

HKTA seminar:

# Navigating the Future: The Rise of Digital Assets in Financial Landscape

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28 April 2025

5:00pm - 6:30pm Sharing session

6:30pm - 7:00pm Networking



香港信託人公會  
Hong Kong Trustees' Association

# HKTA Seminar: Navigating the Future: The Rise of Digital Assets in Financial Landscape

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28 Apr 2025



The background of the slide features a light gray grid. Several red squares are placed at various intersections: one at (5, 13), one at (95, 27), one at (80, 53), one at (75, 60), one at (85, 53), and one at (95, 80).

# Overview

- **Section 1 : Highlights of Digital Asset and Virtual Asset Industry Landscape**
- **Section 2 : Opportunities in the Asset Management Industry**
- **Section 3 : General introduction of Project Ensemble**
- **Section 4 : Slowmist's sharing of cyber threat**
- **Appendix**





# WEB 3.0

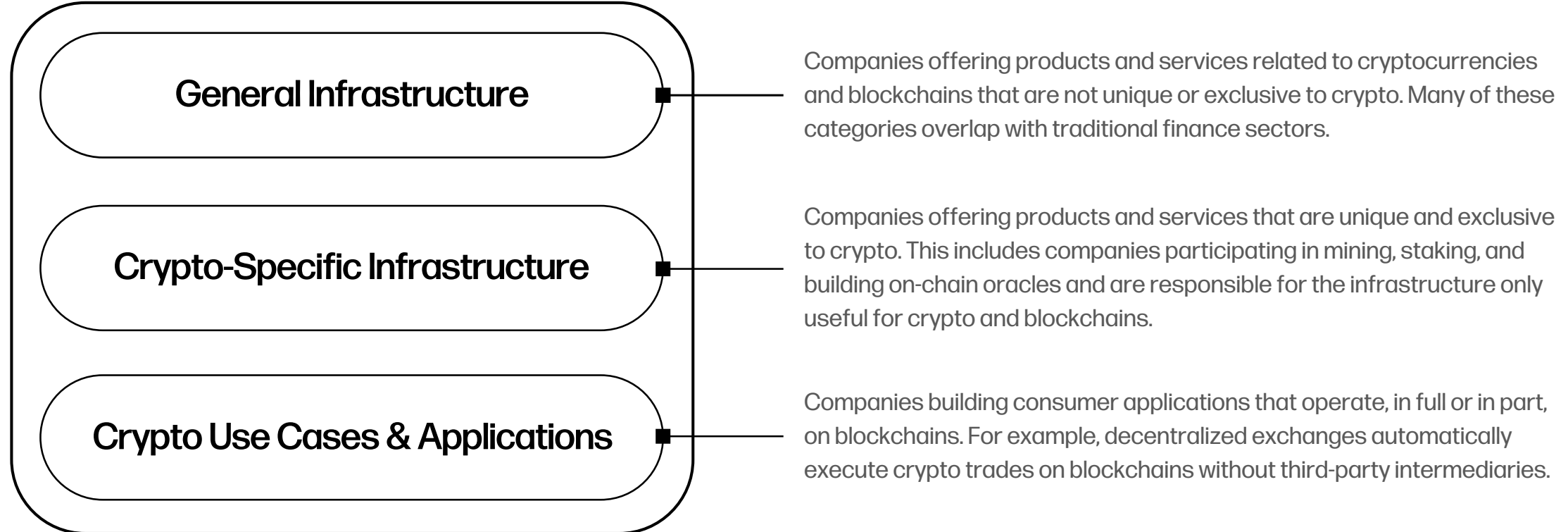
Section 1:

Highlights of Digital Asset and  
Virtual Asset Industry  
Landscape



# The Digital Asset Industry – A Framework

We divided companies and development teams into three broad categories, as shown below. While this framework may not capture every aspect of the industry, it offers a comprehensive lens for evaluating the investable universe. It can also be applied to emerging companies and sectors in crypto as they evolve and gain relevance.





# Categories, Sub-Categories, and Business Focus

## General Infrastructure

### MARKETS

Exchanges (Spot)  
Exchanges (Options/Derivatives)  
Venture Funds  
Custody  
Clearing/Settlement  
Index Providers  
Asset Managers  
Lending Markets  
Hedge Funds  
Market Makers  
Prime Brokerages

### BUSINESS SUPPORT

Banking  
Compliance  
Accounting/Taxes  
Investment Banking  
Cloud Services  
Data/Research  
Consulting

## Crypto-specific Infrastructure

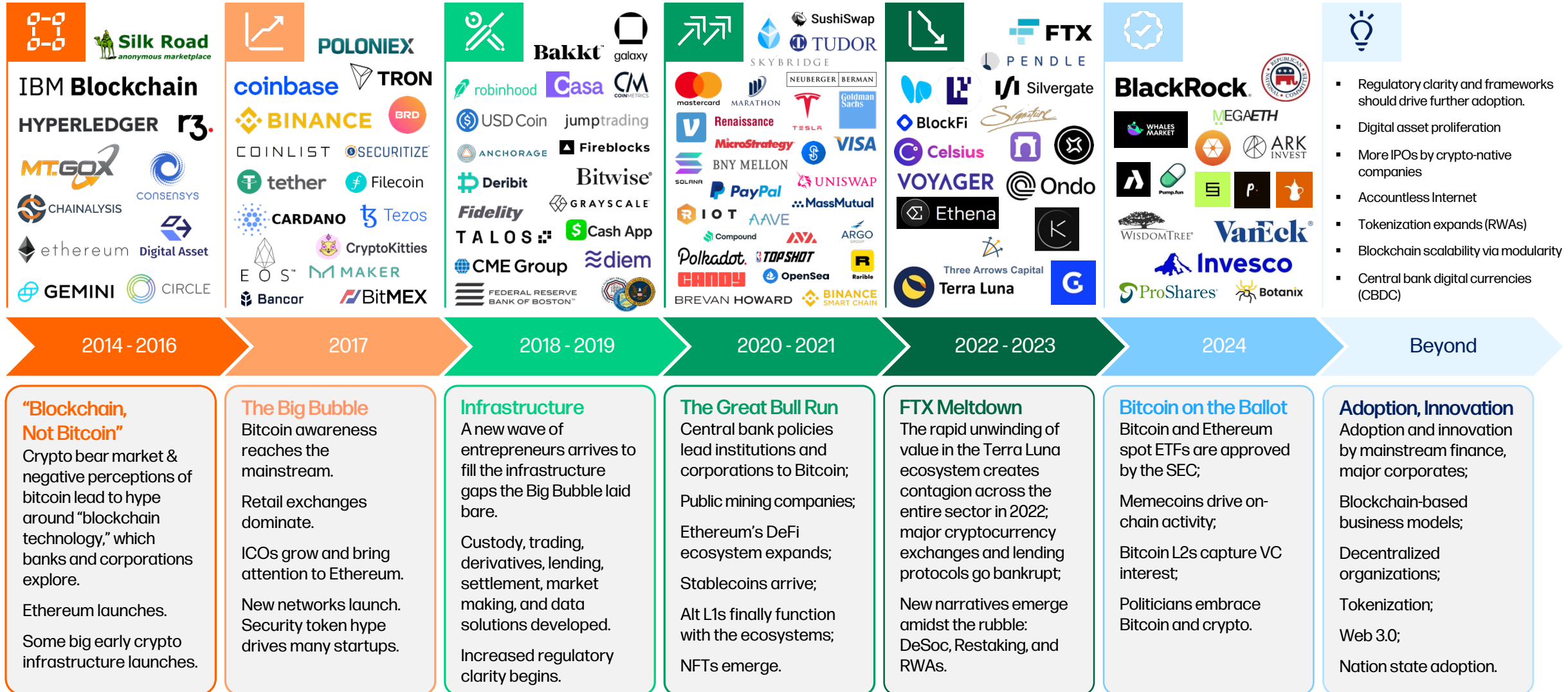
Layer 1 Blockchains  
Layer 2 Protocols  
Rollups-as-a-Service  
Mining Operations  
Mining Pools  
Mining Hardware  
Staking Pools  
Staking Infrastructure Providers  
Bridges/Cross-Chain Messaging  
Shared Sequencing  
Shared Security/Restaking  
Web3 Developer Tooling  
Web3 Wallets  
Zero-knowledge Coprocessors  
Zero-knowledge Provers  
Token Minting  
MEV Tooling  
Oracles  
MEV Searchers/Relays/Builders  
Intents  
Smart Contract Auditing

## Crypto Use Cases & Applications

Payments  
Remittances  
Stablecoins  
Decentralized Exchanges  
Decentralized Lending  
RWA/Tokenization  
Prediction Markets  
Rewards/Loyalty Programs  
Virtual Casinos  
Privacy/Mixers  
Supply Chain Management  
Fundraising/Charity  
Governance/DAOs  
Identity  
Artificial Intelligence  
NFT Marketplaces  
Decentralized Public Infrastructure  
Gaming  
Decentralized Social Media  
Messaging/Chat  
Music Royalties/IP Management  
Content Publishing  
Storage/File Sharing



# Phases of Adoption

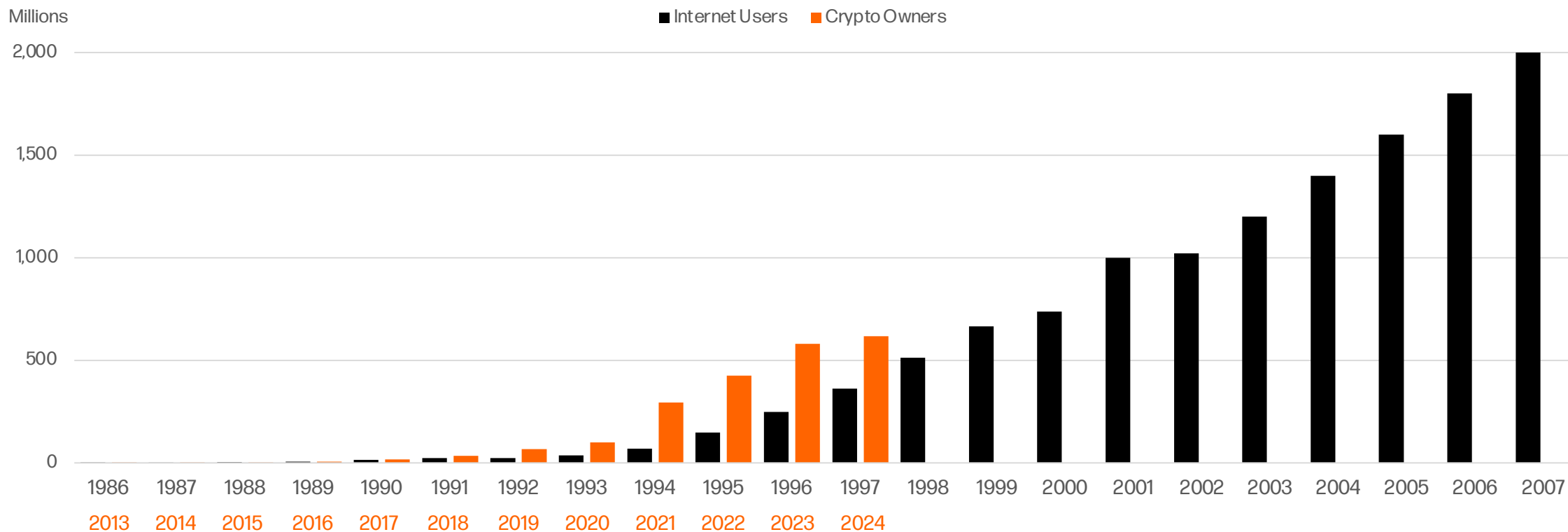




# Crypto adoption is on par with early Internet adoption.

Can blockchain technology be as transformative as the Internet? As more countries work towards building comprehensive regulatory frameworks that issue clear guidance on digital assets, we believe that global crypto adoption is poised to expand.

Global Tech Adoption: Internet Users vs. Crypto Owners



For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

Source: Galaxy Research, Data: Our World in Data, Cambridge Judge Business School, Statista, Crypto.com | Time series starts from year each technology first hit 1m users/owners. Data is current through August 22, 2024.

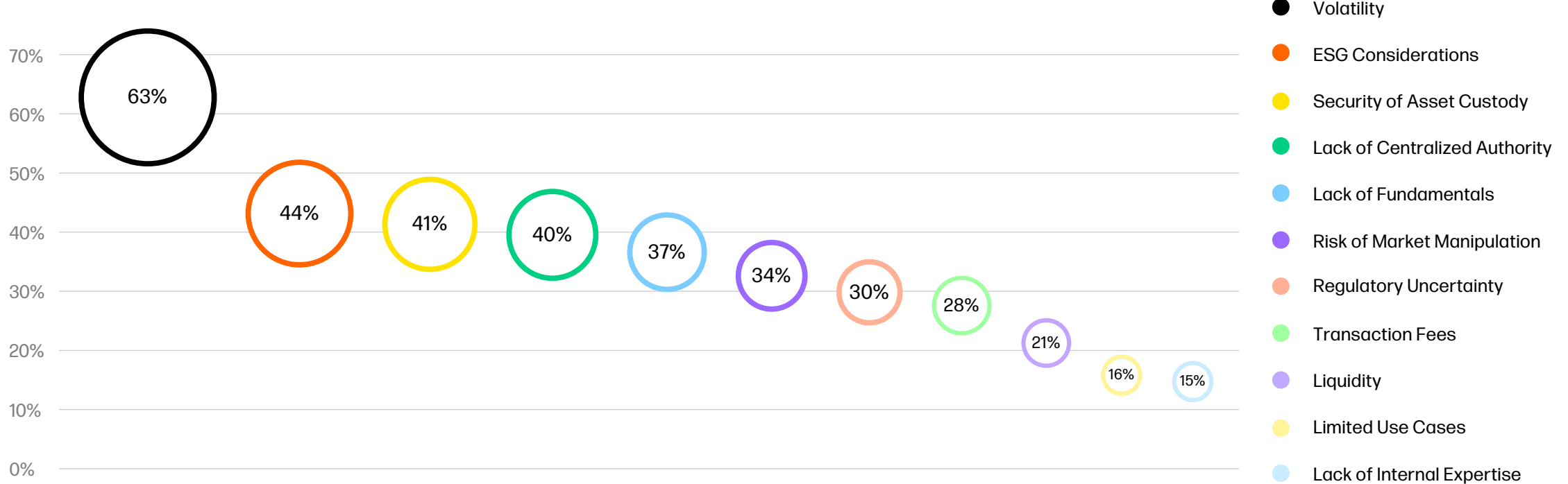




# The barriers to investing in digital assets are gradually easing.

While institutional investors have cited “price volatility” as the top barrier to investing in digital assets, recent regulatory developments, improved security measures, and advancements in infrastructure are gradually addressing these concerns.<sup>1</sup>

## Top concerns for institutional investors:



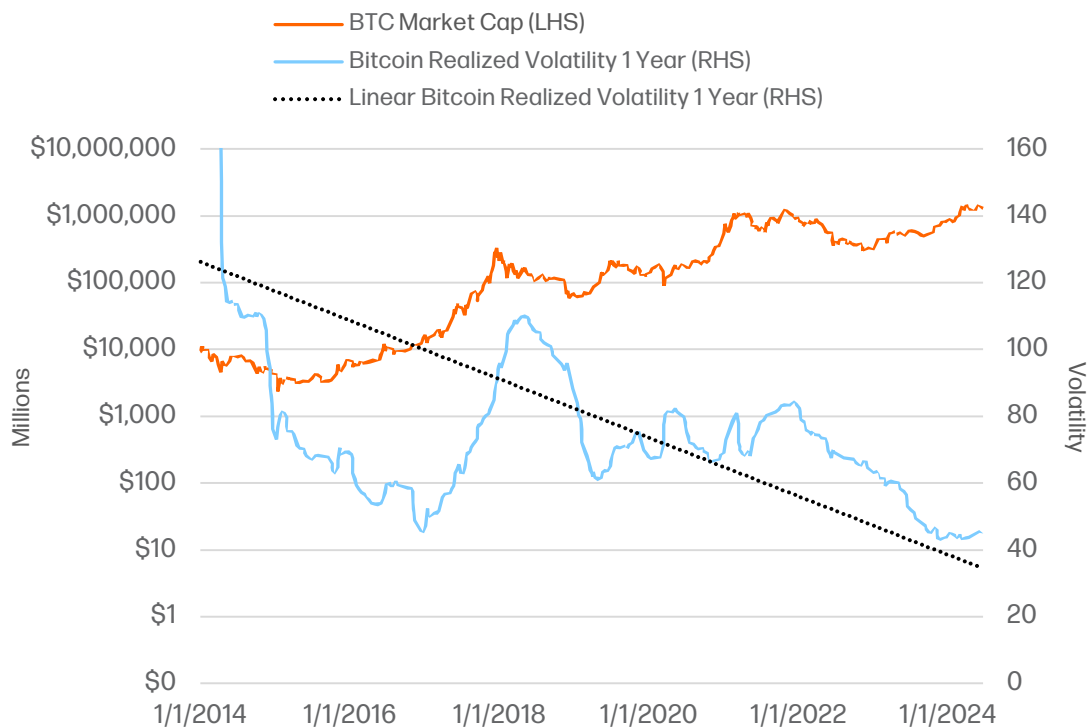
[1] Source: Coinbase | Institutional Investor, 2023 Digital Assets Outlook Survey, as of November 2023.



# Bitcoin Volatility is Trending Downward

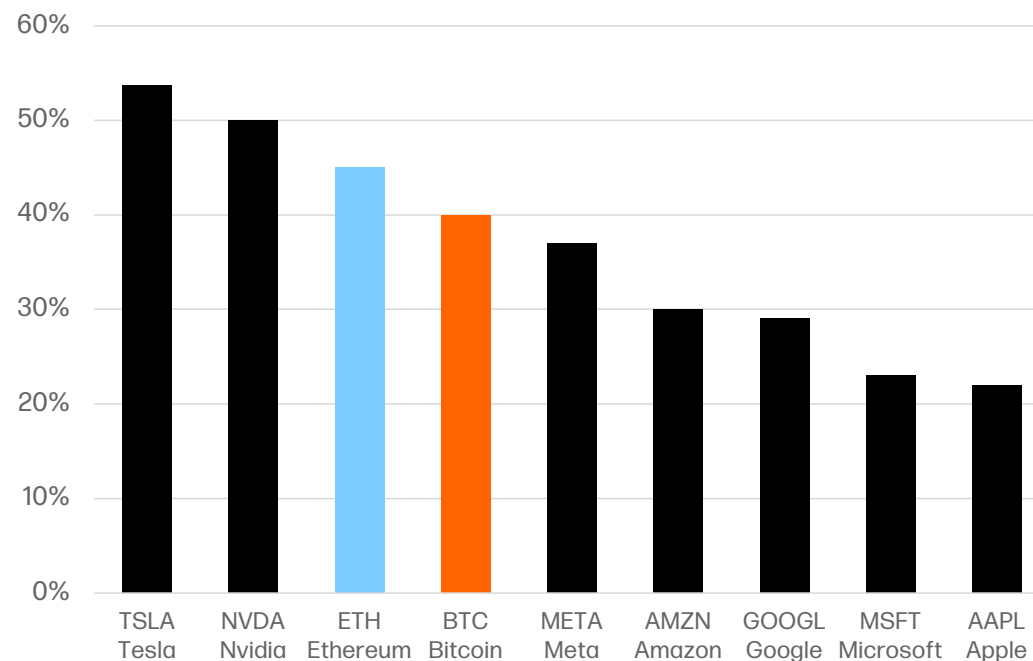
Although bitcoin is more volatile than traditional assets, its realized volatility continues to decline as adoption grows. When looking at bitcoin's 1-year volatility, it is no longer an outlier compared to the "Magnificent Seven."

## Bitcoin Market Cap vs. Realized Volatility<sup>1</sup>



The selected 10-year time period is from January 1, 2014 to June 20, 2024.

## Magnificent Seven: 1-Year Volatility<sup>2</sup>



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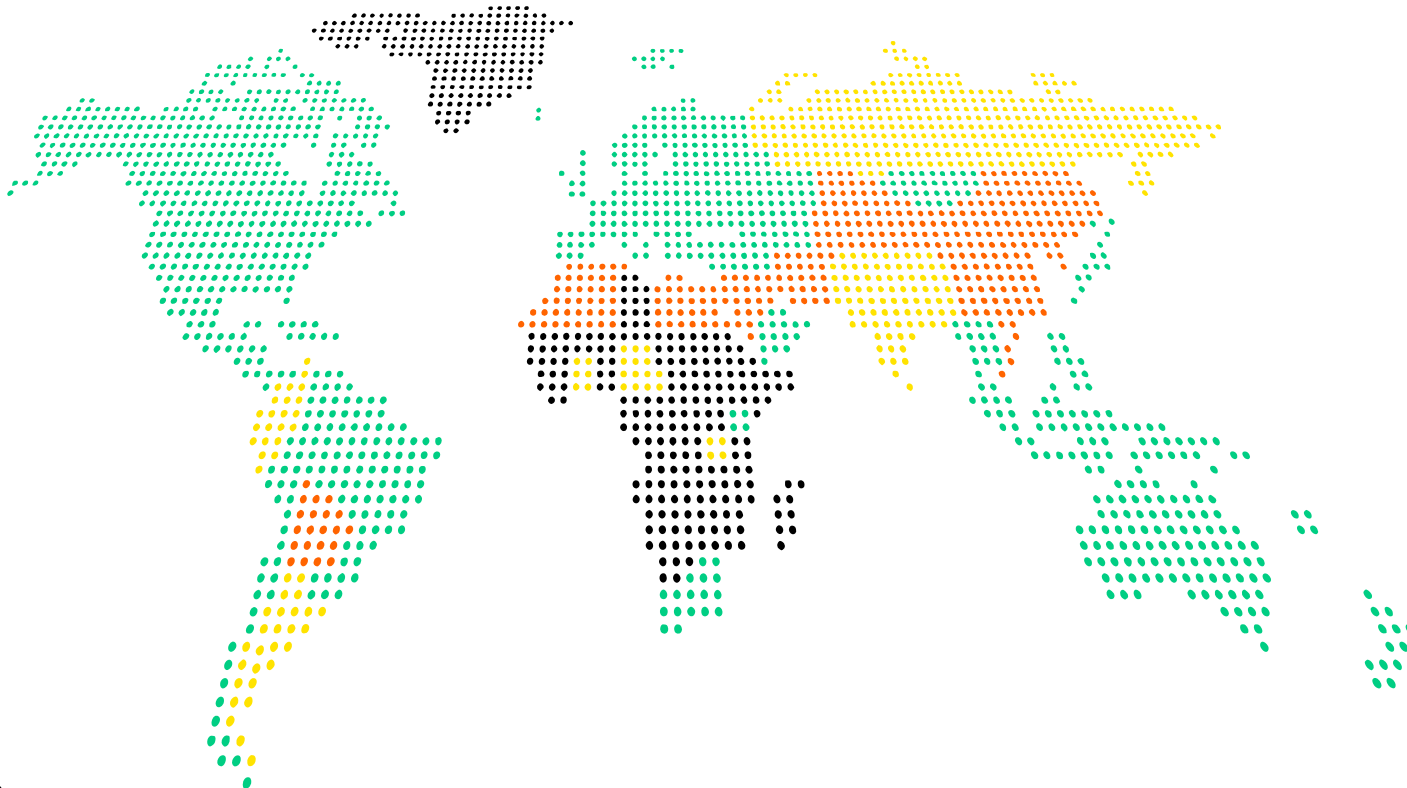
[1] Galaxy Research, as of June 20, 2024. Note: Bitcoin volatility is trending downward overall, reaching a new all-time low in 1-year volatility in March 2024. [2] Bloomberg, as of August 5, 2024.



# Global Landscape of Crypto Regulation in 2024

Across the globe, governments are advancing dialogues and creating comprehensive regulatory frameworks for digital assets to ensure transparency, protect investors, and foster innovation in the financial sector.

## Mapping Digital Asset Regulation



### Selective Jurisdictions \*

- United States
- Canada
- United Kingdom
- European Union
- Hong Kong
- Japan
- United Arab Emirates
- Saudi Arabia
- China (Mainland)
- Australia
- Bahamas
- Cayman Islands
- Bahrain
- South Africa
- Russia
- India
- South America

### Regulatory Framework

- ✓ Legislation / Regulation in place
- ⌚ Process initiated or plans communicated
- ✗ Regulatory process not initiated

### Legal Status

- Legal (all activities are permitted)
- Partial Ban (some activities not permitted)
- General Ban (all activities limited)
- Unknown

Regulatory framework refers to countries or governments with legislation in place to enforce tax policy requirements, anti-money laundering and terrorist financing (AML/CFT), consumer protections, licensing, and disclosure obligations.

Legal status refers to whether individuals or institutions within the jurisdiction are permitted to buy, sell, or trade cryptocurrencies freely.



# What motivates investors to seek exposure to the digital asset space?

## Four reasons to consider investing:

001



### Returns

Exposure to an entirely new asset class with the potential for outsized appreciation and asymmetric returns.

A 2023 Institutional Investor survey conducted by Fidelity ranked “high potential upside” as the top appeal of digital assets.<sup>1</sup>

002



### Diversification

Bitcoin and other digital assets offer portfolio diversification benefits due to their low correlation with other investments.

See slide 26  
“Expanded Correlation Matrix” for Bitcoin and Ethereum against other asset classes.

003



### Thematic/Strategic

Digital assets can provide a hedge against inflation, yield opportunities from staking & lending, and offer censorship-resistant value storage.

004



### Innovation

Access to 24/7 global liquidity, participate in decentralized finance (DeFi), and leverage the transparency, immutability, and transaction speeds of a blockchain.

The same survey ranked “innovative tech play” as the second most appealing reason to invest in digital assets.<sup>1</sup>



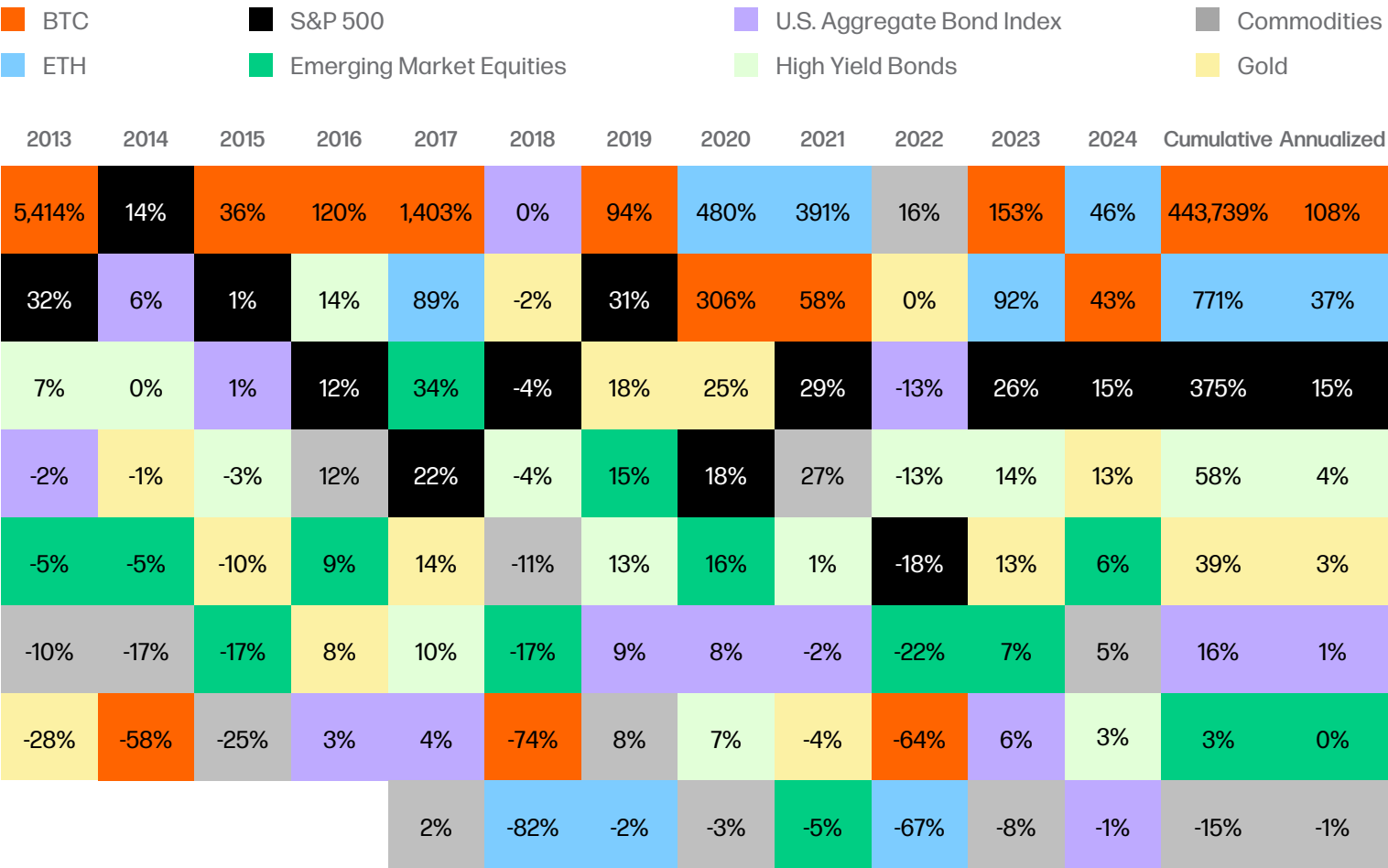
# BTC and ETH Post Strong Historical Performance

Despite fluctuations in the broader digital asset market, **BTC** and **ETH** have consistently ranked the best or second-best performing assets for ten of the past twelve years.

Past performance is no guarantee for future results. For informational purposes only and should not be considered investment advice or a recommendation to buy, sell, or hold any particular security.

Source: Galaxy Asset Management, as of July 2024.

Annual returns for selected asset classes ranked from best to worst within each calendar year over the last 12 years.

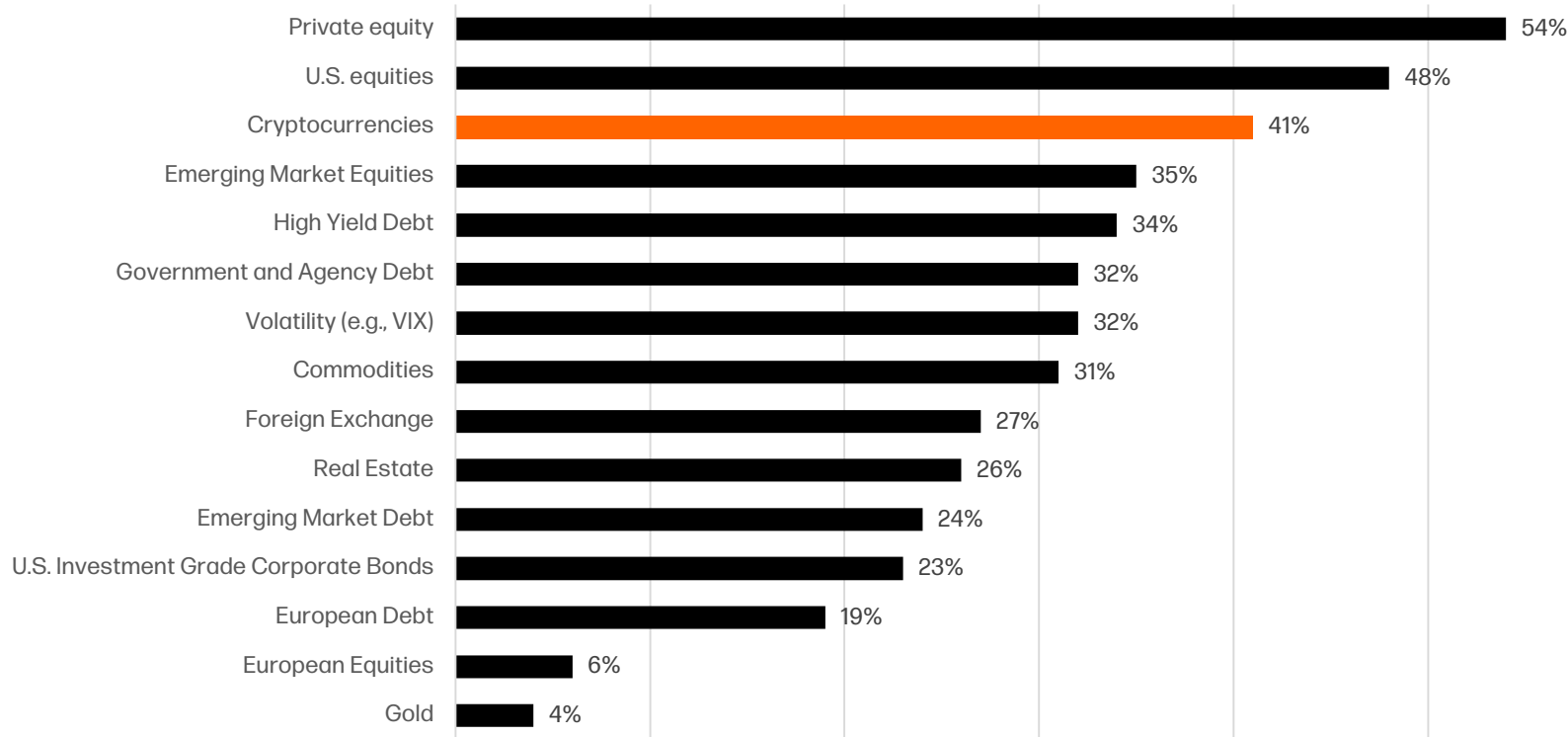






# Digital assets are seen as a good opportunity for risk-adjusted returns in 2024 and the coming years.

## Investor Sentiment and Outlook for 2024 and Beyond<sup>1</sup>



### Survey Question:

“Thinking about the next three years, in which asset classes do you see the biggest opportunities to generate attractive risk-adjusted returns?”

**Methodology:** Data was collected between Oct. 19-Nov. 6, 2023. Audience n=250 U.S. institutional decision makers from hedge funds, asset managers, and allocators.



# Observations and Predictions

1. Based on our research, we believe that we are approaching the era of regulatory clarity and sustainable frameworks. With the industry's strong foothold across markets and traditional finance, we see a growing consensus that "crypto is here to stay." Regulation will drive trust and adoption.
2. Solidifying regulatory foundations will lead to more mature markets, thereby allowing more non-native crypto companies to become major players in the industry, not only in the general markets and infrastructure sectors of digital assets but also in crypto-specific infrastructure and crypto use cases.
3. The value of decentralization and censorship resistance among industry participants should drive more open-sourced, DAO-led projects within crypto-specific infrastructure. We believe these products and services will likely become the permissionless layer upon which companies across the industry can build new applications over time, akin to how eCommerce was built atop the open internet.
4. The subsector that features a larger number of public companies is bitcoin mining operators. Bitcoin mining is a capital-intensive operation funded primarily through equity capital, as opposed to debt capital. See Galaxy Research's [Mid-Year Mining Report](#) for more information.
5. Zero-knowledge provers, another subsector of crypto-specific infrastructure that requires capital-intensive operations, may grow to benefit from deeper equity fundraising in the future.
6. Gaming leads the "crypto use cases" subsector, featuring the largest number of major projects and the highest share of VC investment in the digital asset industry. Blockchain gaming, alongside DeFi, holds the potential to become one of the most critical use cases for crypto. For more information, see Galaxy Research's [Quarterly VC Updates](#).

"Crypto Use Cases: Real Utility Beyond Speculation"



[Read Report](#)

Galaxy Research's Quarterly VC Updates



[Learn More](#)

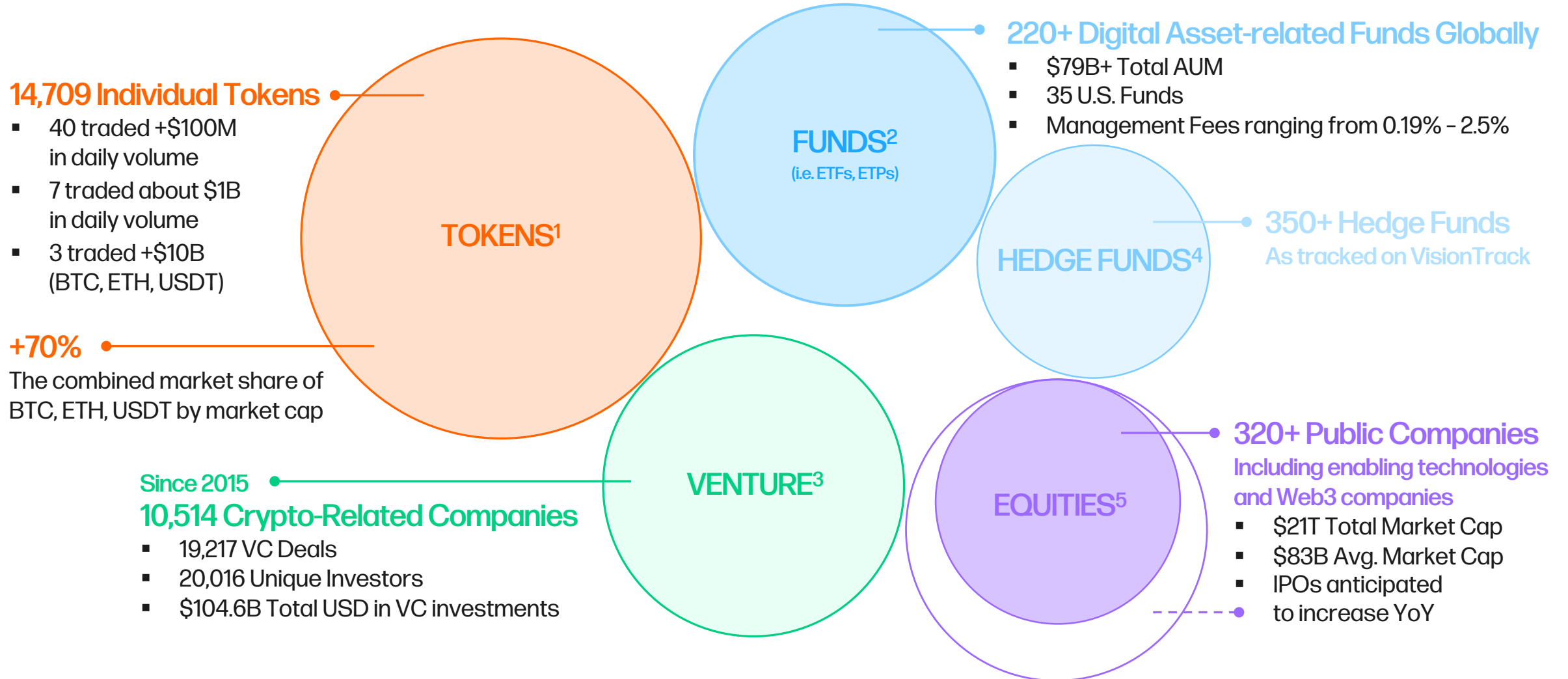
Galaxy Research's Mid-Year Mining Report



[Learn More](#)



# The Global Digital Asset Industry by Investment Category



[1] Galaxy Research, September 12, 2024, Data: CoinGecko.com. [2] Galaxy Research, September 12, 2024, Data: Bloomberg Intelligence. [3] Galaxy Research, September 12, 2024, Data: Pitchbook.

[4] Galaxy Research - VisionTrack, as of August 31, 2024. [5] Galaxy Asset Management, Data: VettaFi, September 4, 2024.



# Pros & Cons: The four major entry points into digital assets

With a wide range of investment vehicles – spot ETFs, VC investments, and crypto derivatives – each entry point into the digital asset universe comes with unique advantages and risks. Investors should align their strategy to their preferred risk tolerance and desired level of digital asset exposure:

## Direct Ownership

001

### Pros

- + Direct access to the blockchain
- + Self-custody of assets
- + Ability to stake assets for yield

### Cons

- Exchange and custody risk
- Steep learning curve
- Potential for lost keys

## Fund Exposure

002

### Pros

- + Familiar investment vehicle
- + Reduced custody risk
- + Multiple fund strategies

### Cons

- No access to the blockchain
- No ability to self-custody
- Annual management fees

## Venture Investing

003

### Pros

- + Access to early-stage deals
- + Potential for outsized returns

### Cons

- Must be a qualified investor
- High cost of ownership
- Long path to liquidity

## Public Equities Exposure

004

### Pros

- + No custody fees
- + High transparency
- + Regulated, audited financials

### Cons

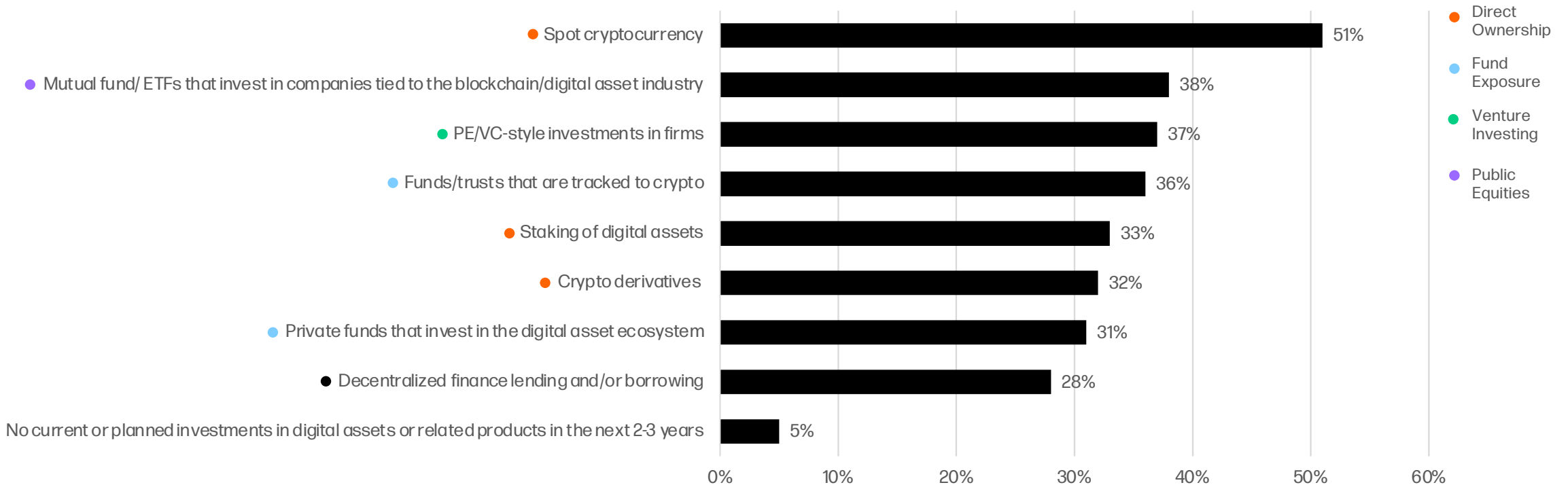
- Limited investable landscape
- Credit risk
- Management execution risk



# Institutional investors' appetite for different investment strategies

A 2022 EY survey highlights the ranging interest among institutional investors in allocating their portfolios to different crypto products, based on their expected investments over the next two to three years.<sup>1</sup>

## Institutional investors anticipated investments over the next 2-3 years (2022)



[1] EY, "Staying the course: institutional investor outlook on digital assets", [https://www.ey.com/en\\_us/insights/financial-services/how-institutions-are-investing-in-digital-assets](https://www.ey.com/en_us/insights/financial-services/how-institutions-are-investing-in-digital-assets).





# Adoption Often Starts with Bitcoin and Ether

The low correlation of digital assets with more established asset classes, like equities and fixed income, makes them well-suited to diversify a multi-asset portfolio.

## 1. Clearest Entry Point

- Bitcoin and Ether are the largest cryptocurrencies by market cap

## 2. Most Accessible

- High liquidity and often more accessible for investors
- More regulatory clarity than other cryptocurrencies

## 3. Compelling Risk-Return Profile

- Strong performance over the past 10 years
- Low correlation to traditional assets
- Potential hedge against market volatility and inflation

### Correlation Matrix Explained:

+1.0 means that the two assets are moving together in lockstep.

0.0 means that the two assets have no correlation to each other

-1.0 means the two assets are moving in completely opposite directions.

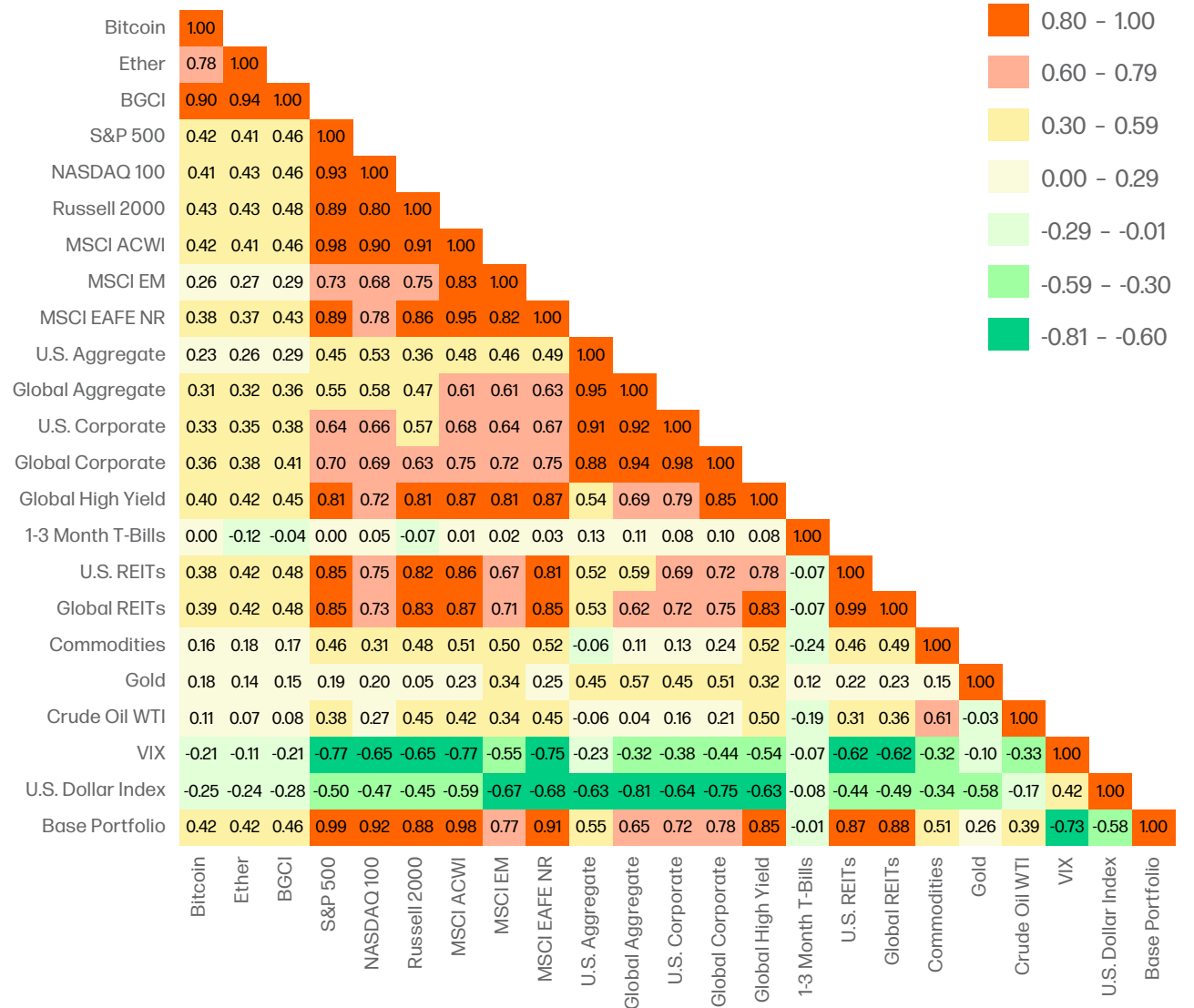
[1] Data: Bloomberg, as of June 28, 2024.

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The Expanded Correlation Matrix tracks a 6-year correlation period.

\*Base Portfolio = 35% S&P 500, 35% U.S. Aggregate, 10% Commodities

## Expanded Correlation Matrix<sup>1</sup>

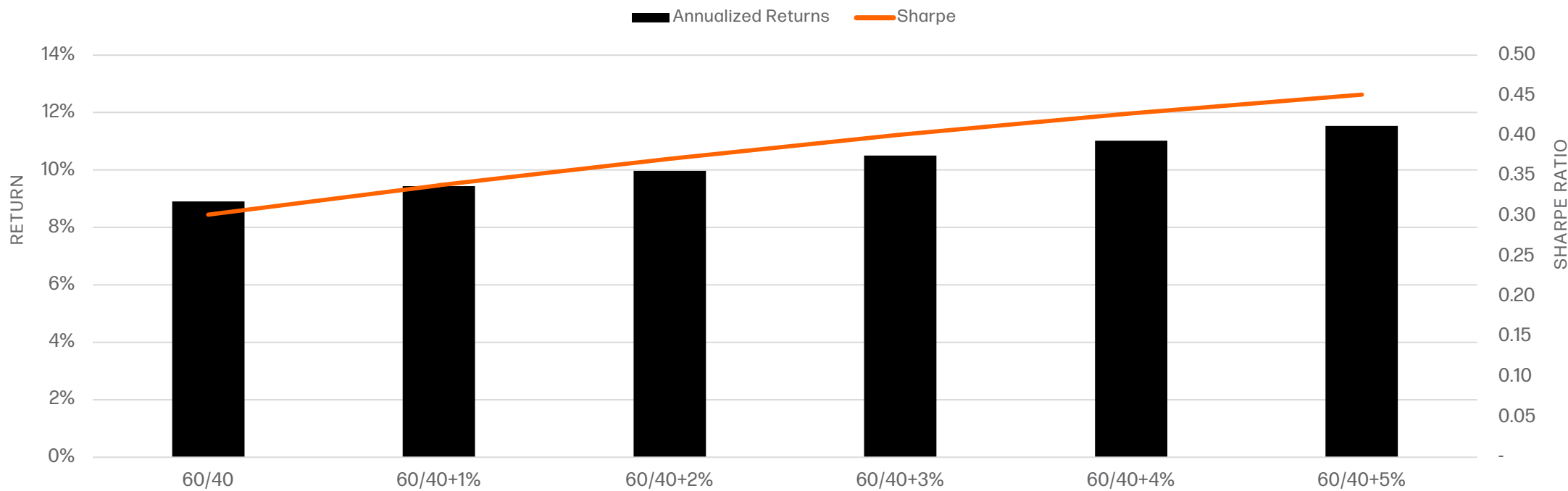




# Getting Off Zero: Bitcoin in a Portfolio

Integrating bitcoin into traditional investment portfolios is no longer a speculative bet; it's a forward-thinking strategy for holistic financial planning and wealth preservation. Adding bitcoin incrementally to a diversified portfolio may provide asymmetric benefits without sacrificing the portfolio's risk profile.

## Impact on return and Sharpe Ratio from adding crypto to 60/40 portfolio (2019 - 2024)



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The selected 5-year time period includes both crypto's bull and bear market cycles.

Source: Galaxy Asset Management, as of July 2024.



# Fund Exposure

## By the Numbers:

001



# 1200+

U.S. institutions disclosed  
\$16.5B in Spot Bitcoin ETF  
holdings at the end of Q2-24<sup>1</sup>

002



# 220

Blockchain & crypto ETPs  
tracked on Bloomberg<sup>2</sup>

003



# \$79B+

Combined AUM of 220  
blockchain & crypto ETPs<sup>3</sup>

004



# 65

Fund issuers across 220  
blockchain & crypto ETPs

## Traditional fund issuers have entered the chat.

Many of the largest fund issuers  
globally are launching digital asset  
products.

**BlackRock**

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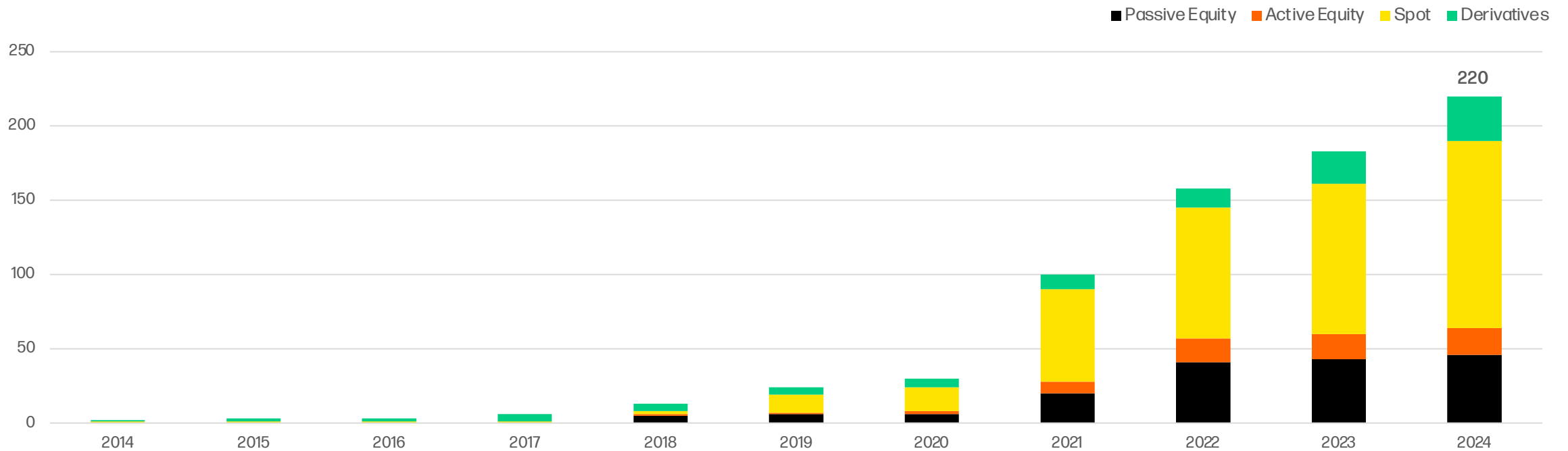
All third-party company product and service names in this presentation are for identification purposes only. The product names, logos, and brands are property of their respective owners. Use of these names, logos, and brands does not imply endorsement.

[1] Bloomberg, as of August 31, 2024. [2] Bloomberg, as of September 10, 2024. [3] Bloomberg, as of September 20, 2024.



Over the past decade, the number of ETPs has surged globally, cementing digital assets as a new asset class and giving investors more familiar investment options.

Cumulative Number of Crypto-related ETP Inceptions, Globally (2014 - 2024)<sup>1</sup>



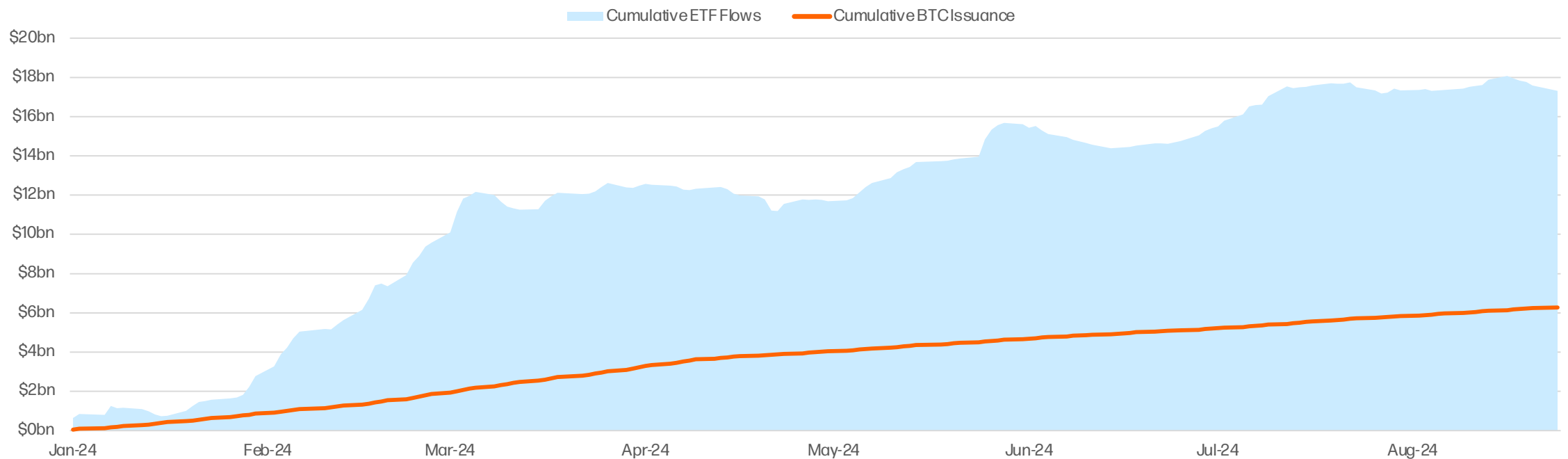
[1] Source: Galaxy Research, as of August 31, 2024. Data: Bloomberg.



# U.S. Spot ETFs were a significant source of new demand.

Since the spot ETFs began trading, demand from ETFs has significantly outpaced new bitcoin issuance. BTC ETF Inflows in Q1 and Q2 of 2024 demonstrate the demand for more easily accessible exposure. Measured by the asset flows within the first six months, the BTC ETF launch can be considered the most successful ETF launch (across all issuers) of all time.

**Bitcoin ETF Flows vs. BTC Issuance (Cumulative)<sup>1</sup>**



[1] Source: Galaxy Research, Data: Bloomberg, as of August 31, 2024.







## Section 2:

# Opportunities in the Asset Management Industry

# Exhibit 1 - Development of Tokenized Real-World Financial Assets

	... till 2020	2021–2022	2023–2024
 <b>Money</b>	<b>PoC:</b> Tokenized money in FS industry e.g., CBDC studies in ~85% central banks, JPM Coin	<b>Acceleration:</b> Tokenized money development among FIs and regulators through pilots, sandboxes, policy changes etc.	
		<b>Launch &amp; rapid rise:</b> Stablecoin exceed US\$100 billion, e.g., USDT by Tether, USDC by Circle	
 <b>Investable Assets</b>	<b>PoC:</b> Multiple tokenized real-world assets initiatives across asset types, such as funds, real estates	<b>Launch:</b> Tokenized financial products in exclusive distribution channels, e.g., JPM intra-day repo, Franklin Templeton MMF, HKMA tokenized bonds, UBS tokenized note, HSBC tokenized gold	

Cryptocurrency market capitalization (US\$ trillion)



## Takeaways

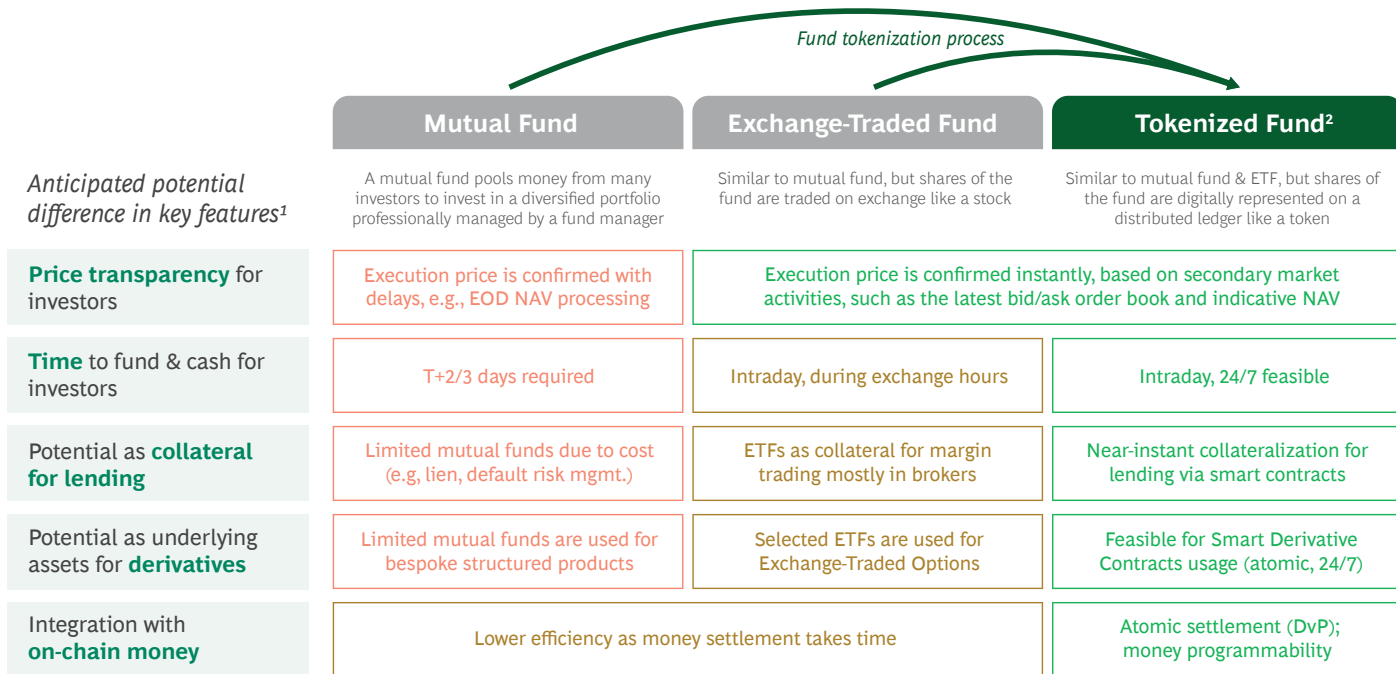
**Tokenized finance reaching a critical inflection point** with readily available on-chain money & investable real-world assets

**Tokenized money is already available & rapidly developing**

- Stablecoin tested in virtual asset industry
- Accelerated development in CBDC & tokenized deposits, driven by regulators & FIs

**Types of concrete investable tokenized real-world assets are launched**, e.g., credit, funds, commodity

# Exhibit 2 - Feature comparison: Mutual funds, ETF, Tokenized funds



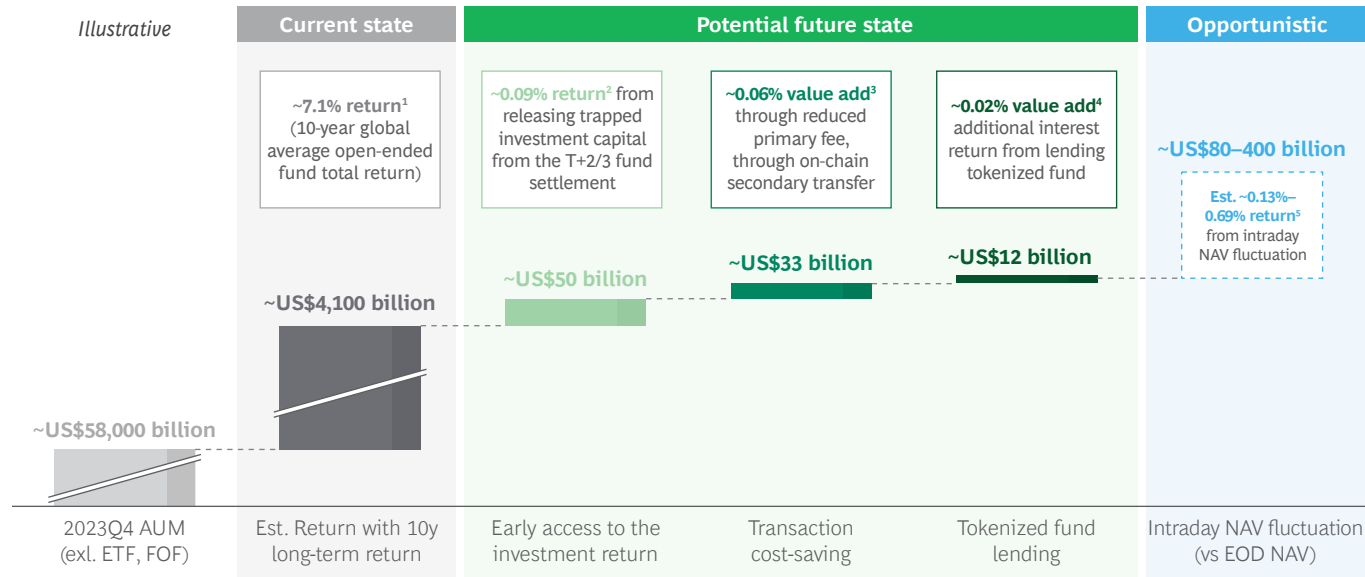
**Source:** Industry interview, BCG analysis.

<sup>1</sup>Features for tokenized funds are their potentials using blockchain – subject to regulations.

<sup>2</sup>Also known as on-chain fund, digital fund, or blockchain-trade fund.

# Exhibit 3 - Fund tokenization benefits for global mutual fund end-investors

Benefits for global mutual fund end-investors (US\$ billion)



**Sources:** Morningstar; ICI; Refinitiv; CSSF Luxembourg; BCG analysis.

<sup>1</sup> 10-year Total Return for Open-ended fund, including International Equity, US Equity, Sector Equity, Nontraditional Equity, Allocation, Municipal Bond, Taxable Bond etc.

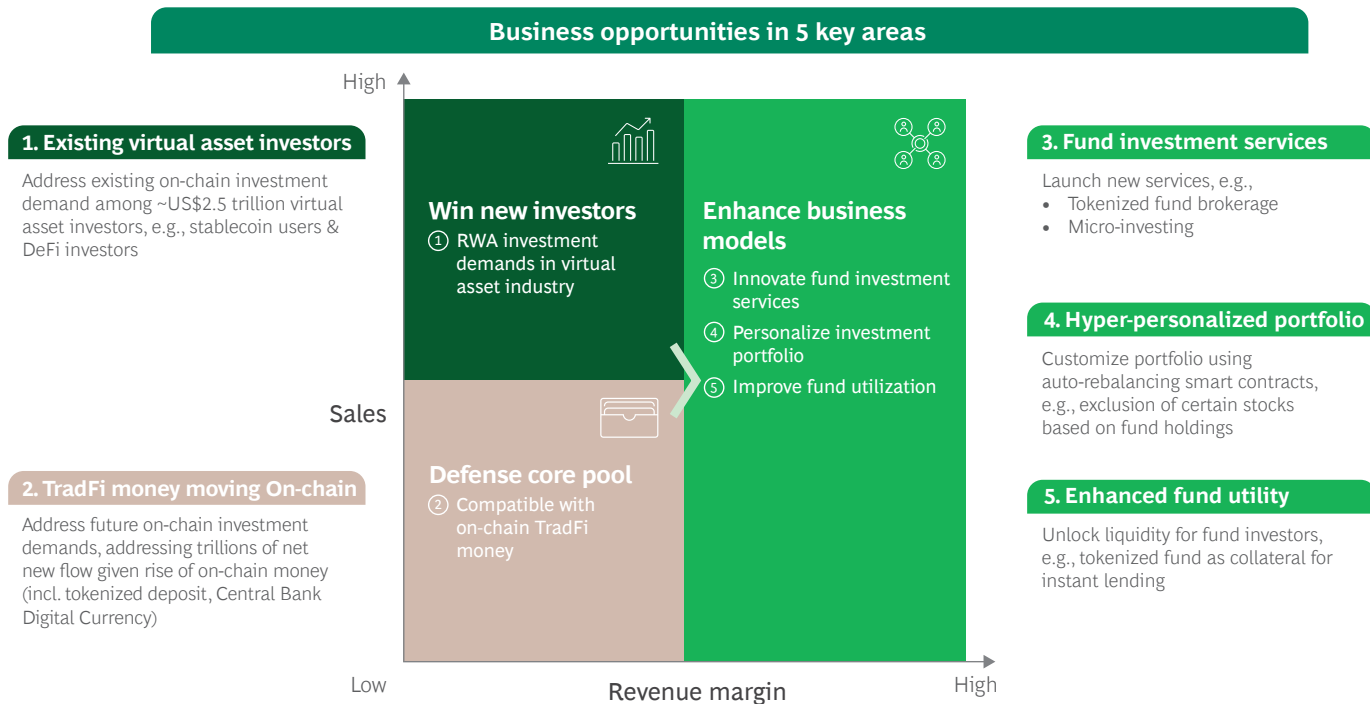
<sup>2</sup> Based on est. global total subscription and redemption activities and additional avg. annual mutual fund return from three days (T+3).

<sup>3</sup> Handle primary subscription and redemption activities to secondary market with lower fees (~0.1% vs. ~0.2% on primary).

<sup>4</sup> Benchmark tokenized fund to ETF on-loan volume as % of AUM with the avg. ETF lending interest rate.

<sup>5</sup> 1st and 3rd percentile of EOD NAV and 30-min avg. market price difference among global top 10 ETFs by AUM over the past 12 months.

# Exhibit 4 - Five key business opportunities from tokenized funds



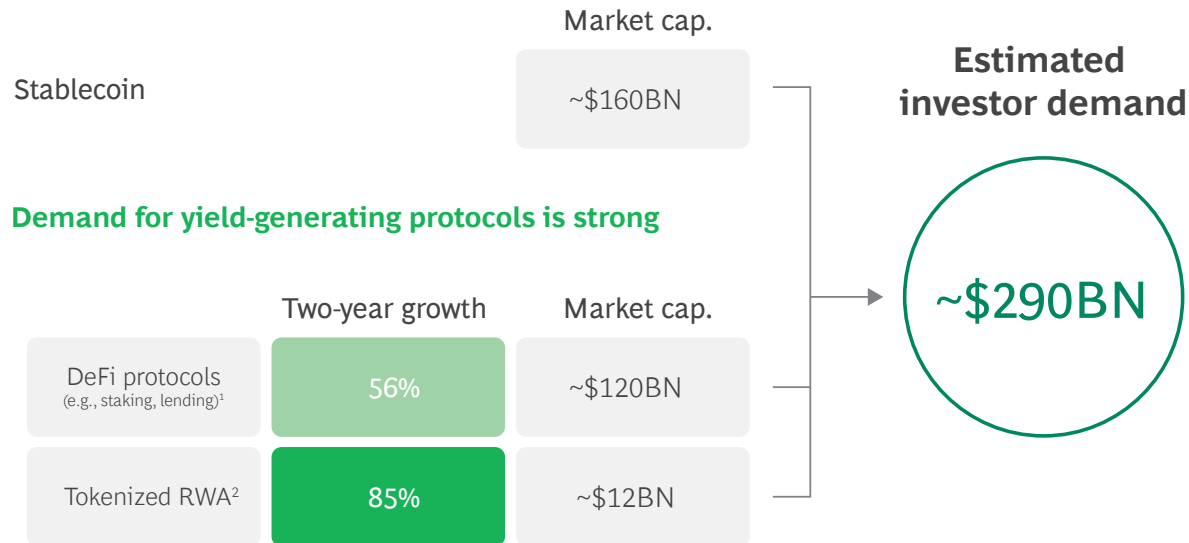
Source: BCG analysis.



# Exhibit 5 - Virtual asset owners are seeking yield-generating investments

## Virtual asset investors demand stability & on-chain investments

Demand for real-world value peg is strong



**Sources:** DeFi Llama, RWA.xyz, BCG analysis.

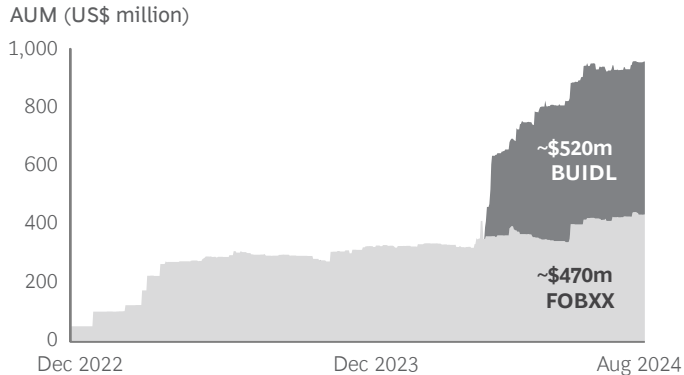
<sup>1</sup>Other DeFi protocols include lending, derivatives, liquid staking, restaking, etc.

<sup>2</sup>Real world asset tokenization. Included tokenized funds (~US\$1 billion), tokenized private credits (e.g., Figure, Centrifuge, Maple).

## Exhibit 6 - BlackRock BUIDL and Franklin Templeton FOBXX facts11

### AUM of Tokenized Money Market Funds

Dec'2022 to Sep'2024



### Distribution Snapshot

(Sep'2024)

Fund Name	# of holders	Monthly Txn Vol.	Distribution Channel	Mgmt. Fee (%)
<b>BUIDL</b> BlackRock USD Institutional Digital Liquidity Fund	~20 holders (institutions)	~\$60m (~12% of the AUM)	<b>SECURITIZE Intermediary</b> Digital wealth mgmt. platform, tokenized asset & blockchain focus	0.50%
<b>FOBXX</b> Franklin OnChain U.S. Government Money Fund	~470 holders (retail focus)	—	<b>BENJI Direct-to-client</b> Franklin Templeton's own distribution channel	0.15%

Sources: rwa.xyz, press releases; BCG analysis.

## Exhibit 7 - Physical money, dematerialized money, and on-chain money

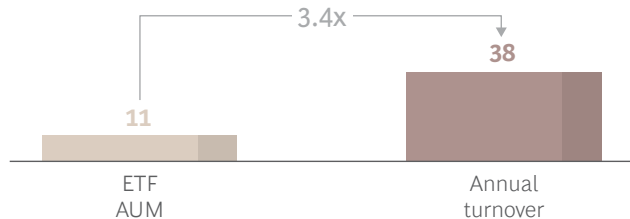
	Physical money	Dematerialized money	On-chain money
<b>Examples</b>	Banknotes and coins	Bank deposits balance Digital wallet	Regulated stablecoin Tokenized deposit Central Bank Digital Currency (CBDC)
<b>Impact for wealth &amp; asset managers</b>	Limited Scalability Complexity in dealing with physical cash transaction	Scalable Grow offline investing alongside bank services Grow online investing, targeting mass at lower cost	Enhanced business models Capture new demands for purpose-bound money, 24/7 instant investing, etc Unlock new business models, e.g., tokenized fund as intra-day lending collateral

Source: BCG analysis.

## Exhibit 8 - Tokenized fund secondary market potential volume

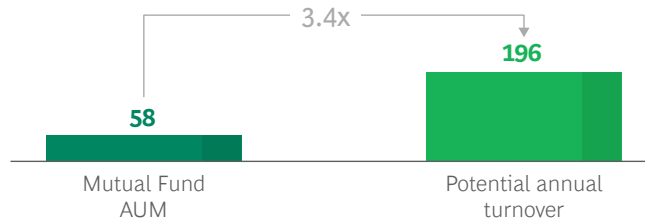
ETF turnover is 3.4 times to the AUM

North America ETF AUM and annual turnover  
(2023, US\$ trillion)



If tokenized fund could follow,  
implying ~\$200TN annual turnover

Global fund AUM and potential annual turnover  
(2023, US\$ trillion)



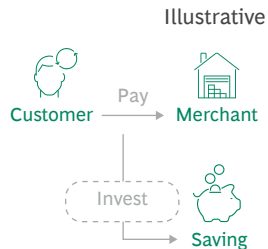
Sources: SimFund, BCG analysis.

# Exhibit 9 - What is micro-investing?

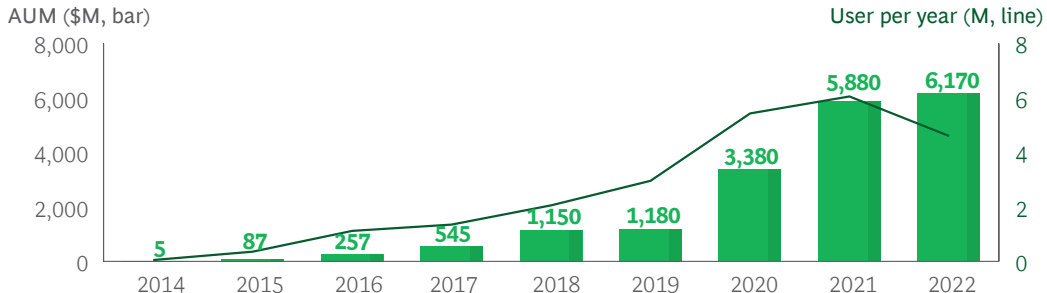


## What is Micro-investing?

**Invest-as-you-pay:** Set aside money in every payment you make

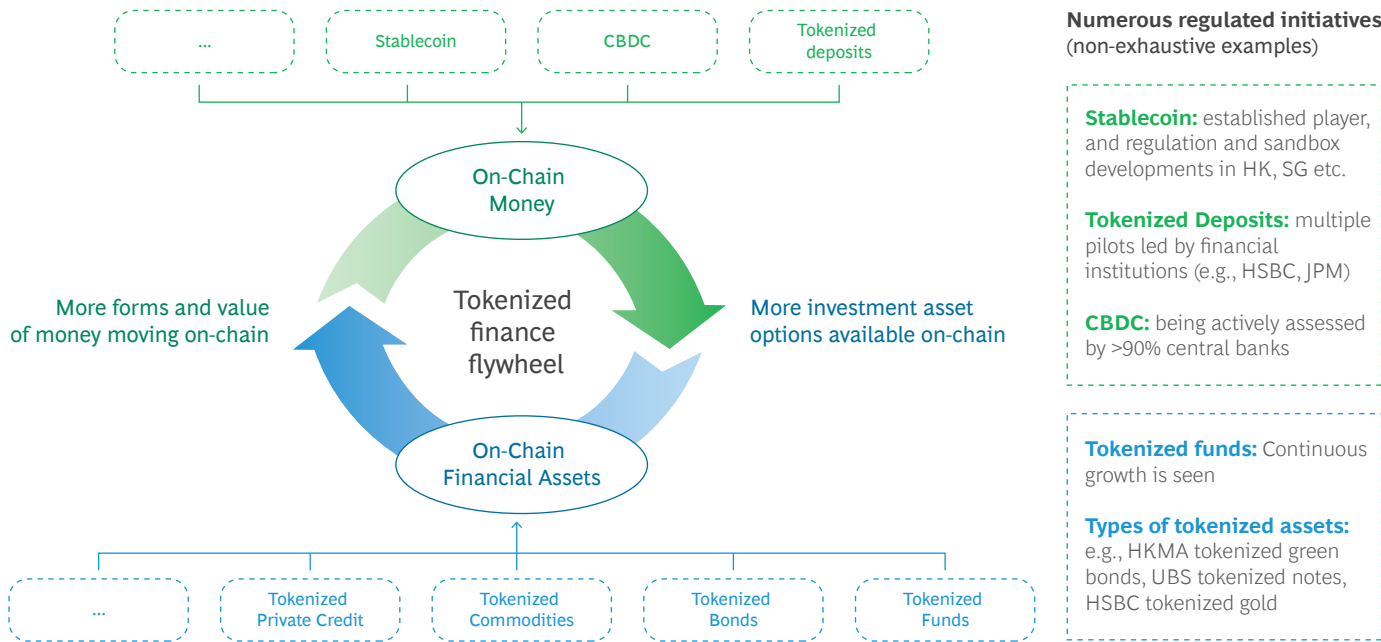


## A FinTech in micro-investing and robo-advice AUM & User Growth, 2014–2022



Sources: Investing in the Web; BCG analysis.

# Exhibit 10 - Critical mass through a flywheel effect and regulatory initiatives



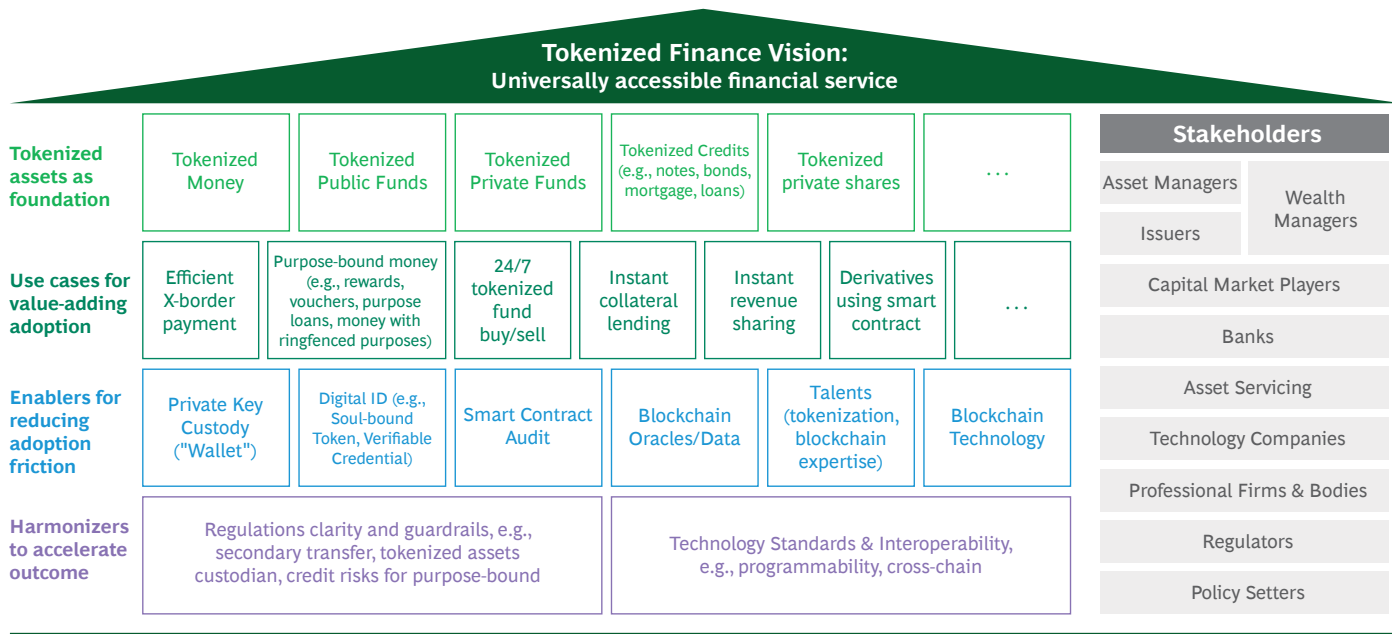
# Exhibit 11 - Tokenized fund development under two paths<sup>13</sup>

	What if #1 Grow Gradually like ETF	What if #2 Upgrade Existing Fund Vehicles
Key elements required	<p>Clarity on requirements for secondary transfer</p> <p>Continued development on stablecoins, tokenized deposits and CBDC</p> <p>Asset managers launching new fund vehicles to attract new investors</p>	<p>Clarity on requirements for secondary transfer</p> <p>Continued development on stablecoins, tokenized deposits and CBDC</p> <p>Asset managers launching new fund vehicles to attract new investors</p> <p><i>Easy-to-follow conversion path for existing fund vehicles</i></p>
Potential AUM of tokenized fund in 2030	<p>~US\$600 to 1,000 billion</p> <p>ETF achieved 1% of total AUM in ~7 years after its first launch in major market</p>	<p>US\$ trillions+</p> <p>Subject to guidance from regulators</p>

Source: BCG analysis.



# Exhibit 12 - Developing a vision for tokenized finance



Source: BCG analysis.

## Key areas for global collaboration

### Tokenized fund regulation clarity

**Reusing existing vehicles:** What setup is needed to allow fund tokenization to reuse existing fund vehicles? Funds can convert to tokenized form directly, instead of creating new structures to reduce costs and adoption implications.

**Secondary transfer allowed:** What guardrails should be put in place to protect investor interests? Solutions may include KYC-ed wallets, bid/ask spread management, and tokenized fund broker qualifications.

**Qualification for tokenized fund operations:** What are the requirements to operate tokenized funds, across fund management, asset custodian, transfer agent and fund administrators? What tokenized money should be accepted (e.g., stablecoin by licensed players to manage issuer risk)?

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### Common tokenized operational standards

**Global tokenized fund passporting:** How should tokenized funds be designed to support cross-jurisdictional distribution, including use of existing Mutual Recognition of Funds arrangements.

**Common controls adhered by all:** What should be the common set of protocols to implement automated controls? Potentially control layers could be defined by specific regulators, asset managers, distributors, and programs.

**Operations for tokenized underlying asset:** If managers decide to manage tokenized underlying assets via tokenized funds leveraging smart contracts, what should be the setup?

---

### Technical interoperability

**Blockchain interoperability:** What should be the common cross-chain interfaces to ensure features embedded in funds via smart contracts (e.g., secondary transfer controls, collateral management) can remain effective under a multi-chain set-up?

**Risk-based security standards:** What should be the principles for data management and cyber-security to protect privacy, safety of tokenized funds?

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## Section 3:

### General introduction of Project Ensemble

# Navigating the Future of Money

## *Tokenising Together, Today and Tomorrow*

Dec 2024

Hong Kong Monetary Authority



HONG KONG MONETARY AUTHORITY  
香港金融管理局

# The HKMA's CBDC journey

Wholesale

Project  
LionRock  
(HKMA)

Project  
Inthanon-LionRock  
(HKMA – BOT#)

1

Project mBridge  
(BISIH\* – four central banks)



3

Project Ensemble

Technical & Business Deep Dive

Retail

Ongoing horizon scanning of international developments

2

Project e-HKD  
(HKMA)



Project  
e-HKD+  
(HKMA)

Collaborative projects with BISIH^

2017

2018

2019

2020

2021

2022

2023

2024

# BOT – Bank of Thailand

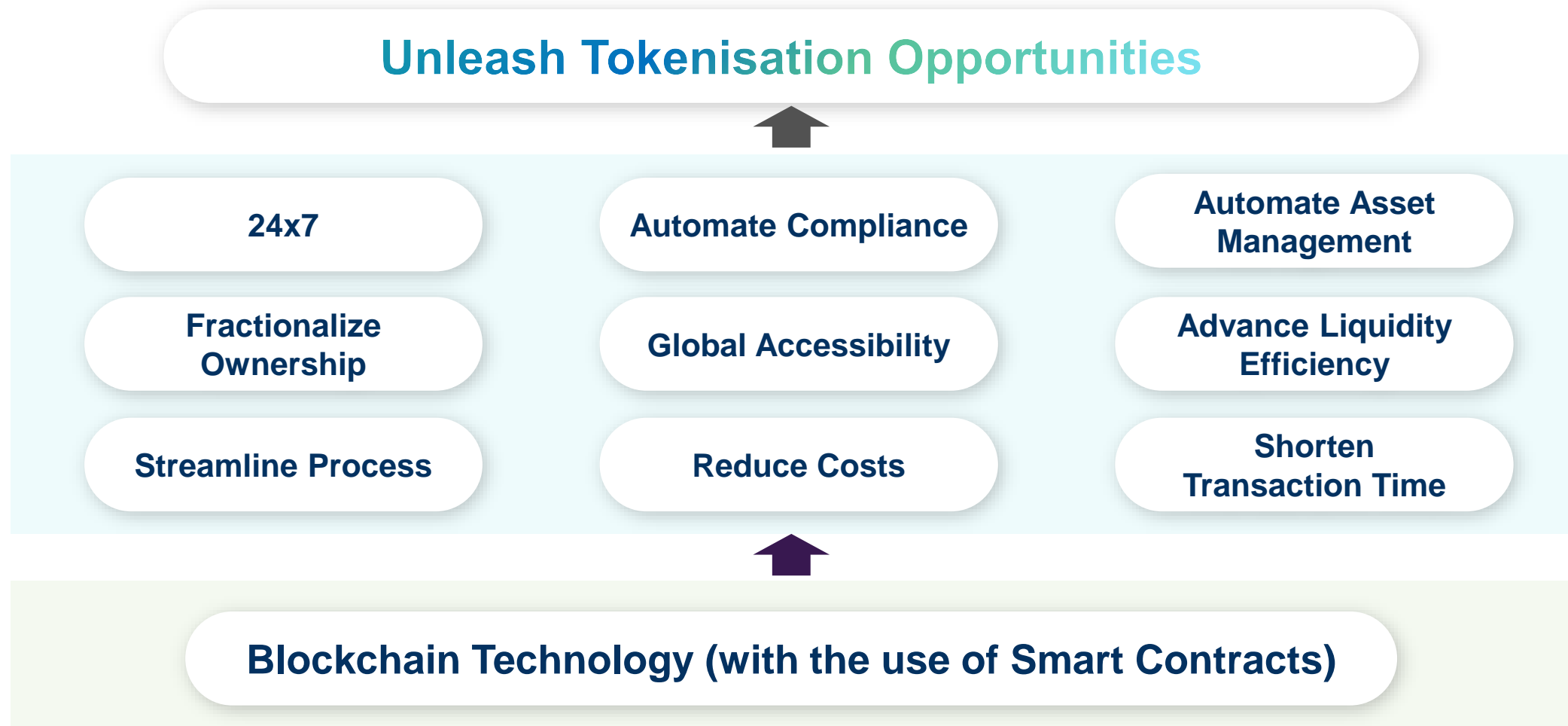
\* BISIH – Bank for International Settlements Innovation Hub (Hong Kong Centre)

^ Project Aurum and Project Sela



# Project Ensemble: to promote the development of Hong Kong's tokenisation market

“**Tokenisation**” refers to storing and transferring any value or right in a form of token using blockchain technology.

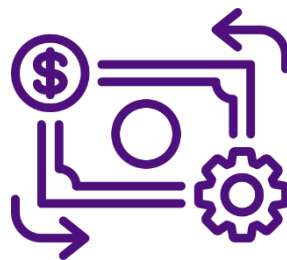


## Project Ensemble: focus of initial experimentation – four main themes

### Financial Assets



**Fixed income  
and investment  
funds**



**Liquidity  
management**

### Real World Assets



**Green and  
sustainable finance**

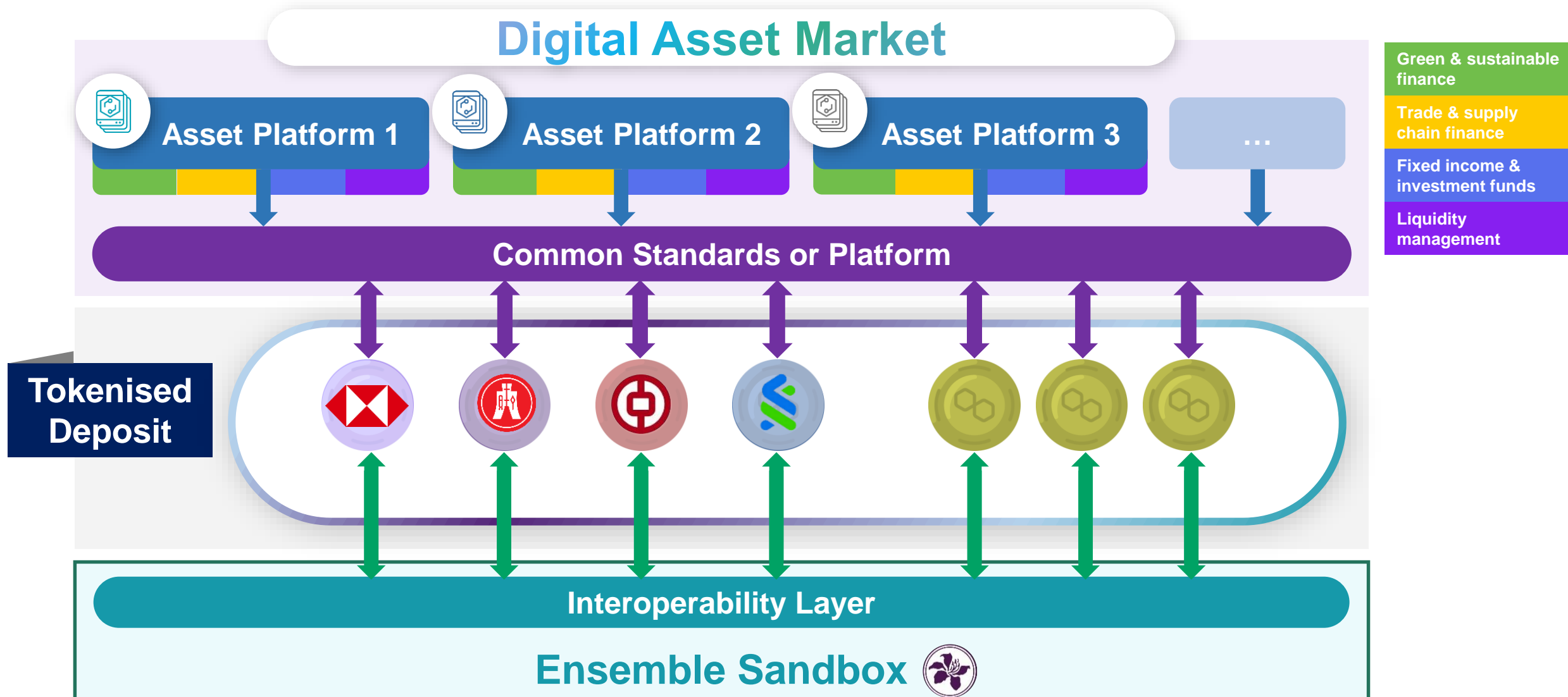


**Trade and  
supply chain  
finance**

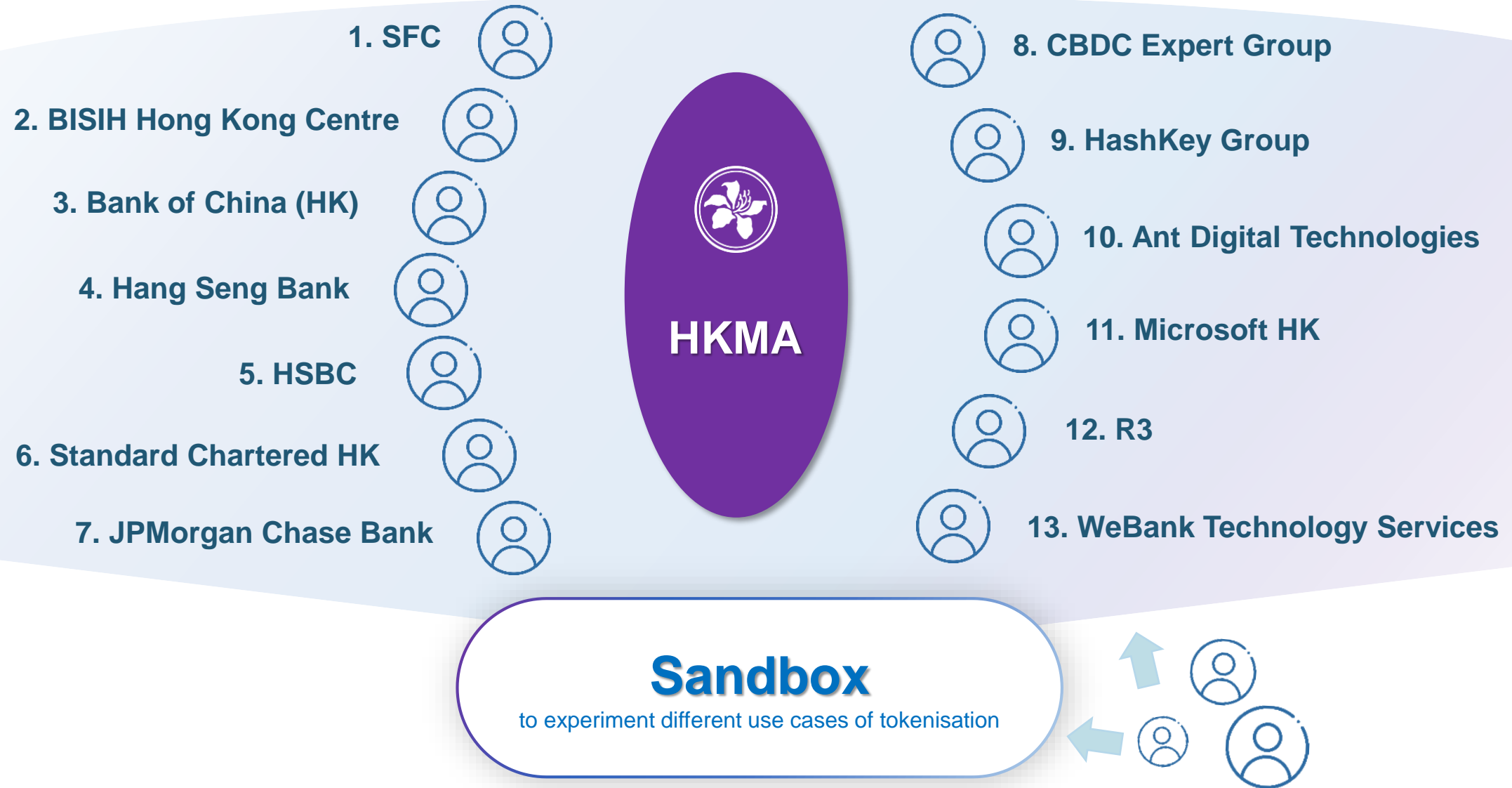




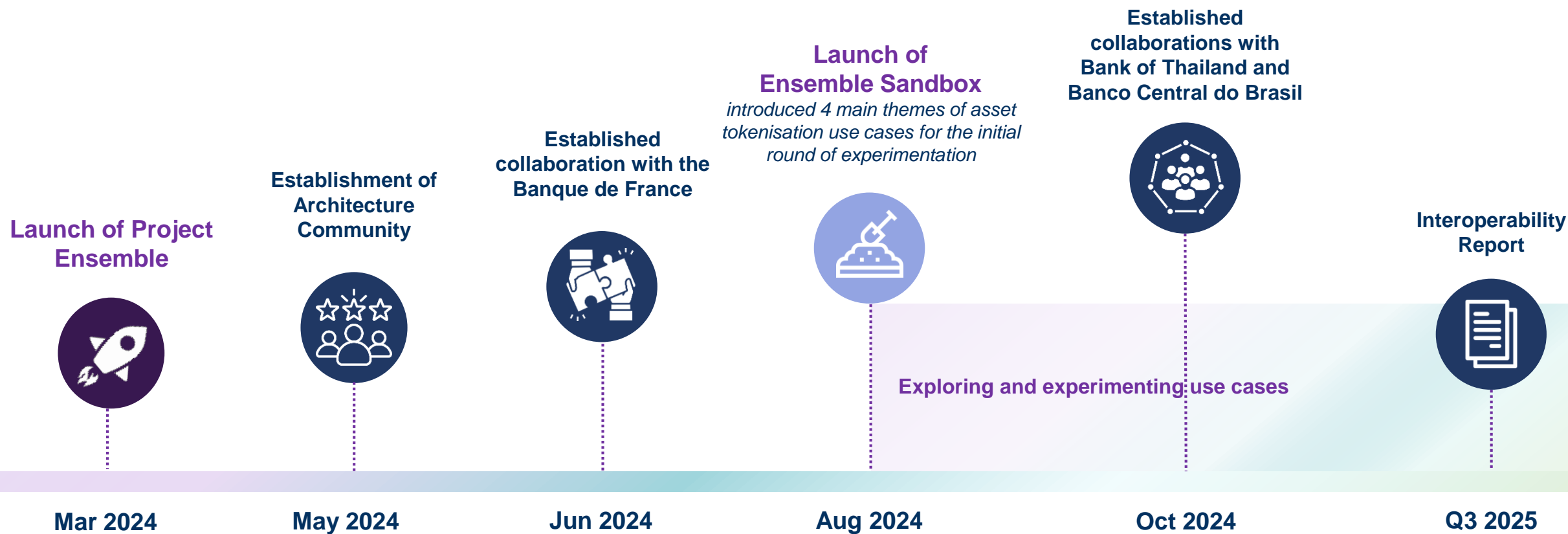
## Project Ensemble: Ensemble sandbox – ready for use



# Project Ensemble: Architecture Community to develop industry standards and co-create Project Ensemble Sandbox



# Project Ensemble: milestones of our journey



# Infographic: Hong Kong Stablecoins Bill

KING & WOOD  
MALLESONS  
金杜律师事务所

9 December 2024

- On 6 December 2024, the government of the Hong Kong Special Administrative Region of the People's Republic of China (Hong Kong) published the Stablecoins Bill in the Gazette, which will be introduced into the Legislative Council for first reading on 18 December 2024
- The Stablecoins Bill would, among other things, establish a licensing and regulatory regime for stablecoin issuers, to be overseen by the Hong Kong Monetary Authority (HKMA)
- This infographic provides a high-level overview of key elements of Hong Kong's new stablecoins regime as set out in the Stablecoins Bill

Is the digital asset in question a **specified stablecoin**, being a cryptographically secured digital representation of value that, among other features, purports to maintain a stable value with reference wholly to one or more **official currencies** (such as USD or HKD) **or** other HKMA-specified units of account or stores of economic value?

"Specified stablecoin" **excludes** financial products and instruments that are already subject to existing regulatory regimes, such as bank deposits, securities, futures contracts, limited purpose digital tokens, float stored in stored value facilities (SVFs), SVF deposits and digital representations of value issued by a government or central bank, such as central bank digital currencies (CBDCs)

NO

YES

Does any **one** of the following descriptions apply to the specified stablecoin in question?

- (1) a person issues the specified stablecoin in **Hong Kong** in the course of business;
- (2) the specified stablecoin purports to maintain a stable value with reference (wholly or partly) to **Hong Kong dollars**;
- (3) a person carries on, in respect of the specified stablecoin, an **activity specified by the HKMA** pursuant to Section 5(4) of the Stablecoins Bill **OR**
- (4) a person **actively markets** to the public of Hong Kong that it carries on an activity which, if carried on in Hong Kong, would constitute any of the activities described above.

YES

The issuer of the specified stablecoin **must** apply to the HKMA for a licence to carry on a regulated stablecoin activity, **unless** a specific licence exemption is available.

To obtain a licence, the issuer must satisfy **licensing conditions and requirements** relating to, among other things:

- the issuer itself
- its financial and other resources
- the specified stablecoin it issues
- the reserve assets and stabilisation mechanism supporting the specified stablecoin

NO

Unless specifically designated pursuant to certain powers conferred upon the HKMA by the Stablecoins Bill, the digital asset is generally **outside** the scope of application of Hong Kong's stablecoin regulatory regime

The issuer of the specified stablecoin is generally **not** required to apply to the HKMA for a licence to carry on a regulated stablecoin activity.

However, specified stablecoins issued by a person that is **not** licenced to carry on a regulated stablecoin activity are regarded by Hong Kong regulators as being unsuitable for use by the general public given the opaqueness of the risks involved. Therefore, these types of specified stablecoins generally can only be "offered" (within the meaning of Section 6 of the Stablecoins Bill) to a class of persons specified by the Financial Secretary pursuant to Section 9 of the Stablecoins Bill. The HKMA has previously indicated that eligible offerees of these types of specified stablecoins would generally be limited to professional investors.

## Minimum criteria that licensees must satisfy:

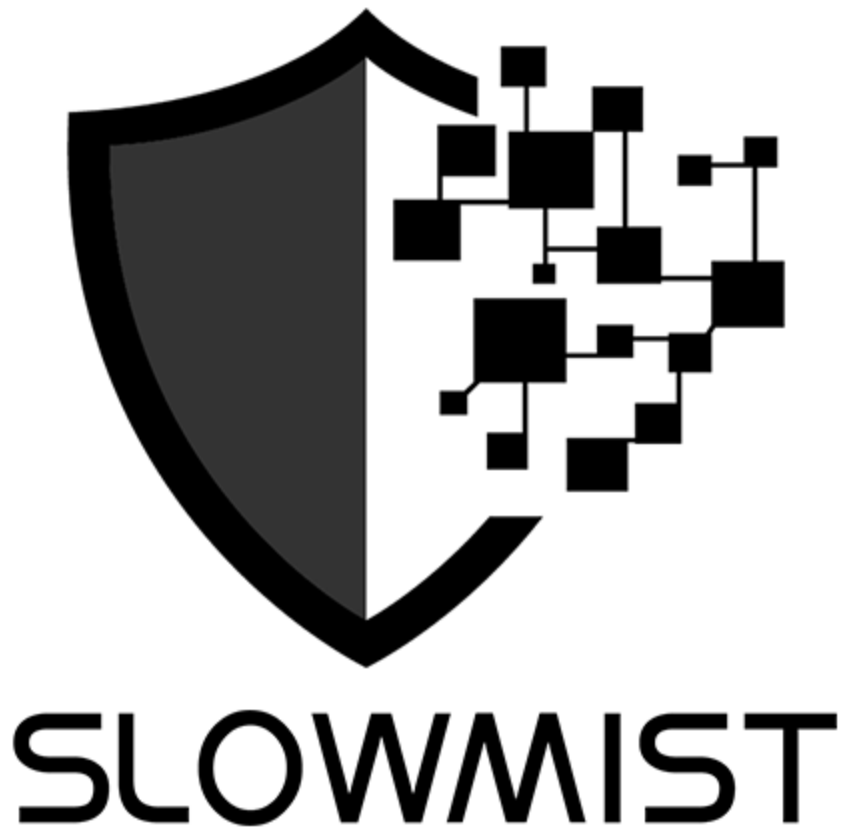
- Reserve assets:** Requirements relating to the amount, composition, quality, liquidity, custody, segregation, location, management and disclosure of reserve assets backing the specified stablecoin. Algorithmic stablecoins are not acceptable.
- Redemption process:** Requirements designed to ensure the timely redemption (generally "as soon as practicable") of the specified stablecoin by holders at par value, in the referenced currency and without unduly burdensome redemption conditions or unreasonable redemption fees
- 'Localisation' requirement:** The specified stablecoin issuer must be a Hong Kong company and its senior management must be based in Hong Kong
- Restrictions on the specified stablecoin issuer engaging in **business activities** other than a licensed stablecoin activity
- Financial resources:** The specified stablecoin issuer must have adequate financial resources and liquid assets to meet its obligations as they fall due. At a minimum, its paid-up share capital must be not less than HKD 25,000,000
- The specified stablecoin must be **non-interest bearing**
- Governance, 'fit and proper', knowledge and experience** requirements
- Prudential and risk management** requirements
- Whitepaper** and other **information disclosure** requirements
- Audit** requirements
- AML/CFT** requirements
- Other licensing conditions and requirements imposed by the HKMA

Authorized institutions (AIs) licensed by the HKMA are **not** subject to these three sets of requirements



KWMdigital.asia





Section 4:

Slowmist's sharing of  
cyber threat

## ■ 加密行業損失總覽

總公開安全事件: **1861 起** (≈ 每 2 天一起安全事件發生)

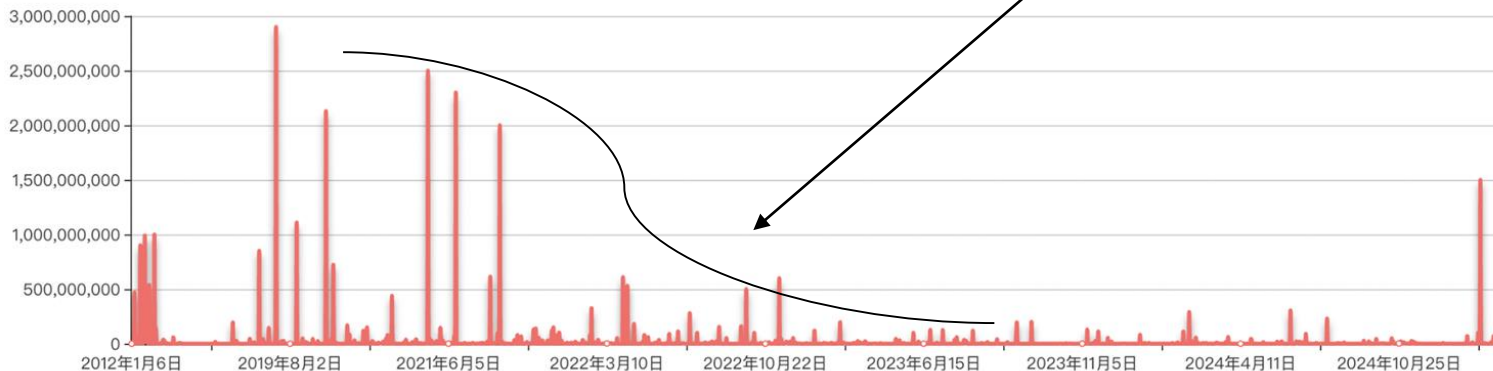
總損失金額: **>\$35B** (≈350 億美元)

[SlowMist Hacked 统计]:

全部区块链生态被公开的区块链安全事件 **1861 起**;

损失总金额约 **\$ 35,867,242,813.24** ;

近年損失金額低於 2019-2021 牛市，  
但單次攻擊金額依舊很大和黑客攻擊手法不斷演變



來源1：慢霧被黑檔案庫的統計 ([詳情](#))

## ■ 攻擊手法對比

過往 (2017-2021)  
發現+利用漏洞為主

智能合約漏洞  
( 重入攻擊、整數溢出等 )

閃電貸攻擊

基礎設施攻擊  
( API 服務器，前端 DNS 劫持 )

釣魚鏈接  
( 偽造前端，Discord 或推特被盜 )

...

現在 (2022-至今)  
“漏洞挖掘+資金追蹤+洗錢變現”產業鏈

APT 攻擊  
( 供應鏈污染、零日漏洞 )

生態複雜性日益增加  
( 跨鏈橋、多鏈、跨鏈資金洗轉 )

黑產工具工業化  
( AI 輔助社工、自動化攻擊套件 )

隱蔽式權限滲透  
( 管理員身份釣魚、治理代幣劫持 )

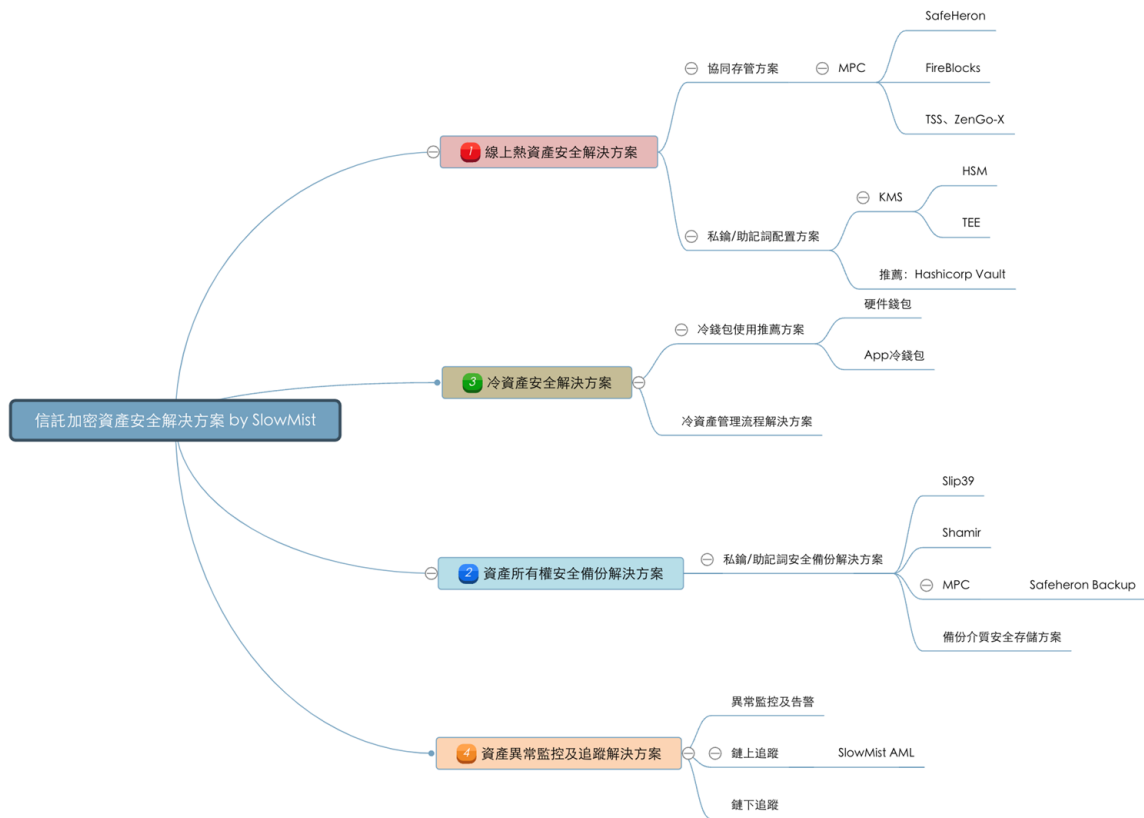
...

## ■ 信託會面臨的安全風險

- **單點故障**：中心化託管，私鑰集中存儲易成攻擊目標
- **多簽機制缺陷**：弱閾值多簽 2/3 模式，易被內部人勾結盜取
- **授權過度**：若信託接入 DeFi 協議，默認開放無限授權易被釣魚
- **AML監管**：託管資產如涉及混幣器/隱私幣（如 Monero/Tornado Cash），易觸發 AML 條例
- **釣魚攻擊**：缺乏審核機制，易被偽造郵件流/前端誘導同意資產轉移的交易



# 加密資產解決方案



來源2：  
Cryptocurrency  
Security  
Guidance  
by SlowMist  
[\(詳情\)](#)

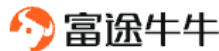
## ■ 如何持續保障資產安全



慢霧 SlowMist，全球領先的加密貨幣安全公司，成立時間超 7 年，全球客戶數千家。  
<https://slowmist.com>

### ★ 面向機構的安全諮詢服務：

- ❖ **前瞻性威脅情報賦能**：持續追蹤全球安全動態，深度剖析最新的攻擊手法與趨勢，將高價值的安全情報及時傳遞給客戶，協助客戶先人一步洞察風險，有效防禦未知威脅；
- ❖ **客製化安全賦能體系**：透過定期的安全態勢分析，為客戶量身打造高階主管安全培訓方案，提升管理階層對網路安全的策略認知。同時，深入客戶業務場景，賦能團隊掌握對抗複雜網路攻擊的實戰技能；
- ❖ **全天候專家支援護航**：無論何時何地，SlowMist 的安全專家團隊提供 7\*24 小時的專業諮詢與響應，如同專屬安全大腦，隨時解答疑問，應對突發狀況，助力業務團隊從容應對地下黑客的高級攻擊挑戰；



## ■ 如何鏈上監控 / 追蹤信託資產



一款專注於打擊加密貨幣洗錢活動的反洗錢追蹤系統  
<https://misttrack.io>

■ 1,000+ 實體地址    ■ 3億+ 地址標籤    ■ 9000萬+ 風險地址    ■ 50萬+ 威脅情報地址    ■ 17條公鏈

- 錢包地址風險評分
- 鏈上地址監控

- 鏈上資產調查
- 鏈上 KYT/KYA API

客戶超 200 多家

**50+**

Crypto Exchanges

**10+**

Crypto Wallets

**10+**

Crypto Custodians

**50+**

Financial Services

**20+**

DeFi Protocols

**20+**

PayFi Platforms

**30+**

Crypto Businesses

**30+**

Others

## ■ 如何鏈上監控 / 追蹤信託資產



一款專注於打擊加密貨幣洗錢活動的反洗錢追蹤系統  
<https://misttrack.io>

### 近期MistTrack成就：

- 協助KiloEx成功追回全部被盜資產約**844萬美元**
- MistTrack協助客戶、合作夥伴及公開被黑事件凍結資金共**超過 1.2 億美元**
- 作為**獨立第三方**受聘調查 EIGEN 代幣被盜事件並發表調查結論
- 關於北韓黑客 Lazarus Group 的分析被「**美國財政部**」引用
- MistTrack 專業追蹤結果被「**聯合國安理會**」引用
- 受邀為香港警隊網路安全及科技罪案調查科 (**CSTCB**) 進行加密貨幣非法資金追蹤的培訓
- 協助追回被詐騙資產，與 XREX 及檢警共創**台灣司法先例**
- ...

## Appendix A – Public information and official announcements related to Project Ensemble

Category	Topic	Link
Official website	<b>HKMA CBDC website (incl. Project Ensemble)</b>	<a href="https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech/central-bank-digital-currency/">https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech/central-bank-digital-currency/</a>
Official press release	[Mar 2024] <b>Commencement of Project Ensemble</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/03/20240307-5/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/03/20240307-5/</a>
	[May 2024] <b>Establishment of the Project Ensemble Architecture Community</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/05/20240507-4/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/05/20240507-4/</a>
	[Aug 2024] <b>Launch of Project Ensemble Sandbox, and announcement of use case themes</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/08/20240828-3/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/08/20240828-3/</a>
	[Oct 2024] <b>HKFTW 2024: announcement of accelerating asset tokenisation through Project Ensemble, along with the latest project updates</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-5/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-5/</a>
Official press release (on international collaboration)	[Jun 2024] <b>Collaboration between BDF and HKMA</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/06/20240627-3/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/06/20240627-3/</a>
	[Oct 2024] <b>Collaboration between BCB and HKMA</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-3/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-3/</a>
	[Oct 2024] <b>Collaboration between BOT and HKMA</b>	<a href="https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-4/">https://www.hkma.gov.hk/eng/news-and-media/press-releases/2024/10/20241028-4/</a>

## Appendix B – References

1. The Investable Universe of Digital Assets, GALAXY ASSET MANAGEMENT

<https://www.galaxy.com/investable-universe/>

2. Tokenized Funds: The Third Revolution in Asset Management Decoded, BCG

<https://www.bcg.com/press/29october2024-tokenized-funds-the-third-revolution-in-asset-management-decoded>

3. General introduction of Project Ensemble, HKMA

## Contact us

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Sustainability, InvestHK**

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**Thank you!**

