World Economic Forum

Digital Assets Regulation:
Insights from Jurisdictional Approaches

INSIGHT REPORT

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Contents

Preface

As the adoption of digital assets continues, 2024 marks a pivotal moment for the global landscape of digital asset regulation. As of early September 2024, the total market capitalization of cryptocurrencies, one type of digital asset, was valued at $2.01 trillion and stablecoins comprised 8.5% of this market, amounting to $171 billion.[1] When it comes to the status of regulation globally, according to a recent Bank for International Settlements (BIS) survey, two-thirds of the 86 jurisdictions surveyed were or will soon be regulating digital assets.[2] The main goals of implementing regulation are to protect investors and consumers and maintain financial stability.

As regulatory developments continue, countries such as Australia, the United Kingdom, Brazil and South Korea have this year committed to unveiling new regulatory frameworks. In addition, the full rollout of the European Union's Markets in Crypto-Assets (MiCA) regulation is poised to set a precedent for comprehensive digital asset oversight.

Although there has been recent progress in digital asset regulation, countries are taking divergent approaches and have established different timelines for creation and implementation. Each jurisdiction is developing regulations based on unique goals and objectives, which risks a lack of coordination globally.

With these varying approaches, it is imperative that stakeholders collaborate to forge a secure and equitable regulatory environment. This necessitates the sharing of learnings from global regulatory experiments, identifying both successful policies and shortcomings. The analysis contained in this report aims to highlight these critical regulatory insights, enabling policy-makers and regulators to craft effective and harmonized frameworks that promote innovation while safeguarding stakeholders. As the global economy navigates the complexities of digital assets, the report endeavours to contribute a clear and impartial perspective on the evolving regulatory landscape.

Executive summary

This report analyses digital asset regulation in several jurisdictions to identify unique approaches and provide insights to policy-makers and private-sector participants.

There is a need for clear guidelines in the fast-evolving digital assets industry. This report provides a close analysis of the regulatory frameworks in nine jurisdictions and their unique approaches to policy creation and implementation. The work builds on previous research undertaken by the World Economic Forum on digital asset regulation, which established a foundation to further explore the jurisdiction-specific approaches detailed in this new report.

By examining nine jurisdictions, the report draws key lessons from each approach and reveals the unintended consequences that may result from different regulatory frameworks. The nine jurisdictions are leading economies for digital asset activity and regulation implementation – the European Union; Gibraltar; Hong Kong SAR, China (Hong Kong); Japan; Singapore; Switzerland; the United Arab Emirates; the United Kingdom; and the United States. The analysis enables leaders to take a jurisdictional view of both the potential advantages and the disadvantages of implementing certain policies.

This investigation of each jurisdiction not only enhances the understanding of the direct effects of regulatory methodologies but also provides context for predicting upcoming trends and preparing for potential challenges in the evolving digital assets landscape. Through such analysis, policy-makers and regulators can anticipate the impacts of their decisions, better enabling them to build and implement regulations that are in line with their intended goals.

Across these nine jurisdictions, the report examines four key industry topics: anti-money laundering (AML) and know your customer (KYC); regulatory and technical sandboxes; decentralized finance (DeFi); and privacy and security. These subjects surfaced as the most pressing during the assessment, standing out as the industry's most prominent issues at this time.

Drawing on this jurisdictional and topic-specific analysis, the report offers a set of recommendations for both public- and private-sector stakeholders, categorized by issue as summarized below.

– **AML and KYC:** Building on existing AML/KYC foundations, focusing on the adoption of technology-enhanced solutions, global cooperation, and training and compliance programmes, to help create a more secure digital assets landscape in the future.

– **Regulatory and technical sandboxes:** Implementing clear sandbox objectives and support mechanisms and enabling the collaborative participation of diverse and broad networks in sandbox environments.

– **DeFi:** Prioritizing the need for risk mitigation and transparency as well as tailored licensing models and clear definitions to refine these regulations in a controlled setting without compromising the unique nature of DeFi and its technological advancements.

– **Privacy and security:** Underscoring the need for strong data protection policies that prioritize the consumer and include regular security audits and compliance checks to safeguard personal and financial information.

Introduction

The global regulatory landscape for digital assets is evolving, with differences in regulatory approaches between jurisdictions.

Digital assets continue to have a strong presence in the global economy, as evidenced by a significant market capitalization.[3] However, the legal status of cryptocurrencies varies significantly by country. According to an analysis by the Atlantic Council, cryptocurrencies are legal in 33 countries, partially banned in 17 and generally prohibited in 10.[4]

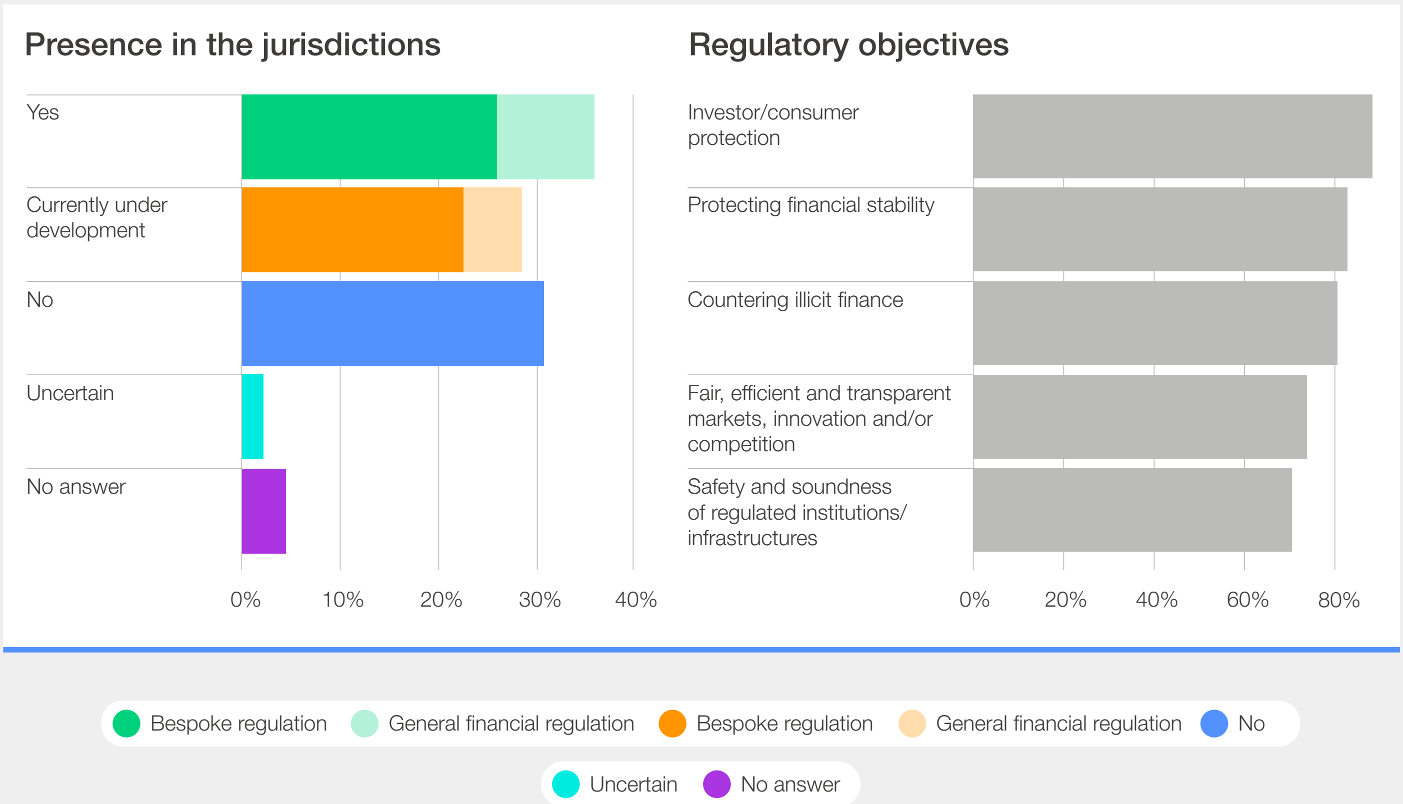
In an assessment of the status of digital asset regulation globally, the Bank for International Settlements (BIS) noted that more than 60% of responding jurisdictions possess or are creating a regulatory framework for digital assets (Figure 1).[5]

Most are bringing forward bespoke regulation (48%) because their existing regulatory frameworks do not cover digital assets. Jurisdictions that have established or are developing a tailored regulatory framework for stablecoins include the United Kingdom, Hong Kong and Singapore,while the European Union is developing a framework for digital assets more generally. In just 9% of jurisdictions, digital assets are subject to existing financial regulation. To date, around 33% of jurisdictions lack a regulatory framework and are not currently working on one.

FIGURE 1 **Central bank responses to digital asset regulation survey**

Regulatory framework for stablecoins and other cryptoassets

As a percentage of respondents, 2023



Source: Bank for International Settlements. (2024). *Annual economic report No. 147: Embracing diversity, advancing together – results of the 2023 BIS survey on central bank currencies and crypto*. www.bis.org/publ/bppdf/bispap147.pdf

This report promotes a nuanced approach to regulation rather than a 'one-size-fits-all' method, a sentiment echoed in the diverse regulatory regimes explored in the report.

Globally, digital asset policies and regulations differ to align with the needs of each jurisdiction, based on variations in goals and risk appetites. In addition, not all digital assets are created equal, and their classification profoundly influences their use, valuation and regulatory treatment. This report promotes a nuanced approach to regulation rather than a "one-size-fits-all" method, a sentiment echoed in the diverse regulatory regimes explored in the report.

As the world grapples with the opportunities and challenges presented in the digital assets sector, the World Economic Forum's Centre for Financial and Monetary Systems seeks to provide an impartial understanding of the regulatory landscape through the Digital Assets Regulatory (DAR) initiative. The Forum has conducted previous related work on this topic including the Digital Currency Governance Consortium white paper series and most recently the Pathways to Crypto-Asset Regulation paper. This earlier work laid the foundation for further exploration of jurisdiction-specific considerations for shaping new policies and regulations.

The DAR initiative engaged more than 80 senior leaders from the public and private sectors and academia to examine the current state of digital asset regulation around the globe, and to analyse outcomes from regulatory implementations to date in several advanced jurisdictions. This report synthesizes the findings from these explorations.

Methodology

Insights have been gathered from our steering committee and expert working group through:

- Desk research
- Workshops
- Interviews

Audience

The report audience includes global policy-makers and regulators, along with executives of private-sector companies, who all have responsibilities connected to digital assets.

Taxonomy

Given the diverse actors and roles that comprise the digital assets ecosystem, a general taxonomy is essential for consistent regulation and can assist with clarity and organization, as well as consistent benchmarking across various jurisdictions. The lack of a common taxonomy has been mentioned in the digital asset space and was referenced in the *Pathways to Crypto-Asset Regulation* report as an important risk. However, there are still many perspectives and a lack of consensus persists on definitions among ecosystem participants. Bearing in mind these complexities, the term "digital asset" will be used throughout this report as an all-encompassing category. Within each jurisdictional context, the terminology is used in line with each respective jurisdiction's usage.

1 Regulatory approaches, outcomes and unintended consequences

This section examines nine jurisdictions' digital asset regulatory approaches, highlighting important industry issues, initial policy outcomes and unintended consequences.

The jurisdictions chosen for examination have regulations at an advanced stage of development, allowing for the impacts of their implementation to be observed.

To examine lessons learned in the digital assets regulatory landscape, a comprehensive view of current approaches is needed. The jurisdictions chosen for examination have regulations at an advanced stage of development, allowing for the impacts of their implementation to be observed. These are: the European Union, Gibraltar, Hong Kong, Japan, Singapore, Switzerland, the United Arab Emirates, the United Kingdom and the United States of America (Figure 2).

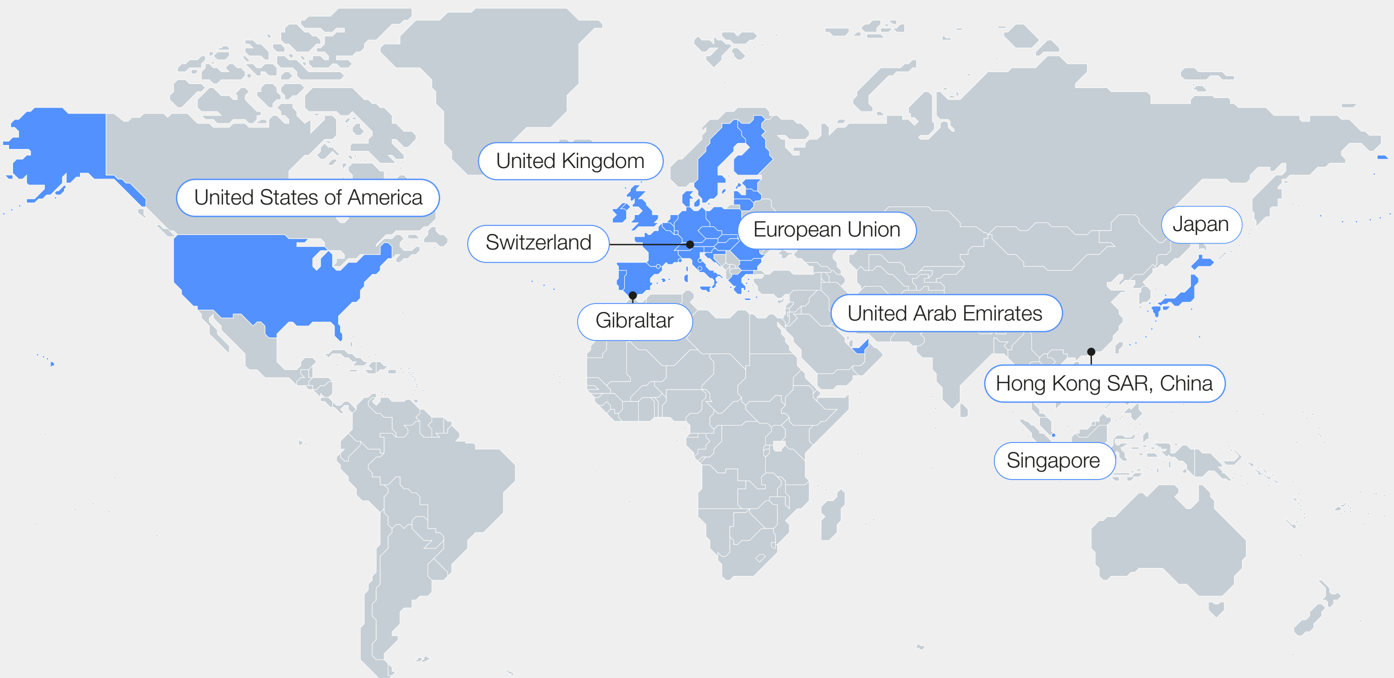
For each jurisdiction, there are four subsections: "general approach", "approach by topic", "outcomes" and "unintended consequences", each designed to explore different elements of the regulatory landscape.

"General approach" describes the overarching regulatory methodology of a given region. Within "approach by topic", the report analyses four of the industry's most pressing issues: anti-money laundering (AML) and know your customer (KYC); regulatory and technical sandboxes; decentralized finance (DeFi); and privacy and security. While evaluating the selected jurisdictions, these topics emerged as the most prominent, with each region adopting a unique regulatory approach to address them. The additional rationale for their inclusion is discussed below:

- **AML and KYC:** Effective AML and KYC measures are mission-critical to the integrity of the digital assets ecosystem as they help promote a transparent and safe environment.
- **Regulatory and technical sandboxes:** Sandboxes play a pivotal role by allowing companies to test products under oversight, promoting responsible innovation while ensuring compliance with existing and upcoming standards.
- **DeFi:** DeFi's goal of altering the existing paradigm of centralization has significant implications for how users interact with technology applications and introduces novel regulatory challenges in the future.
- **Privacy and security:** Robust measures protect consumers' assets and data from threats and build a secure digital assets landscape and increase consumer trust.

In the "outcomes" and "unintended consequences" segments, the report analyses the results of digital assets policies that have been evident to date, as well as any unexpected results stemming from the regulatory frameworks in place.

FIGURE 2 **Nine jurisdictions assessed**



1.1 European Union

General approach

The European Union is one of the largest markets with advanced digital asset regulation. In 2023, the EU finalized the comprehensive Markets in Crypto-Assets (MiCA) regulation, an important piece of the EU's digital finance strategy, providing legal clarity on privacy, security and transparency for digital assets, which does not include non-fungible tokens (NFTs) and decentralized digital assets.[6] MiCA requires all issuers to create a white paper for assets, subject to approval and licensing, with non-compliance leading to fines.[7] The regulation, effective from 30 June 2024 for stablecoins and fully effective by the end of 2024, aims to harmonize regulations among member states, replacing existing domestic laws, while the implementation is delegated to respective jurisdictional authorities for enforcement.[8] MiCA focuses on investor protection and market integrity, primarily addressing crypto-asset service providers (CASPs) and certain types of tokens. It also includes rules for stablecoins, mandating governance and reserve management, and compliance with relevant existing legislation.[9]

It is important to distinguish between crypto-assets that fall under MiCA and financial instruments in digital form that fall under the existing securities regulations (e.g. Markets in Financial Instruments Directive [MiFID]). The EU's Digital Operational Resilience Act (DORA) and the DLT Pilot Regime provide the legal framework for trading and settlement of other digital assets under MiFID II (effective since 2018), facilitating cross-border expansion and mitigating regulatory arbitrage.[10] With these advances, the EU will be the world's largest market with legal and regulatory clarity for digital assets.

> The European Union is one of the largest markets with advanced digital asset regulation.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

In 2021, the EU presented several proposals for strengthening AML protections, including establishing a new entity called the Anti-Money Laundering and Countering the Financing of Terrorism Authority (AMLA).[11] Many of these proposals are currently in development and, subject to discussions, working towards agreements.[12,13]

As a member of the Financial Action Task Force (FATF), the EU aligns with Travel Rule regulations.[14] The revised Transfer of Funds Regulation (TFR) mandates capturing all transaction information, regardless of size, with a threshold of €1,000 for self-hosted wallets.

MiCA requires CASPs to comply with KYC and AML rules, performing enhanced due diligence for customers from high-risk countries.
It is important to clarify here that these AML protections are not crypto-specific, and that the TFR applies exclusively to service providers, and therefore explicitly excludes obligations for providers of hardware and software or providers of self-custody wallets that do not have control over the crypto-assets. As such, AML and KYC remain key elements of the upcoming regulations.

Regulatory and technical sandboxes

MiCA is generally supportive of regulatory and technical sandboxes. In 2023, the EU launched the European Blockchain Regulatory Sandbox, which will run for three years, with cohorts of 20 blockchain use cases.[15] When it comes to digital securities, the launch of the DLT Pilot Regime is dedicated to allowing companies to experiment with distributed ledger technology (DLT).[16] Portugal, an EU member country, also has a unique Technological Free Zone regulatory sandbox for encouraging the development and experimentation of new technology applications.[17,18]

Decentralized finance (DeFi)

MiCA explicitly carves out DeFi from the upcoming regulation, as per recital 22: "Where crypto-asset services are provided in a fully decentralised manner without any intermediary, they should not fall within the scope of this Regulation."[19] However, the regulation calls for several studies of components of the DeFi ecosystem, decentralized protocols and applications.

The European Securities and Markets Authority (ESMA) recently published a report, *Decentralised Finance in the EU: Developments and Risks*, to inform the future of MiCA.[20] Additionally, the European Commission is expected to prepare a report by December 2024 that examines the DeFi market.

Privacy and security

MiCA will require identity verification of asset holders, and mandates that trading platforms must not allow users to trade assets with full anonymization. Additionally, the Travel Rule's identity requirements, to which the EU subscribes, will include supervision of financial transactions.[21]

The EU has also enacted the General Data Protection Regulation (GDPR), which is seen as one of the most comprehensive privacy and security laws in the world. Authorities are evaluating how GDPR and MiCA will work together.[22]

Outcomes

The intention of the MiCA regulation is for regulation to be harmonized across Europe, as the law is binding and directly applicable in all EU member states. Proponents argue that it avoids regulatory fragmentation, safeguards consumer protections and facilitates cross-border expansion for CASPs, which will mitigate regulatory arbitrage.

The European Blockchain Regulatory Sandbox has led to mixed opinions. Some stakeholders have given positive feedback about the ability to run innovative experiments, establish best practices alongside regulators and collaborate with authorities effectively. However, the sandbox has also been criticized by industry participants for its narrow scope of permitted use cases, which has resulted in a relatively limited pool of applicants.

European authorities have been able to instil increasing confidence on the topic of KYC and AML with the takedown of cryptocurrency mixers such as ChipMixer and Bitzlato, which enabled money laundering.[23,24]

Other outcomes include the growth of inward investment into the EU by international digital asset firms, which are early signs of increased market development.

Unintended consequences

Some aspects of digital assets have been excluded from regulation, while others are being seen as overly prescriptive. MiCA has been criticized for excluding technology applications such as central bank digital currencies (CBDCs), utility tokens, DeFi and NFTs, leading to potential unintended consequences.

Other aspects of MiCA can be seen as being too strict, such as stablecoin reserve requirements. Also, the mandated transparency conflicts with digital asset anonymity, raising privacy concerns. Industry players are urging the EU to consider alternative compliance methods that better protect privacy. Lastly, the Data Act's provisions for interrupting or terminating smart contracts have faced backlash from blockchain advocacy groups, who view these controls as overreaching.

1.2 Gibraltar

General approach

Gibraltar has established itself as a prominent centre for blockchain and digital assets. In January 2018, the territory pioneered legislation for DLT, the first jurisdiction to do so worldwide, emphasizing regulation, reputation and quick market implementation. It is widely recognized for its efforts in advancing blockchain technology and ensuring sustainability and security within the industry.

To operate in Gibraltar, cryptocurrency companies must obtain a licence from the Gibraltar Financial Services Commission (GFSC) under the Financial Services Act of 2019. The GFSC reviews applications and may grant a licence if certain criteria are met. Gibraltar has clear regulatory frameworks such as the Financial Services Regulations of 2020, which regulate firms such as cryptocurrency exchanges and wallet providers.

Taxation under the Gibraltar Companies Act of 2014 exempts dividends, capital gains and income generated from digital asset transactions if they occur outside Gibraltar.[25] This tax framework is attractive for companies and investors focused on blockchain-related activities, significantly reducing the tax burden on cross-border digital asset transactions.

> Gibraltar's tax framework is attractive for companies and investors focused on blockchain-related activities, significantly reducing the tax burden on cross-border digital asset transactions.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

The GFSC sets KYC and AML principles, requiring firms to maintain records, monitor systems and report suspicious activities while allowing adaptation to evolving challenges. This regulatory framework aims to balance effective oversight with the need for innovation and growth in the financial sector.[26]

Regulatory and technical sandboxes

Gibraltar's regulatory sandboxes allow companies to test new products in a controlled environment, ensuring compliance and reducing risks before market launch. The GFSC oversees these initiatives, ensuring that the products are tested within strict regulatory parameters to safeguard consumer interests and maintain market stability.[27]

Decentralized finance (DeFi)

Gibraltar's proactive DeFi regulation by the GFSC ensures flexibility, transparency, security and consumer protection while avoiding overly prescriptive rules.[28] The GFSC's regulatory sandbox plays a significant role in this approach, allowing DeFi projects to test their products and services in a controlled environment.

Furthermore, the GFSC collaborates closely with industry stakeholders to stay updated on technological advances and emerging trends in DeFi, ensuring that regulations remain relevant and effective.

Privacy and security

The GFSC mandates stringent data protection and cybersecurity measures for blockchain businesses, ensuring compliance with international standards such as GDPR. Additionally, the Proceeds of Crime Act provides thorough guidelines on security and privacy, facilitating a stable commercial setting for businesses.[29] Moreover, it provides clear guidelines on risk management and the safeguarding of customer assets to prevent data breaches and unauthorized access. This proactive regulatory stance helps build trust and creates a secure environment for digital asset transactions in Gibraltar.[30]

Outcomes

There has been an influx of companies to Gibraltar's digital assets ecosystem on account of its favourable regulatory environment. The presence of digital asset firms in the country is expanding, with more entities establishing operations there.

Additionally, Gibraltar's regulatory framework has attracted international businesses, bolstering economic growth and positioning the territory as a competitive hub for digital assets. Moving forward, the country aims to continue enhancing its regulatory landscape to sustain growth and attract more blockchain innovators.

Unintended consequences

Gibraltar's straightforward regulatory compliance processes have the potential to attract firms seeking regulatory arbitrage opportunities. Specifically,the ease of acquiring DLT provider licences and lower operational costs in Gibraltar have significantly reduced the barriers to entry. This could attract less desirable market players and intensify regulatory arbitrage practices, as companies look to benefit from Gibraltar's more accommodating regulatory environment. There has been a lack of harmonization of Gibraltar's regulatory practices with other economies in the region.The possibility of regulatory arbitrage exists in these gaps between jurisdictions and there needs to be a greater focus on cross-border cooperation on these regulatory requirements.

Addressing these challenges will be key to Gibraltar sustaining its reputation as a trustworthy and innovative hub for digital assets. In the future, Gibraltar will wish to strike a balance between its appealing regulatory framework and strong enforcement measures to curb potential abuses.

1.3 Hong Kong SAR, China

General approach

In Hong Kong, the Financial Services and the Treasury Bureau (FSTB) of the Hong Kong government issued the Policy Statement on Development of Virtual Assets[31] in October 2022, setting out the vision and policy direction for the regulation of virtual/digital asset activities under the "same activity, same risks, same regulation" principle.

In June 2023, the Hong Kong government further established the high-level Task Force on Promoting Web3 Development. Premised on a balance between appropriate regulation and promoting development, the task force will provide recommendations on the sustainable and responsible development of virtual/digital assets and Web3 in Hong Kong.

The FSTB and financial regulators, including the Hong Kong Monetary Authority (HKMA) and Securities and Futures Commission (SFC), aim to establish a facilitating environment that puts in place timely and necessary guardrails to mitigate actual and potential risks in accordance with international standards.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

Under the Anti-Money Laundering and Counter-Terrorist Financing Ordinance (AMLO) and the Securities and Futures Ordinance (SFO), the SFC plays a pivotal role in setting clear mandates and guidelines for KYC and AML/CFT regulations applicable to virtual/digital asset-related activities.[32] For instance, all SFC-licensed corporations and SFC-licensed VA trading platforms[33] are required to adhere to AML/CFT regulations specifically tailored to virtual/digital assets, ensuring stringent compliance measures are in place.

In addition to KYC obligations that address AML/CFT risks, an SFC-licensed corporation dealing in virtual/digital assets or an SFC-licensed VA trading platform is required to, among other things, conduct a virtual/digital asset knowledge assessment for each retail client.

The SFC provides comprehensive guidelines on other important areas relevant to the operations of SFC-licensed VA trading platforms, such as safe custody of assets, avoidance of conflicts of interest, admission of high liquidity and large-cap virtual/digital assets for retail trading and prevention of market-manipulative and abusive activities, as well as accounting and auditing, risk management and cybersecurity requirements. These aim to facilitate compliance and ensure transparency within the virtual/digital asset market, and serve as a roadmap for market participants, helping them navigate regulatory requirements and maintain compliance standards.[34]

For stablecoin issuers, a proposed regulatory regime will set out AML/CFT requirements and require issuers to have in place adequate systems of control for preventing or combatting possible money laundering and terrorist financing, including customer due diligence measures, transaction monitoring and Travel Rule requirements in compliance with the standards set by the FATF.

In the banking sector, there is growing interest in exploring the DLT that underlies the VA ecosystem with a view to incorporating it into traditional financial market operations.

Regulatory and technical sandboxes

The SFC has offered a regulatory sandbox since 2017. The sandbox seeks to provide a confined regulatory environment for qualified firms to operate regulated activities before fintech is used on a fuller scale. VA trading platforms are expected to enter the sandbox upon being licensed.[35]

For the HKMA, among its full suite of sandboxes administered since 2016, a sandbox for stablecoin issuers was launched in March 2024 that enables the HKMA to communicate supervisory expectations and guidance to institutions that plan to issue stablecoins in Hong Kong. It also provides a means for the HKMA to obtain feedback from sandbox participants on proposed regulatory requirements.[36]

Intermediaries may approach the SFC and the HKMA to discuss their plans on virtual/digital asset-related activities and seek clarification of regulatory requirements.

Decentralized finance (DeFi)

Hong Kong's regulators critically assess DeFi services or activities to understand the arrangements and examine the actual substance of the DeFi arrangements. Specifically, DeFi activities are scrutinized through the existing regulatory framework and requirements under the AMLO and the SFO that apply to regulated financial activities. This balances innovation with regulatory integrity, addressing financial stability and protecting investors.

In the banking sector, there is growing interest in exploring the DLT that underlies the VA ecosystem with a view to incorporating it into traditional financial market operations. In light of this, the HKMA provided relevant guidelines in 2024 on the most important risk-management considerations when banks use DLT-based solutions.[37]

Privacy and security

Hong Kong's regulatory approach to virtual/digital assets emphasizes robust privacy and security measures. Overall, personal data privacy is well safeguarded by the Personal Data (Privacy) Ordinance, which gives statutory effect to internationally recognized data protection principles and establishes the Office of the Privacy Commissioner for Personal Data as an independent statutory authority to monitor data privacy protection in Hong Kong and take enforcement actions where necessary.

For virtual/digital assets, the HKSAR government prioritizes consumer data protection in line with FATF standards to ensure the responsible growth of Hong Kong's landscape. The HKSAR government also encourages continuous improvement and adaptation of cybersecurity technologies, ensuring that the virtual/digital assets sector remains resilient to evolving threats.

The guidelines on AML/CTF promulgated by the SFC require financial institutions to assess the adequacy and robustness of data privacy and security controls of the VA transfer counterparty in the VA transaction as part of the due diligence process. In addition, to ensure that clients' virtual/digital assets are adequately safeguarded, intermediaries in Hong Kong are required, among other things, to partner only with SFC-licensed VA trading platforms in providing VA dealing services. The SFC and the HKMA have also imposed standards on digital asset custody on licensed VA trading platforms[38] and banks[39] in line with international practices.

Under the proposed regulatory regime for stablecoin issuers, licensees will be required to maintain reserve assets that fully back the stablecoins in circulation, as well as provide a legal right for holders to redeem the stablecoins at par at all times, thus ensuring user protection. In addition, issuers will be required to have in place robust cybersecurity measures to address both existing cyber risks and emerging risks that are unique to the blockchain and VA ecosystem.

Outcomes

Hong Kong is renowned for having developed a dynamic and adaptable environment for virtual/digital assets. This is attributed to the comprehensive and clear regulatory system in Hong Kong. The licensing regime for VA service providers in 2023 is one of the first to not only comply with international AML/CTF requirements as stipulated by the FATF but also provide full regulatory requirements on investor protection, which has been recognized by the International Monetary Fund.

On investor education, through the publicity campaigns and educational programmes created by the SFC, the Investor and Financial Education Council (IFEC) and the HKMA, Hong Kong is strengthening the knowledge and understanding of virtual/digital assets among investors and heightening awareness of digital asset-related regulatory obligations among industry professionals. With these efforts, Hong Kong is reinforcing its intention to work with and attract well-meaning industry players.[40]

Further, with its sandbox for stablecoin issuers and efforts on various digital asset-related activities, Hong Kong is seeking to develop a collaborative environment among regulators and industry participants, encouraging the creation of products that are both innovative and compliant. This approach enhances the transparency and robustness of the digital assets ecosystem, which ultimately furthers Hong Kong's commitment to regulatory clarity and user protections.

Unintended consequences

There have been some unintended consequences of Hong Kong's efforts to regulate virtual/digital assets. While the SFC and the HKMA have implemented regulations for the intermediaries and exchanges concerned, licensed VA trading platforms are currently not allowed to offer digital asset futures contracts or related derivatives.[41] Acknowledging the importance of such products to institutional investors, the SFC has undertaken to conduct a separate review, while these products could currently be offered by other market participants with the requisite licences. Although the SFC has indicated that the scale of VA trading platform operations is not expected to be small, given the nature of the business activities, increased operational costs could create barriers for new entrants in the blockchain space.[42,43]

Licensed VA trading platforms are also not allowed to make arrangements to use client assets for generating returns (e.g. proof-of-stake staking activities, a popular method for earning rewards with digital assets, are excluded). This may pose challenges to some industry players and affect the growth of VA trading platforms. In line with international practices, the licensing requirements as statutorily stipulated are activity-based, not entity-based. There may be room for additional clarity as to whether certain companies (e.g. play-to-earn, NFT and utility token businesses) need to be licensed.

1.4 Japan

General approach

Japan's Financial Services Agency (FSA) plays a pivotal role in shaping policies and enforcing regulations, while the Japan Virtual Currency Exchange Association (JVCEA) and the Japan Security Token Offering Association (JSTOA) contribute to creating rules and policies tailored to their respective areas of oversight.

The FSA serves as the primary point of contact for digital asset regulations, ensuring consistency and coherence in regulatory oversight.[44] It has spearheaded amendments to the Payment Services Act (PSA), establishing the legal status of tokens based on their functions and uses.[45] Moreover, self-regulatory organizations play an important role in guiding new industry players through the licensing process and navigating the complex business landscape in Japan.[46] Lastly, Japan has the world's first international stablecoin passportability regime in which regulatory equivalence for regulated foreign-issued stablecoins is supported.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

Japan maintains strict KYC and AML regulations for digital asset exchanges and businesses. These regulations require companies to conduct thorough KYC verification of their customers and implement AML measures to prevent illicit financial activities.

> To mitigate risks, Japan requires cryptocurrency exchanges to segregate investors' assets from exchange assets, reducing loss risks from breaches or insolvency.

Registration under the PSA ensures strict KYC/AML adherence and customer asset segregation. Doing this reduces the balance-sheet exposure risks to which customers may be subject when storing their assets on a given platform.[47]

Regulatory and technical sandboxes

To encourage innovation in the sector, Japan offers regulatory and technical sandboxes, with a special focus on stablecoin-specific sandboxes. Through these environments, stablecoin issuers have the opportunity to collaborate directly with regulatory authorities and gain insights into compliance requirements.

By focusing on stablecoins, Japan aims to show its forward-thinking approach to regulatory oversight, acknowledging the unique characteristics and potential impact of stablecoins on the financial landscape. In order to help maintain healthy collaboration with the private sector, Japan's sandbox structure is detailed, transparent and readily available to market players.[48]

Decentralized finance (DeFi)

Japan has recognized the transformative potential of DeFi and remains cautious about its regulatory implications. Japan mandates that DeFi companies obtain licences from the FSA and comply with existing financial regulations, ensuring DeFi platforms adhere to the same standards as traditional financial institutions, mitigating risks.

Privacy and security

Japan's approach to privacy and security has been informed by early lessons from significant security breaches, such as the Mt. Gox and Coincheck hacks.[49] These incidents served as wake-up calls for regulators and industry participants in Japan.

To mitigate the risks, Japan requires cryptocurrency exchanges to segregate investors' assets from exchange assets, reducing loss risks from breaches or insolvency. This measure and others like it demonstrate the government's commitment to proactively addressing potential issues of privacy and security within the digital assets ecosystem.[50]

Outcomes

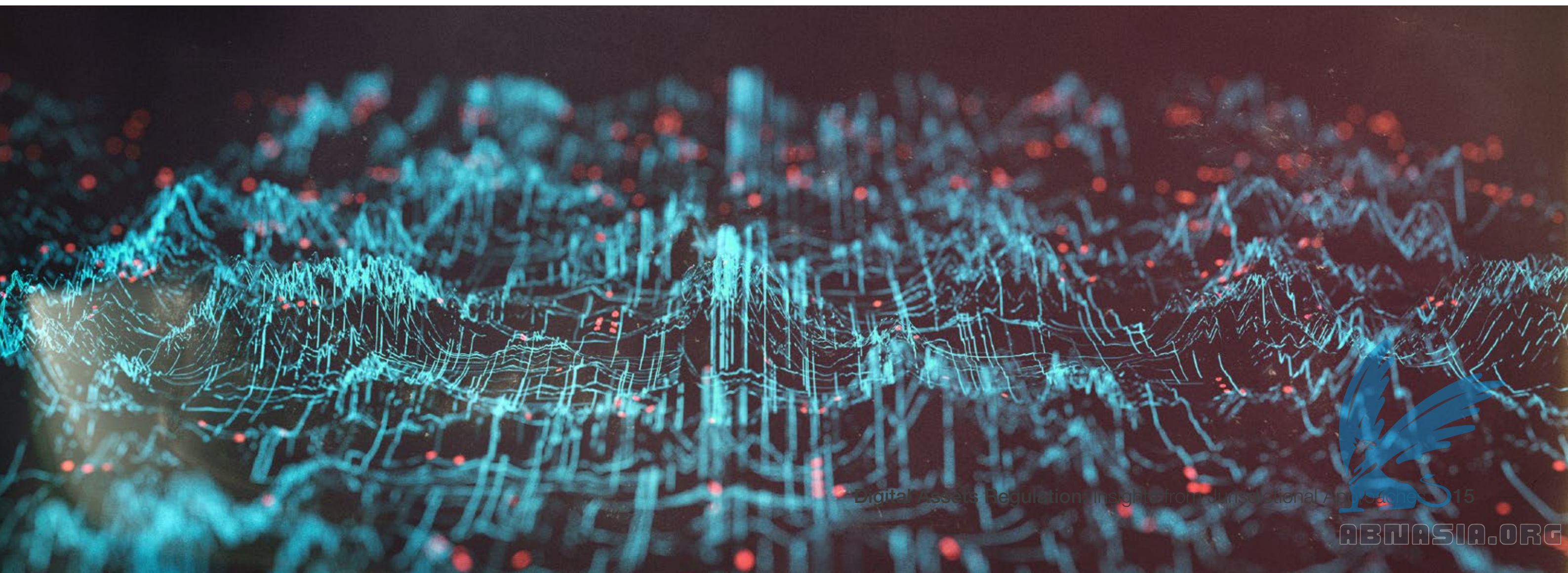
The regulatory approach in Japan has fostered a healthy and predictable relationship between the public and private sectors, enabling new companies to navigate the compliance requirements effectively. The FSA has led the charge, ensuring consistency in and coherence of regulatory oversight by amending the PSA based on new developments.[51]

Registration procedures outlined in the PSA ensure the segregation of customer assets from company holdings, and ultimately provide greater transparency and protection for investors.[52] By mandating this separation, Japan enhances consumer protections and instils greater confidence in the security of digital assets exchanges. Further, by reacting to past incidents, and implementing robust security measures, Japan mitigates risks associated with digital asset custodians and safeguards the interests of its customers in the space.

Unintended consequences

Even with Japan's forward-thinking approach, unintended consequences have emerged. The country's token listing process, although aimed at ensuring compliance and investor protection, initially faced challenges, with a lengthy pipeline of listings awaiting approval. However, the FSA and JVCEA have responded by streamlining the approval process, balancing AML and CFT measures with efforts to promote innovation among new companies seeking approval.[53]

Despite these efforts, regulated entities operating in Japan report significant compliance costs, leading some companies to exit the Japanese market.[54] Companies have expressed concern regarding the record-keeping rules and capital requirements, which they perceive as overly burdensome. Balancing regulatory oversight with the need to promote innovation remains a priority for Japanese regulators as they continue to refine their approach to digital assets regulation.



1.5 Singapore

General approach

In recent years, Singapore has become a digital asset hub in Asia, building on its reputation as a leading fintech centre.[55] The Monetary Authority of Singapore (MAS) is the primary regulator of digital assets. Principle legislation includes the Payment Services Act 2019 (PS Act) and the Financial Services and Markets Act 2022.[56,57]

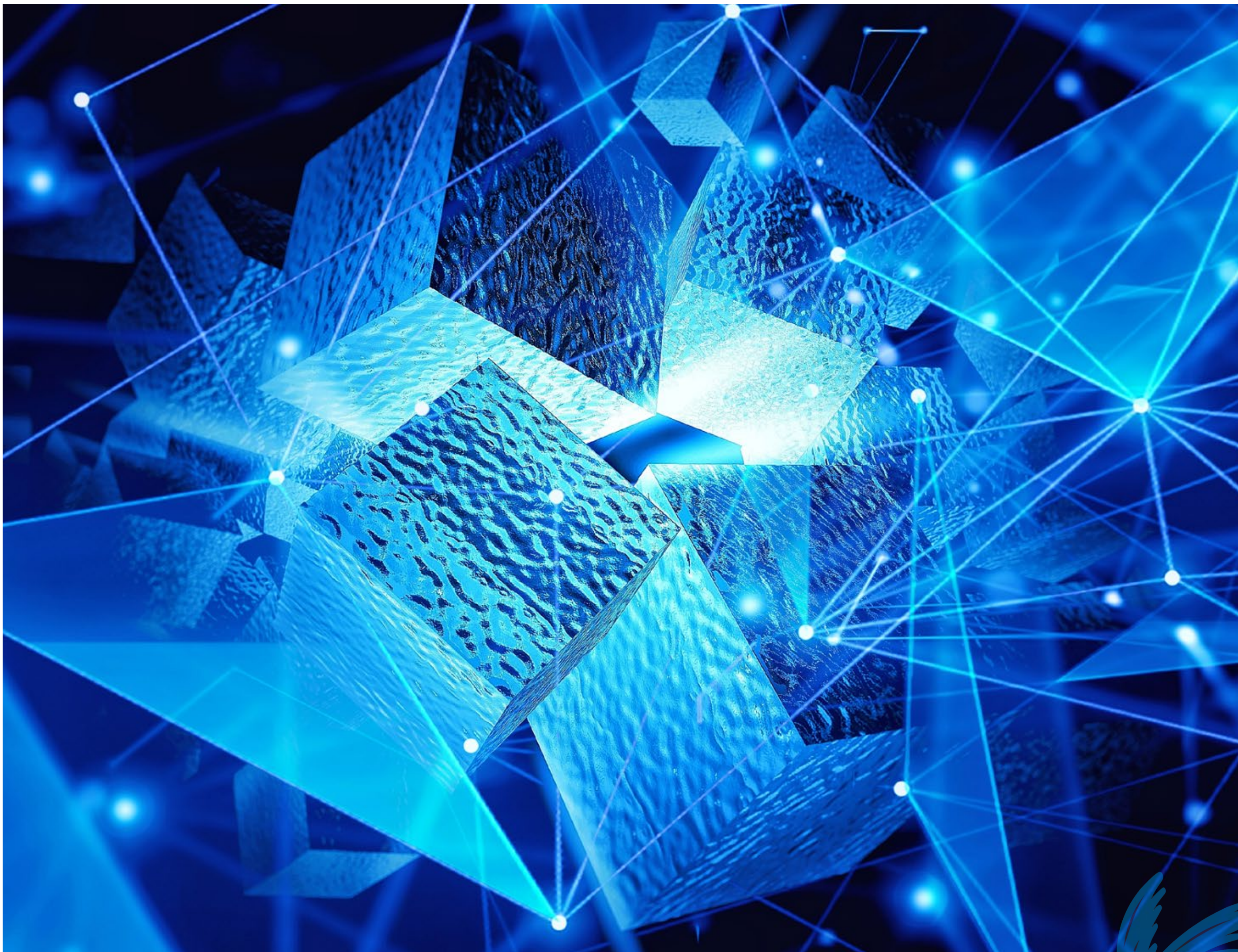
The MAS has issued a proposed regulatory framework under the PS Act for digital payment token (DPT) service providers, such as cryptocurrency exchanges, which implements various operational requirements and customer protection measures. Under this proposal, which was amended in April 2024 and is taking effect in stages, DPT service providers are required to obtain a licence to offer their services in Singapore. Platforms are prohibited from offering retail customers margin trading or any incentives to trade. As a condition of listing a cryptoasset, platforms must disclose potential conflicts of interest, publish the criteria that govern the listing and establish customer dispute procedures.

The clear guidance offered by the MAS, combined with other influencing factors in the jurisdiction such as low tax rates, established financial infrastructure and high cryptocurrency adoption among the population, has led to the region generally being viewed favourably by industry players.[58] Globally, the MAS is also viewed as a leader in cross-border cooperation, frequently partnering with other nations to advance international conversations on digital assets.[59]

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

Singapore has been a member of the Financial Action Task Force (FATF) since 1992 and complies with FATF recommendations on anti-money laundering and counter-terrorism financing.[60] MAS implemented the Travel Rule through its 2019 Notice on the Prevention of Money Laundering and Countering the Financing of Terrorism.[61]



Due to the regulatory clarity provided, Singapore is viewed as an emerging leader in digital assets regulation and has attracted companies looking to expand their presence in the country.

The country's KYC requirements include the disclosure by both the originator and the beneficiary customer of personally identifiable information (PII) for transactions greater than or equal to SGD 1,500 ($1,130). Additionally, Singapore's national digital identity programme, Singpass, provides digital identity for both citizens and businesses.[62]

The MAS has also consulted on a proposed regulatory approach for stablecoin-related activities, which outlines the AML and CFT requirements for stablecoin issuers in Singapore.[63]

Regulatory and technical sandboxes

The MAS has a fintech regulatory sandbox that, contingent on approval into the sandbox, enables innovative market players to experiment with their new financial products and services, which could include blockchain-related use cases.[64] The sandbox's framework sets boundaries and the duration of experiments, providing a structured pathway for new financial technology applications to develop and comply with regulatory standards. Once the sandbox period ends, entities must be compliant with requirements.

Decentralized finance (DeFi)

While the MAS has begun experimenting with various initiatives and has warned consumers about the risks of DeFi, regulation on this topic is still in development given the complexity, nature of transactions and protocol governance considerations. DeFi is regulated under the Securities and Futures Act and the Payment Services Act, but these do not fully address all DeFi activities.

Privacy and security

The MAS released guidance to strengthen consumer protections and deter speculative investing, recommending that businesses check customers' knowledge and user risk profiles before offering certain incentives.[65] It issued guidelines that ban cryptocurrency advertisements in public areas and on websites accessible to members of the general public. These measures aim to protect consumers by minimizing their exposure to high-risk investment products.[66]

MAS has also ordered investor protection measures such as mandating that certain customers' assets be kept in a trust, and not allowing service providers to "facilitate lending and staking of DPTs by their retail customers".[67]

Outcomes

Due to the regulatory clarity provided, Singapore is viewed as an emerging leader in digital assets regulation and has attracted companies looking to expand their presence in the country. This is particularly apparent on topics including token issuance procedures, wallet issuer rules and protocols for exchanges.[68] Overall, the rules outlined in the PSA and the government's focus on consumer awareness have bolstered investor confidence in the industry as well as a relatively transparent business environment in which companies can operate.[69]

Specifically, the country's fintech regulatory sandbox provides a predictable regulatory sandbox environment for market players to test their new products, and its framework around DPTs gives relevant guidance to DeFi market players. An additional example of Singaporean regulatory leadership is the development, co-creation and promotion of "lighthouse projects" that the MAS showcases at the annual Singapore Fintech Festival.

Unintended consequences

While Singapore is generally viewed as digital asset-friendly, it does have strict rules in the market.[70] Several criticisms by industry players have thus surfaced. For example, there was opposition to the proposed MAS consumer protections measures that ban lending and staking:[71] the Blockchain Association Singapore (BAS) argued that these regulations seemed too extreme and advocated reconsideration of the measures, stating that a primary incentive for individuals to hold on to their digital assets is the interest they earn and that there may be an unintended consequence of "pushing people to seek out unregulated offshore firms to lend their tokens to".[72,73] Proponents of the ban argue that although regulating digital payment token service providers might result in fewer of these players operating in the country, it would ultimately reduce risks for consumers in the long run.

1.6 Switzerland

General approach

Due to the fact that Swiss legislation is principle-based and technology-agnostic, most of its existing legal provisions may also be applied to virtual assets. Switzerland does not provide for comprehensive, stand-alone virtual assets regulation. Therefore, there are only a very few targeted regulatory instruments specifically designed for virtual assets that mainly focus the transfer of such assets from a civil law perspective. Furthermore, Swiss legislators introduced a specific framework for a DLT trading facility. Other than that, the Swiss Financial Market Supervisory Authority (FINMA) issued guidance on how to handle virtual assets within the given legal framework in practice; for example, with regard to the scope of the Banking Act or the AML Act. Important frameworks include the Financial Services Act (FinSA), the Financial Institutions Act (FinIA), the Anti-Money Laundering Act (AMLA), the Financial Market Infrastructure Act (FMIA) and guidelines for initial coin offerings (ICOs), facilitating investment and industry growth.[74,75]

The clarity and predictability of Switzerland's regulatory framework has attracted investors and digital asset companies seeking a stable jurisdiction for their operations.[76] The country's favourable tax laws have further bolstered its attractiveness, leading prominent companies such as blockchain labs and foundations to establish their headquarters there. More than 1,000 blockchain businesses have chosen Switzerland as their base, reflecting the country's status as a leading hub for blockchain innovation.[77]

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

Switzerland demonstrates a proactive stance on KYC and AML regulations, with FINMA and the Swiss Federal Council leading the way. Their progressive approach is evidenced by specific amendments to the Anti-Money Laundering Ordinance (AMLO) and supplemental guidelines issued by FINMA as to the scope of the AML Act.

Switzerland's AML legislation provides clarity and guidance on AML requirements for entities operating in the digital assets space. These regulations mandate robust KYC procedures to verify the identities of customers and ensure compliance with AML standards. There have been several advances in AML legislation and in May 2024, the Federal Council adopted a dispatch on strengthening the anti-money laundering framework.[78]

Regulatory and technical sandboxes

Switzerland's approach to promoting innovation in the digital assets sector is highlighted by FINMA's regulatory and technical sandboxes. These offer a controlled environment in which start-ups and established companies exploring blockchain-based offerings can test products and services while engaging with regulators to ensure compliance, mitigating risks and ensuring consumer protection.

Switzerland adopts a technology-neutral stance on decentralized finance (DeFi), prioritizing compliance and regulatory clarity.

Decentralized finance (DeFi)

Switzerland adopts a technology-neutral stance on decentralized finance (DeFi), prioritizing compliance and regulatory clarity. FINMA oversees DeFi projects under the same regulatory frameworks as other financial institutions, focusing on transparency, security and AML. DeFi platforms must adhere to the FMIA and FinSA for market integrity and consumer protection.

Privacy and security

Switzerland's regulatory landscape emphasizes privacy and security, enforced through the Swiss Data Protection Act (DPA) and aligned with GDPR. Companies are encouraged to adopt cryptographic techniques and secure protocols to protect data integrity and privacy, ensuring secure transactions. This includes using secure smart contracts and decentralized networks to minimize the risk of data tampering and fraud.

Outcomes

Switzerland's proactive approach, guided by bodies such as FINMA and the Swiss Federal Council, underscores the country's commitment to maintaining a secure and transparent financial ecosystem. By applying existing legal provisions to virtual assets, consumer and investor confidence have increased, ultimately supporting the market integrity of its digital assets ecosystem.

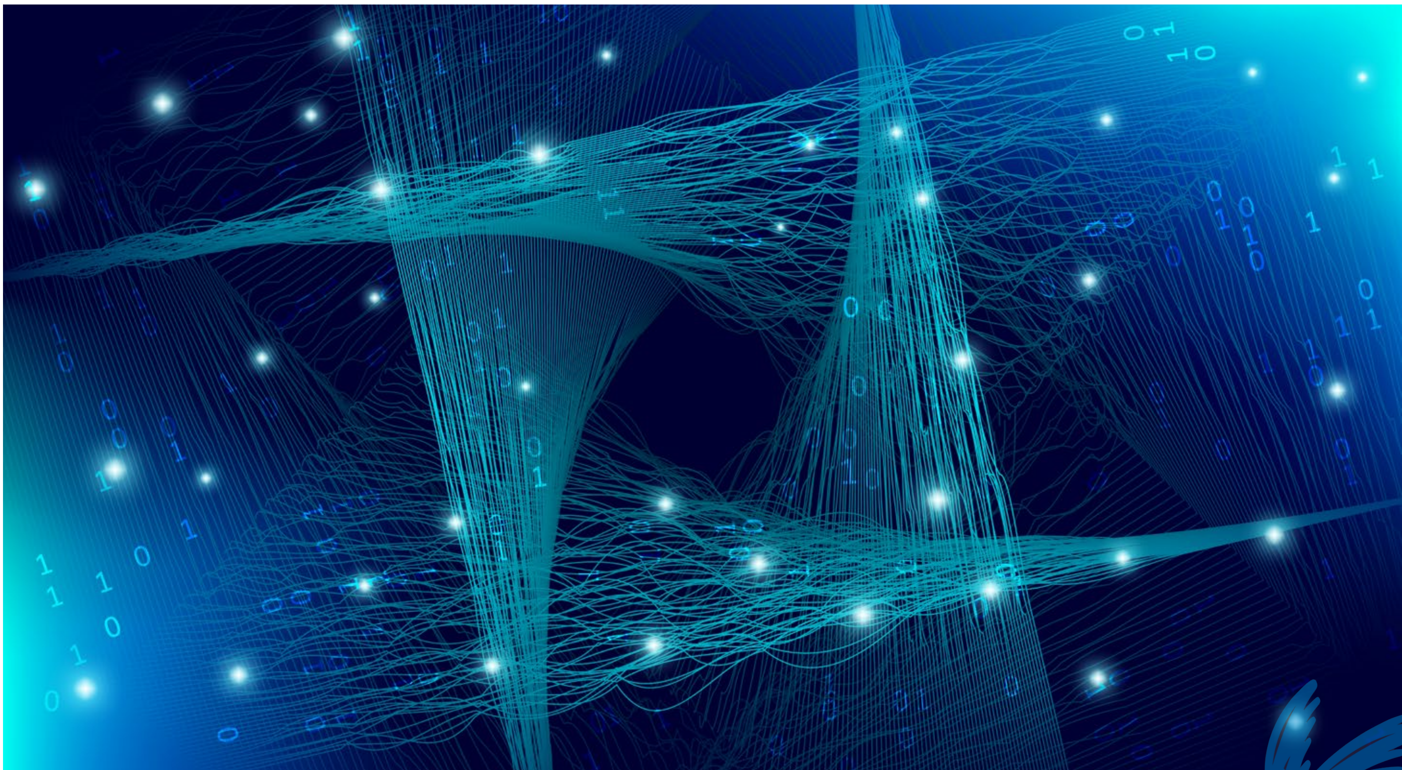
Regarding sandboxes, by providing a structured environment for experimentation, FINMA enables companies to explore innovative blockchain solutions within a supportive regulatory environment. Through these regulatory and technical sandboxes, Switzerland is actively promoting collaboration between industry stakeholders and regulators, driving the development of cutting-edge technology applications while safeguarding investor interests and financial stability. This approach has positioned Switzerland as a leading hub for digital assets innovation globally, attracting entrepreneurs and businesses seeking a conducive environment for technological advancement.

Unintended consequences

While Switzerland's regulatory approach to digital assets has been lauded for its innovation-friendly environment, it has also faced challenges, such as crypto-related crimes. A new regulatory environment may inadvertently attract bad actors that could facilitate scams and illicit activities, damaging the country's ecosystem.[79]

Like other countries at the forefront of crypto regulation, Switzerland runs the risk of failing to ensure regulatory reciprocity between Swiss-based operators and their EU counterparts. Cooperation and regulatory development with other jurisdictions should be the focus of attention as development continues.

Exploring these challenges can support Switzerland's role as a key player in cryptocurrency innovation, developing an environment that is inclusive and accessible to all participants. As a result, regulatory efforts are needed to navigate the complexities associated with these activities in the future.



1.7 United Arab Emirates

General approach

The UAE promotes a business-friendly climate for digital assets.[80] The central bank does not license cryptocurrencies and they cannot be used as legal tender; however, they can be owned and traded.[81,82]

In Dubai, the Dubai Financial Services Authority (DFSA) serves as a long-standing regulator for the Dubai International Financial Centre (DIFC) and has created a new regulator, the Virtual Assets Regulatory Authority (VARA).[83] In 2022, UAE's Law No. (4), Regulating Virtual Assets in the Emirate of Dubai, established VARA with the aim of positioning the country as a pioneering force in the digital assets arena.[84] The ultimate goal of VARA is to balance growth with security in order to promote responsible and sustainable growth of the digital assets ecosystem. It addresses a number of regulatory concerns, which has provided clarity for new and existing market players and defines virtual assets clearly.[85] In March 2024, the DIFC announced the enactment of its Digital Assets Law.[86] Alongside this, its new Law of Security and amendments to existing legislation are designed to provide clarity to investors and help ensure the zone keeps up with technological developments.

In Abu Dhabi, it is worth noting that the Abu Dhabi Global Market (ADGM) was among the first regulators in the world to require authorized exchanges to pre-clear any tokens they wished to list with the regulator first prior to making the tokens available to the public.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

The main driver of AML compliance in the UAE remains the central bank, which in conjunction with other relevant regulators has issued common UAE-wide guidance on AML.[87]

VARA emphasizes the importance of KYC and AML protocols for market players in its jurisdiction. It does this by mandating licences for any company that is an intermediary between digital assets and fiat, offers borrowing or lending services and facilitates the transfer of virtual assets, among other activities. Further, VARA requires virtual assets service providers (VASPs) to maintain effective AML and CFT protocols relevant to their virtual asset activities.[88] For international players, the DFSA provides AML/CFT guidance.

Regulatory and technical sandboxes

The UAE has established regulatory and technical sandboxes for market players, which aim to provide clear insights for companies that plan to launch products in the jurisdiction. In conjunction with its sandbox environments, the UAE also promotes active dialogue between public and private sectors in the space.[89]

Decentralized finance (DeFi)

As part of its strategy to become a prominent regional hub, the UAE has fostered a cooperative atmosphere that supports a broad spectrum of decentralized finance applications with the aim of attracting DeFi companies to not only do business in the country but also be headquartered there.[90]

Privacy and security

The UAE has implemented stringent customer and data protection measures for VASPs. VARA requires secure storage and transmission practices to protect customer data and prevent breaches and unauthorized access.[91] VASPs are able to ensure that they are complying with security and privacy measures through the country's robust sandbox environment ahead of product launches.[92]

Outcomes

The UAE's approach to digital assets regulation has resulted in positive outcomes for both consumers and businesses, creating a healthy business environment that encourages investment and innovation.[93] This has led to a number of industry leaders expanding their operations into the jurisdiction in recent years.[94]

The sandbox environment in the UAE has helped position the country as a favourable landscape for companies building a variety of products including wallets, decentralized autonomous organizations (DAOs), utility tokens, NFTs and decentralized applications (dApps).[95]

Unintended consequences

Although VARA has established itself as a leading authority in the country, regulatory fragmentation across the UAE's seven emirates has created complexities and compliance challenges for businesses as well as differences in treatment between onshore and offshore players. This fragmentation can lead to inconsistencies in the application and enforcement of regulations, making it difficult for companies to maintain uniform compliance standards. As a result, businesses could face increased operational costs and legal uncertainties.

1.8 United Kingdom

General approach

The digital assets regulatory framework under development in the United Kingdom primarily focuses on creating stable market conditions, enhancing investor protections and providing an environment that fosters innovation. The regulation distinguishes between digital securities and unbacked cryptoassets and stablecoins, which is where most of the new regulation is coming into effect. The Financial Conduct Authority (FCA) regulates digital assets under broader financial services legislation.[96] Notably, the Financial Services and Markets Act of 2023 provides extensive guidance on financial matters, including the treatment of digital asset settlements.

The UK is currently considering further regulatory action in order to protect consumers and support innovation in its jurisdiction.[97] In October 2023, the UK's Law Commission suggested the establishment of a distinct property category for digital assets, proposed a technical oversight group and supported the applicability of existing common law to digital asset issues.[98] The government is currently evaluating these recommendations. Most recently, His Majesty's Treasury (HMT) issued a consultation response to the future financial services regulatory regime for cryptoassets. This response provides an overview of the government's position on trading venues, custody, staking and other important issues.[99]

For the regulation of fiat-backed stablecoins, the UK strives to provide predictability for market participants by incorporating them into existing legislation, as outlined in Discussion Paper 23/4 on Regulating Cryptoassets Phase 1: Stablecoins.[100]

> UK regulation distinguishes between digital securities and unbacked cryptoassets and stablecoins, which is where most of the new regulation is coming into effect.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

The financial promotion rules for cryptoassets offer detailed guidelines for businesses wishing to offer financial promotions, while managing a customer's journey – which includes performing relevant KYC and AML checks.[101,102] The intended goal of such new licensing requirements is to provide a safe and predictable environment in which companies can operate.

Regulatory and technical sandboxes

In order to promote a conducive environment for innovation, the UK has established regulatory sandboxes, allowing industry participants to test and develop new products. The UK's permanent Digital Sandbox and Digital Securities Sandbox aim to provide a controlled environment for testing digital asset products.[103,104]

The Digital Securities Sandbox is specifically designed to ensure the responsible development of new technology products, such as DLT. It enables market players to work directly with members of the FCA and the Bank of England to make the necessary adjustments to their products in essential topic areas such customer protections.[105]

Decentralized finance (DeFi)

Aiming to be a leading regulated jurisdiction, HMT is focused on regulating DeFi through its Future Financial Services Regulatory Regime for

Cryptoassets response, which emphasizes its aim of maintaining a balanced approach to challenges in DeFi regulation.[106]

The government is currently working through a set of consultation requests with industry players before bringing forth any prescriptive frameworks. As part of its focus on DeFi, the UK aims to prioritize eliminating regulatory arbitrage as a focus area in the future.

Privacy and security

Collaboration between the FCA and the UK's Prudential Regulation Authority (PRA) is aimed at building a transparent set of norms for digital asset custodians, particularly concerning staking and lending, emphasizing risk identification and consumer protection.[107]

The FCA has laid out strict rules on cryptocurrency advertisements, emphasizing the need for clarity to protect consumers from misleading claims. Regulations require crypto-related ads to be fair, not to be misleading and to be accompanied by the appropriate set of risk warnings.[108]

Outcomes

The financial promotion rules for cryptoassets help companies to expand their operations in the country due to the regulatory transparency on AML and KYC measures. They enhance consumer trust and have played a role in attracting large firms to operate in the jurisdiction.

As businesses have adapted their procedures to meet these standards, the digital assets market has become more resilient in the UK. The alignment of major companies with these comprehensive regulatory standards has promoted a safer investment climate, potentially driving further institutional investment and supporting sustainable growth in the digital assets ecosystem within the country.

The UK's forward-thinking approach to DeFi has attracted more companies.[109] The FCA is exploring a regulatory sandbox specifically for DeFi projects to promote innovation while ensuring compliance. The Treasury aims to deliver similar regulatory outcomes across centralized crypto services and DeFi equivalents to mitigate regulatory arbitrage risks.[110]

Unintended consequences

The UK faces challenges in making decisions in the digital assets space because of the multiple agencies that are attempting to create regulations, including HMT, FCA, PRA and the Bank of England. The additional licence requirements resulting from the Financial Services Markets Act were met with varied reactions from industry players. This has the potential to deter start-ups and newcomers from entering a market that requires greater capital commitments upfront. Some overly stringent regulations may even cause companies to withdraw.[111]

1.9 United States of America

General approach

The United States has a fragmented approach to digital assets regulation, with a host of different regulatory agencies involved such as the Securities and Exchange Commission (SEC), the Commodities Futures Trading Commission (CFTC), the Federal Deposit Insurance Corporation (FDIC) and the Department of the Treasury, among others.

Various pieces of federal legislation have been proposed over the past few years, all of which aim to establish jurisdictional boundaries and provide clarity to regulatory bodies as to how digital assets should be regulated. Recent examples have focused on two main aspects of digital assets: stablecoins and market structure. Related to stablecoins, the Lummis-Gillibrand Payment Stablecoin Act in the US Senate aims to establish a thorough set of regulations for the issuance of stablecoins and the management of the associated reserves and market structure; in addition, the McHenry Payment Stablecoin Act has passed the US House of Representatives. On the latter, the House of Representatives passed the Financial Innovation and Technology for the 21st Century Act (FIT 21), which provides a regulatory framework for the operation of digital assets markets.[112] The bill is poised to advance to the Senate for further consideration.

Additionally, both the House of Representatives and Senate passed House Joint Resolution 109 in the hope of overturning the SEC's Staff Accounting Bulletin (SAB) No. 121, which mandates that custodians holding digital assets on behalf of customers recognize a liability on their balance sheets, potentially raising the level of capital required from banks that decide to custody digital assets.[113,114] This marked the first time that both chambers of the US legislature passed digital asset-relevant legislation. President Joe Biden vetoed the resolution, citing potential risks to consumer and investor protections, keeping SAB-121 in effect.

Although some of the federal regulation has not yet been implemented, the US approach has benefitted in some cases from a federated model in which major financial centres such as New York can advance the digital assets environment.

Approach by topic

Anti-money laundering (AML) and know your customer (KYC)

AML and KYC policies in the United States include several key regulations. The Financial Crimes Enforcement Network (FinCEN) within the Department of the Treasury mandates that digital asset exchanges and administrators must register as money service businesses (MSBs) and comply with AML requirements, including implementing thorough KYC procedures to verify customer identities.[115]

The United States also adheres to the FATF Recommendations, which set international standards on AML and KYC for VASPs, ensuring that VASPs implement adequate KYC procedures and comply with the Travel Rule.[116]

Regulatory and technical sandboxes

Several states have regulatory sandbox programmes that can benefit blockchain initiatives, including Arizona, Florida, Hawaii, Nevada, North Carolina, Utah, West Virginia and Wyoming.[117] Arizona and Wyoming in particular have made progress. Arizona established a regulatory sandbox in 2018, allowing fintech companies to test innovative products with reduced regulatory burdens.[118] Wyoming, known for its crypto-friendly stance, has also developed a progressive sandbox to encourage blockchain innovation.[119]

On a federal level, the Consumer Financial Protection Bureau (CFPB) introduced a digital sandbox to encourage innovation in financial products and services. The sandbox allowed entities to experiment with compliance solutions under the supervision of the CFPB, ensuring that consumer protections were maintained during the testing phase.[120] However, to date there has not been widespread use of the CFPB's sandbox.

Decentralized finance (DeFi)

The United States has approached DeFi regulation in several ways, focusing on transparency, consumer protection and market integrity. FATF guidance, adopted by the country, recommends that DeFi protocols adhere to AML and KYC standards. Also, the SEC and the CFTC attempted to apply existing securities and commodities laws to DeFi platforms, requiring registration and compliance with financial regulations and filing enforcement actions in the absence of guidance.

A key component of FIT21 is the way that it promotes innovation in a host of industries by creating a pathway to compliance for decentralized networks. For example, FIT21 provides a route for the digital assets of computational networks and even social networks to receive appropriate and safe regulatory treatment that matches the

technology; this would address important open questions of DeFi regulation while ensuring that innovation can thrive across industries.

Privacy and security

The United States takes a multifaceted approach to privacy and security policies. The SEC, FinCEN and CFTC enforce strict guidelines to ensure compliance and protect users' data. The SEC mandates that blockchain and crypto companies adhere to the same privacy and security standards as traditional financial institutions, requiring comprehensive protections to prevent data breaches and ensure the confidentiality of user information.[121]

Additionally, the Federal Trade Commission (FTC) enforces consumer protection laws that apply to digital assets, ensuring that companies maintain transparent privacy policies and secure user data against unauthorized access.[122]

Outcomes

> **Due to a lack of federal-level regulatory guidance, states have taken the lead on building and implementing the appropriate policies, which has helped companies navigate growth in these regions.**

Due to a lack of federal-level regulatory guidance, states have taken the lead on building and implementing the appropriate policies, which has helped companies navigate growth in these regions. States such as Wyoming have also passed progressive legislation recognizing decentralized autonomous organizations (DAOs) as legal entities, further bolstering innovation and investment in the digital assets sector. In addition, Wyoming has passed a series of blockchain-friendly laws, such as recognizing the legal status of digital assets and creating a new type of bank, special purpose depository institutions (SPDIs), specifically for handling digital assets. This legal clarity has attracted several blockchain businesses to certain states.[123]

The US is an important digital assets market and the country's laissez-faire approach has promulgated the advent of tokenized money market funds and dollar dominance of the stablecoin segment. In addition, while some in crypto perceive the US to be too heavy-handed when it comes to combatting illicit finance, others believe that the tougher approach has ultimately been a positive for the industry. The US has also been a leader in enabling industry participation and dialogue.

Unintended consequences

In 2022, devastating consumer losses and multiple bankruptcies highlighted weaknesses in the industry, underscoring the urgent need for a more comprehensive regulatory framework.[124] Total cryptoasset-related fundraising grew sixfold, from approximately $3 billion in 2020 to $22.63 billion for 2023. However, the share of such fundraising deals that take place in the United States has fallen every year. Numerous reports attribute this decline to ongoing regulatory uncertainty in the US relative to other jurisdictions.[125]

In the absence of regulatory clarity, companies have pointed to an unworkable "regulation by enforcement" approach, which industry players argue inhibits their ability to grow predictably in the country. This is despite digital asset companies actively petitioning for more concrete rules and regulations and increased clarity.[126,127] Industry voices highlight a lack of clarity regarding which regulatory bodies have jurisdiction in certain circumstances, causing several market leaders to expand their presence overseas.[128] Such industry voices view greater coordination among regulatory entities as a necessity for improving regulation in the US.

2 Recommendations

Jurisdictional analyses revealed insights that can be beneficial for policy-makers, regulators and private-sector leaders as they aim to shape effective digital asset environments.

In conducting the jurisdictional analysis, certain recommendations surfaced for policy-makers, regulators and private-sector leaders working to shape digital asset environments that meet their goals. Particular topics and suggestions arose regularly in conversations with public- and private-sector stakeholders.

Since these recommendations are influenced by several jurisdictions, they can provide guidance on a jurisdictionally agnostic basis. By relying on existing data points, public-sector leaders can build and implement policies that have the greatest chance of achieving their intended objectives, as well as avoiding familiar pitfalls.

The recommendations below result from jurisdictional analysis to date, and directly address the four aforementioned key topics: anti-money laundering (AML) and know your customer (KYC); regulatory and technical sandboxes; decentralized finance (DeFi); and privacy and security.

2.1 Anti-money laundering (AML) and know your customer (KYC) recommendations

“ For digital asset regulation in particular, given the increasingly international make-up of industry players and the nature of borderless blockchains, public-sector leaders globally must strengthen international cooperation in AML and KYC.

Technology-enhanced solutions

Policy-makers and regulators as well as private-sector stakeholders should explore the adoption of technology-enhanced solutions to meet AML and KYC requirements in the jurisdictions. Technology-enhanced solutions can help jurisdictions achieve their specific goals in relation to preserving consumer data rights and ecosystem security.

To simplify implementation and reduce costs, technology solutions for KYC processes that are employed for other financial use cases should be considered. This can include the use of digital identity verification methods and blockchain technology to streamline processes while enhancing accuracy and security. For example, the use of privacy-preserving KYC solutions that leverage cryptographic techniques such as zero-knowledge proofs to validate user identities without exposing personal data has proven useful for enhancing AML and KYC goals. Additionally, artificial intelligence (AI) and advanced analytics platforms have been effective in monitoring and detecting suspicious activities. Specifically, real-time analytics platforms that uncover anomalies and identify illicit activities have proven effective in serving as a deterrent for bad actors.

Global cooperation

To date, jurisdictions have generally taken a fragmented approach to cross-border AML and KYC policy creation and implementation for existing financial use cases. For digital asset regulation in particular, given the increasingly international make-up of industry players and the nature of borderless blockchains, public-sector leaders globally must strengthen international cooperation in this topic area. In order to facilitate cooperation, there must be open dialogue between regulators and the digital assets industry to share best practices and challenges in AML and KYC compliance. Additionally, collaborative efforts must not only be between industry players and the public sector domestically, but also include international collaboration. This will enable comprehensive AML and KYC oversight globally and significantly enhance the regulatory landscape for all parties. There is a crucial role for standard-setters as the development of global standards is a key pillar for enhancing certainty and consistency of regulatory approaches.

Training and compliance programmes

AML and KYC policies that have proven effective often emphasize thorough training and compliance programmes. These policies call for ongoing education on the importance of AML and KYC, emerging financial crime trends and the tactical use of new tools to remain compliant.

Additionally, effective regulations in this arena frequently mandate that digital asset service providers regularly update and train their staff on AML and KYC regulations.[129] This ensures that their technology application stacks and employee knowledge remain up-to-date with evolving financial crime methods, ultimately enhancing overall compliance and security in the digital assets ecosystem.

2.2 Regulatory and technical sandbox recommendations

Clear sandbox objectives and support mechanisms

In various jurisdictions, the sandboxes that achieve their intended objectives are designed with specific goals and criteria for participation. This helps ensure that sandbox initiatives are focused, are driven by clear objectives and offer high value for public- and private-sector participants. Having a timeline or specific steps to receive regulatory approval can provide structure and clear milestones. However, timebound sandboxes might not be suitable for all companies, as some products require more time than others to achieve their objectives. A flexible approach is necessary to accommodate these variations and ensure that the sandbox can adapt to different needs.

In addition, support mechanisms such as providing hands-on regulatory guidance for participants can also help innovators navigate the regulatory landscape while testing new products and services in a controlled environment.

Insights gained from sandbox experiments should inform and adjust regulatory frameworks, ensuring that they remain relevant and conducive to innovation. It is also crucial that sandboxes include a clear path to implementation once the sandbox concludes. Regulators need to consider carefully how sandboxes will provide a route to long-term sustainability for the businesses that participate in them; otherwise, they risk deterring innovative actors from participating.

“ Regulators need to consider carefully how sandboxes will provide a route to long-term sustainability for the businesses that participate in them; otherwise, they risk deterring innovative actors from participating.

Collaborative ecosystems

Effective sandboxes foster collaborative environments in which public-sector officials and innovators can share insights, challenges and feedback. They should also improve transparency and feedback mechanisms within the sandboxes to ensure that start-ups receive timely and constructive responses, facilitating better development and regulatory compliance.

In addition, government leaders should encourage cross-border collaboration on sandbox initiatives to harmonize regulatory approaches and share lessons learned. International cooperation can help address the cross-jurisdictional nature of digital assets and ensure consistent regulatory standards.

Diverse and broad networks

Throughout the jurisdictions analysed, sandboxes often have mechanisms for sharing insights and feedback, leading to practical policy and regulatory outcomes. Cross-border collaboration on sandbox initiatives can also harmonize regulatory approaches and ensure consistent standards.

To maximize the benefits of sandboxes, policy-makers and regulators should prioritize creating enabling environments for a diverse pool of candidates. By including diverse participants, this helps ensure a wide range of products and challenges are explored.

Establishing international networks for cross-border testing enhances learning and facilitates knowledge transfer, while improving transparency and feedback mechanisms ensures timely responses for start-ups, aiding in regulatory compliance. Moreover, specialized sandboxes for technology applications are essential to regulate uncharted activities and prevent market fragmentation.

2.3 Decentralized finance (DeFi) recommendations

Sandbox-first approach

Jurisdictions that show signs of progress in addressing the rapidly evolving DeFi ecosystem are those that address its complexity through a nimble, sandbox-first approach. The success of regulatory sandboxes highlights the potential for collaborative innovation in DeFi. Regulatory sandboxes provide a controlled environment in which developers can experiment with digital assets and decentralized protocols.

This approach facilitates the development of guidelines and regulations that are both practical and forward-looking for industry players who aim to innovate in the space. Sandboxes ultimately help ensure that regulatory measures keep pace with technological advances in DeFi, creating a dynamic and compliant ecosystem.

Risk mitigation

Policy-makers and regulators that have demonstrated advances in DeFi regulation have begun to work directly and alongside DeFi platforms to ensure appropriate disclosure of risks to users. DeFi applications include a wide array of use cases, some of which provide access to social media protocols, while others facilitate access to decentralized identify-management systems. These applications pose different risks depending on their use case. Policy for DeFi should be calibrated to the risks posed by specific DeFi application. This may include consistent and clear communication about the risks of using specific DeFi applications and protocols and the potential for loss when interacting with applications that take custody of user funds or involve some form of financial consideration. Consistent and clear communication is needed about the risks of participating in DeFi protocols, the potential for loss when interacting with these types of products and the nascent nature of many players in this ecosystem.

Developing a clear, effective regulatory framework for DeFi is critical. Implementing licensing models that account for the decentralized nature of DeFi has enabled progress. These models should increasingly consider the unique characteristics of DeFi's underlying technology applications and prioritize regulating the services that sit on top of these protocols rather than the infrastructure itself. This approach, which focuses on the governance structures and DeFi operational models, helps ensure transparency and accountability within DeFi platforms, mitigating risks and ultimately protecting consumers.

Parameter definitions

Where policies have achieved their aims, policy-makers have worked with industry players to create definitions for DeFi activities and establish an appropriate regulatory framework. It is important to ensure that different definitions of "decentralization" are accounted for, as there are various interpretations based on the activity levels of DeFi players.

In general, legacy financial regulation was written with an issuer or entity-centric framework. While this made sense for cases in which there was an identifiable business with a centralized management team, for decentralized digital assets, such entity-centric frameworks do not align with the technology. Policy-makers and regulators should therefore explore the possibility of achieving the crucial aims of protecting consumers, maintaining market integrity and promoting innovation by calibrating requirements and parameter definitions for decentralized networks.

2.4 Privacy and security policy recommendations

> Encouraging the use of privacy-preserving technology applications that protect user identities as well as their financial information helps build comprehensive and resilient policy.

Consumer-focused

Effective security and privacy-related policies generally embody a consumer-centric approach. Since individual consumers may take on risk when engaging in the space, end users should be considered the key stakeholder group requiring protecting through policies.

Effective policies implement education campaigns to raise awareness about the importance of security practices in the digital asset space. These initiatives might include workshops, online courses, communication with the public to increase awareness and partnerships with academic institutions to ensure that retail consumers can access crucial information. By developing a culture of security awareness, such policies help build a more resilient and informed user base, ultimately reducing the risk of security breaches and fraud in the digital asset space.

Clear and consolidated

A common feature of successful security and privacy policies is the establishment of a central authority within a jurisdiction to oversee digital asset regulations, which can help clarify guidelines and minimize the potential for regulatory arbitrage. While not a requirement for success, having one authoritative body means that security protocols and standards can be uniformly applied in digital asset platforms.

Further, having a centralized authority within a jurisdiction can simplify operations for companies implementing privacy and security technology applications. In line with this, there should be international cooperation to align policies in different jurisdictions. The presence of a dedicated regulatory body can lead to more proactive updates to security and privacy policies, addressing emerging threats and technological advances promptly. This may apply not just to security and privacy policies but potentially also to digital assets policy development as a whole because it can provide consistency and transparency.

Technology-enabled

Forward-looking policies often use enhanced analytic tools that can provide policy-makers with data when monitoring and enforcing rules (e.g. real-time risk alerts). It is important to require digital asset companies to undergo regular security audits and compliance checks to mitigate potential risks appropriately.

Encouraging the use of privacy-preserving technology applications that protect user identities as well as their financial information helps build comprehensive and resilient policy. Moreover, technology alone cannot preserve privacy; proper data management is crucial, particularly in deciding what information should be recorded on blockchains.

Conclusion

There is a need for comprehensive, adaptable regulations that meet the differing needs of individual jurisdictions and for ongoing public–private dialogue to ensure effective and future-ready frameworks.

The increasing complexity of the digital assets regulatory landscape underscores the importance of comprehensive regulation in the years to come. Policy-makers and regulators face a demanding road ahead as they attempt to devise adaptable strategies, prepare for upcoming industry challenges and maintain a transparent regulatory environment. By analysing the regulatory landscape across nine jurisdictions in which progress has been made, this report uncovers valuable lessons and provides public-sector leaders with important insights as they build and implement new rules.

In this critical period for digital asset regulation, it is also important for public-sector leaders to focus on select key topic areas. Four of the industry's most pressing issues as discussed in the report are anti-money laundering (AML) and know your customer (KYC); regulatory and technical sandboxes; decentralized finance (DeFi); and privacy and security.

Finally, the ongoing dialogue between public-sector authorities and private-sector participants ensures that regulations are not only responsive to current demands but also adaptable to future developments. A well-defined and flexible regulatory framework, informed by diverse experiences, is paramount because it provides the clarity necessary for the industry. By engaging with a variety of stakeholders, policy-makers and regulators can better navigate the complexities inherent in this fast-paced industry. The thoughtful integration of global insights and company-specific data into regulatory practices can enhance the agility of regulatory frameworks in the future. This proactive stance not only prepares the market for immediate shifts but also sets a strong foundation for the future.

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