurrency wallet or exchange platform. Require users to review

and confirm their transactions before finalising them. This can help prevent accidental transactions.

Transaction Reversal Period:

Allowing users a short period, such as 10-15 minutes, after initiating a transaction to cancel or reverse it. During this time, the transaction remains pending and can be voided without irreversible consequences. However, once the confirmation period elapses or the transaction is confirmed, it becomes irreversible.

Clear Communication:

Providing clear and prominent warnings to users about the irreversible nature of cryptocurrency transactions. Educate users about the importance of verifying transaction details before confirming them.

Transaction Previews:

Offering users the option to preview the transaction details, including the recipient address, amount, and any associated fees, before initiating the transaction. This allows users to verify the accuracy of the transaction information before proceeding.

Two-Factor Authentication (2FA):

Implementing two-factor authentication for transaction confirmation. Require users to authenticate their identity through a second factor, such as a one-time password sent to their mobile device, before finalising the transaction. This adds an extra layer of security and reduces the likelihood of unauthorised transactions.

Transaction Confirmation Thresholds:

Allowing users to set transaction confirmation thresholds for large or high-value transactions. Require additional verification steps, such as email confirmation or 2FA, for transactions that exceed the predefined threshold.

Transaction Monitoring and Alerts:

Enabling users to monitor their transaction history and set up alerts for incoming and

outgoing transactions. This allows users to quickly detect any unauthorised or suspicious activity and take appropriate action.

2.2.14 Lack of Legal Precedent

- Lack of legal precedent in disputes and contract resolutions
- Potential mitigations to reduce the impact of the disadvantage:

Industry Standards and Best Practices:

Establishing industry-wide standards and best practices can help fill the gap left by the absence of legal precedent. Blockchain Ireland works with organisations such as the International Organization for Standardization (ISO) to develop guidelines for resolving disputes and interpreting contracts in the crypto space.

Smart Contracts and Code Audits:

Emphasise the importance of well-written smart contracts and thorough code audits to minimise the risk of disputes arising from coding errors or vulnerabilities. Crypto developers should adhere to best practices for smart contract development and engage third-party auditors to review their code for security and reliability.

Regulatory Clarity:

Blockchain Ireland advocates for clear regulatory frameworks governing crypto transactions and contracts. Regulatory uncertainty can contribute to legal disputes and deter investors and businesses from participating in the crypto market. Working with lawmakers and regulators to develop clear and consistent rules can help foster trust and confidence in the crypto ecosystem.

Legal Precedent Building:

Blockchain Ireland encourages parties involved in crypto disputes to document and publicise their resolutions. While not legally binding, these precedents can serve as valuable reference points for

future disputes and help establish common practices within the crypto community.

Cross-disciplinary Collaboration:

Through our Blockchain Ireland Legal and Regulatory Working Group, we foster collaboration between legal experts, technologists, economists, and other relevant stakeholders to develop innovative solutions to the challenges of resolving crypto disputes. Drawing on insights from multiple disciplines can help identify creative approaches to addressing the unique characteristics of blockchain technology and digital assets.

Education and Awareness:

Educating users about the unique legal and regulatory challenges in the crypto space can help prevent disputes from arising in the first place. This could include providing clear and accessible information about the terms and conditions of crypto transactions, as well as the potential risks and benefits involved.

the point of sale, allowing for real-time transactions.

- Diversification: Users can spend a variety of cryptocurrencies, giving them flexibility and the ability to utilise different assets for different purposes.

3.1.3 Risk Management

Hedging against Volatility: Users can mitigate the impact of cryptocurrency price volatility by converting their digital assets to fiat currency at the time of the transaction.

3.1.4 Financial Privacy

- Partial Anonymity: While traditional debit and credit cards are associated with personal information, some crypto debit cards offer a degree of privacy as transactions are executed through blockchain technology.
- Crypto operators in “regulated” sectors can mitigate the privacy barrier by only allowing access to goods/services if wallets are “whitelisted” i.e. approved for KYC and wallet screening
- Privacy, whilst an innate characteristic, can be defended against by imposing full KYC on regulated entities

3.1.5 Global Transactions

No Cross-Border Fees: Cryptocurrencies operate on a global scale, and using a crypto debit card can eliminate or reduce the need for currency conversion fees and international transaction fees associated with traditional banking.

3.1.6 Financial Inclusion

Access for the Unbanked: Crypto debit cards can provide financial services to individuals who are unbanked or underbanked, giving them access to a global financial system.

3.1.7 Earn Rewards

Cashback and Rewards: Some crypto debit cards offer cash back rewards or other perks, providing additional incentives for users to make transactions using their cards.

3.1.8 Security Features

Two-Factor Authentication: Many crypto debit cards come with advanced security features, such as two-factor authentication, providing an extra layer of protection for users.

3.1.9 Portfolio Management

Tracking and Reporting: Some crypto debit cards offer tools and features to help users track and manage their spending, providing insights into their financial habits.

3.2 Use Case 2: Stablecoins

Stablecoins offer several benefits as a form of payment, making them attractive for various use cases.

3.2.1 Adoption

In 2022, stablecoins settled over \$11 trillion onchain, dwarfing the volumes of processed by PayPal (\$1.4 trillion), Mastercard (\$6.57 trillion), almost surpassing the payment volume of Visa (\$11.6 trillion), and reaching 14% of the volume settled by ACH, and over 1% the volume settled by Fedwire

3.2.2 Price Stability

Reduced Volatility: Stablecoins are designed to maintain a stable value by pegging their value to a reserve asset, such as a fiat currency (e.g., USD), a commodity (e.g., gold), or a basket of assets. This stability makes them more predictable and suitable for everyday transactions.

3.2.3 Global Accessibility

Borderless Transactions: Stablecoins operate on blockchain technology, allowing for fast and low-cost cross-border transactions. This can be especially advantageous for international trade and remittances, as users can transfer value without the need for traditional banking intermediaries.

3.2.4 Fast and Low-Cost Transactions

Efficient Transfers: Transactions with stablecoins can occur quickly and at lower costs compared to traditional financial systems. This is particularly beneficial for

micropayments, where the fees associated with traditional payment methods may be impractical.

3.2.5 Financial Inclusion

Access to Banking Services: Stablecoins can provide individuals in regions with limited access to traditional banking services with a means to engage in digital financial transactions. Users only need a smartphone and internet connection to access stablecoin services.

3.2.6 Smart Contracts and Programmability

Automation of Payments: Stablecoins built on blockchain platforms that support smart contracts enable programmable money. This allows for the automation of payments and the creation of more complex financial arrangements, such as conditional payments and escrow services.

3.2.7 Reduced Counterparty Risk

Transparency and Security: Transactions made with stablecoins on a blockchain are transparent and traceable. The use of blockchain technology reduces counterparty risk and fraud, providing a more secure environment for transactions.

3.2.8 Financial Privacy

- Enhanced Privacy Features: Some stablecoins offer privacy features, allowing users to transact with a degree of anonymity. This can be appealing to individuals who prioritise financial privacy.
- Crypto operators in “regulated” sectors can mitigate the privacy barrier by only allowing access to goods/services if wallets are “whitelisted” i.e. approved for KYC and wallet screening
- Privacy, whilst an innate characteristic, can be defended against by imposing full KYC on regulated entities

3.2.9 Decentralisation

No Central Authority Control: Many stablecoins are built on decentralised blockchain networks,

3. RESPONSE TO QUESTION 2 - USE CASES

3.1 Use Case 1: Crypto Debit Card

Using a crypto debit card can offer several benefits

3.1.1 Accessibility and Usability

- Widespread Acceptance: Crypto debit cards are typically associated with major payment networks like Visa or Mastercard, allowing users to make purchases at millions of merchants globally.
- ATM Withdrawals: Users can withdraw fiat currency from ATMs using their crypto debit cards, providing liquidity and accessibility to their cryptocurrency holdings.

3.1.2 Seamless Integration with Cryptocurrencies

- Instant Conversion: Many crypto debit cards enable users to convert their cryptocurrencies into fiat currency at

reducing dependence on a central authority. This decentralisation can enhance trust in the stability and operation of the stablecoin.

3.2.10 Hedging Against Volatility

Stable Asset Holding: Users can use stablecoins as a way to temporarily park funds in a stable asset without being exposed to the volatility inherent in certain cryptocurrencies.

3.3 Use Case 3: Decentralised Finance (DeFi)

Decentralised finance (DeFi) refers to a set of financial services and applications built on blockchain and cryptocurrency technologies, aiming to recreate and improve upon traditional financial systems. While DeFi is often associated with lending, borrowing, and trading, it can also offer several benefits as a form of payment.

3.3.1 Global Accessibility

DeFi operates on blockchain networks that are accessible worldwide. This enables anyone with an internet connection to participate in DeFi payment systems, providing financial services to individuals who may not have access to traditional banking.

3.3.2 Reduced Intermediaries and Fees

DeFi transactions can occur directly between parties, eliminating the need for intermediaries such as banks. This reduces transaction costs, as users don't have to pay fees associated with traditional banking services.

3.3.3 Speed of Transactions

DeFi transactions are often processed faster than traditional banking transactions. This is particularly beneficial for cross-border payments, where traditional banking systems may involve delays due to intermediary banks and different time zones.

3.3.4 Transparency and Security

Transactions on decentralised networks are recorded on a public blockchain, providing transparency. Users can verify transactions and ensure the integrity of the system. The use of cryptographic techniques enhances the

security of DeFi transactions.

3.3.5 Programmability and Smart Contracts

DeFi platforms often leverage smart contracts, which are self-executing contracts with the terms directly written into code. This programmability allows for the automation of various financial processes, including payments, without the need for intermediaries.

3.3.6 Financial Inclusion

DeFi has the potential to bring financial services to unbanked and underbanked populations. Users only need a smartphone and internet access to participate in DeFi, reducing the barriers to entry compared to traditional banking.

3.3.7 Permissionless Access

DeFi platforms typically operate on permissionless blockchains, meaning users can access and use these services without requiring approval from a central authority. This opens up opportunities for individuals who may be excluded from traditional financial systems.

3.3.8 Decentralisation and Resilience

DeFi platforms are often decentralised, meaning they don't rely on a single point of failure. This can make the overall system more resilient to various risks, including cyber attacks or technical failures.

3.4 Use Case 4: Real Estate

Stablecoins offer several benefits as a form of payment, making them attractive for various use cases.

3.4.1 Global Transactions

Cryptocurrency allows for borderless transactions, making it easier for international buyers to invest in real estate properties without dealing with currency exchange rates or international transaction fees

3.4.2 Speed of Transactions

- Cryptocurrency transactions can be completed much faster compared to traditional banking methods, which often

involve lengthy processing times, especially for cross-border transactions.

- This speed can be particularly advantageous in competitive real estate markets where timing is crucial

3.4.3 Lower Transaction Costs

- Cryptocurrency transactions generally have lower fees compared to traditional banking and payment systems
- By eliminating intermediaries like banks or payment processors, buyers and sellers can avoid many of the fees associated with traditional real estate transaction

3.4.4 Enhanced Security

- Cryptocurrency transactions are secured by cryptography and decentralised ledger technology (blockchain), which provides a high level of security and protection against fraud and unauthorised access
- Additionally, blockchain technology provides a transparent and immutable record of transactions, reducing the risk of disputes or fraudulent activities

3.4.5 Accessibility

- Cryptocurrency enables individuals who may not have access to traditional banking services to participate in real estate transactions.
- This can include people in regions with underdeveloped banking infrastructure or individuals who have limited access to traditional financial services due to regulatory or logistical barriers

3.4.6 Potential for Increased Liquidity

- By allowing fractional ownership and facilitating easier transferability of property ownership through tokenization, cryptocurrency has the potential to increase the liquidity of real estate assets
- This means that investors can more easily buy, sell, and trade fractional ownership stakes in real estate properties, which can make real estate investment more accessible and flexible

3.4.7 Diversification of Investment Portfolio

For investors looking to diversify their investment portfolio, real estate purchased with cryptocurrency offers an alternative asset class that may not be correlated with traditional financial markets, providing opportunities for risk mitigation and potentially higher returns

4. RECOMMENDATIONS

Crypto-asset payments are here to stay. Moreover:

1. Crypto-asset adoption is increasing at the retail and institutional levels
2. The volume is increasing
3. The value is increasing

We would like to make the following recommendations:

4.1 Recommendation 1: Clear Regulatory Framework

- Working with the EU, the Irish government should continue to develop a progressive regulatory framework specifically tailored to address the unique characteristics of crypto-assets for payments, including stablecoins at a retail, merchant and institutional level.
- This framework should include guidelines for issuing, trading, and using crypto-assets in payment transactions.
- By providing clarity and certainty to businesses and consumers alike, the government can foster innovation in the crypto-payment sector while mitigating potential risks such as money laundering, fraud, and consumer protection.

4.2 Recommendation 2: Foster Innovation and Research

- Encourage investment in research and development initiatives related to blockchain technology and crypto-assets.
- The government should allocate resources

to support national innovative projects and partnerships between academia, industry, and government agencies.

- By fostering a conducive environment for innovation, Ireland can position itself as a global hub for blockchain technology and crypto-payment solutions, attracting talent and investment from around the world.

4.3 Recommendation 3: Collaborate with Local International Bodies

- Collaborate with Blockchain Ireland and other international regulatory bodies and organisations to develop standardised frameworks for regulating crypto-assets.
- Given the borderless nature of cryptocurrencies and blockchain technology, it is essential for Ireland to engage with other jurisdictions to establish harmonised regulatory standards.
- By participating in international forums and initiatives, Blockchain Ireland and the Irish government can contribute to the development of a coherent global regulatory framework while ensuring that its own policies remain aligned with international best practices.

Blockchain Ireland would be delighted to host a roundtable meeting to discuss the above points with our members from across the ecosystem as an immediate next step:

By implementing these recommendations, the Irish government can establish progressive policies that promote innovation, foster consumer trust, and facilitate the responsible adoption of crypto-assets for payments in Ireland.

Blockchain Ireland would like to note that in respect of Payments, one area not covered was (CBDCs) Central Bank Digital Currencies, which is a strong use case for DLT. We would welcome the chance to answer any follow up questions around this particular topic at a later stage, if this would be of interest.

