Executive summary

The International Monetary Fund (IMF) and the Financial Stability Board (FSB) have developed regulatory recommendations aimed at managing macroeconomic and financial stability risks linked with crypto-assets. Key elements of these regulations comprise macroeconomic, legal and financial aspects as well as the implications for monetary and fiscal policies. The recommended measures intend to mitigate risks encountered with crypto-asset activities, particularly those associated with stablecoins and decentrali sed finance (DeFi). Crypto-assets pose significant potential risks such as undermining effective monetary policy, threatening global financial stability, and causing destabilising financial flow. The IMF and FSB recommend a comprehensive policy and regulatory response to tackle these issues. Regulatory and supervisory oversight of crypto-asset issuers and service providers can support monetary and fiscal policies and financial integrity requirements. The FSB has developed a global framework of recommendations based on the principle of "same activity, same risk, same regulation”. To mitigate risks associated with financial integrity, jurisdictions should Operationalize the Financial Action Task Force (FATF) anti-money laundering and counter-terrorist financing standards. Moreover, jurisdictions, particularly emerging ones, may need to enact additional targeted measures to address their unique risks and circumstances. Lastly, a roadmap for the effective implementation of comprehensive crypto-asset policies has been laid out by the IMF, FSB, and other international organizations. This roadmap focuses on institutional capacity building, global coordination, information sharing, and addressing data gaps in the ever-evolving crypto-asset ecosystem.

1. Introduction

The article discusses the impact of the volatility and complexity of crypto-assets over the past decade, and highlights the potential for systemic risk if they become more integrated with traditional finance. Emerging in 2009, cryptocurrencies have experienced sharp fluctuations in value with total market capitalisation growing three-fold in 2021, and falling from $2.6 trillion to below $1 trillion in the May 2022 market turmoil. Crypto-asset issuers and providers conduct diverse functions and activities, increasing the interconnectedness of crypto markets, like stablecoins that can connect different crypto-asset activities. However, this turbulence demonstrated the vulnerability of stablecoins to peg deviations. Despite this, the impact on the global financial system remains limited due to limited connections of crypto-assets with core financial markets and systemically important financial institutions. Policymakers are initiating protection measures for financial stability and consumers against prospective systemic risks, with bodies like FSB, BCBS, CPMI, IOSCO and the FATF leading the global crypto-asset regulatory framework. The article emphasizes the necessity of a coordinated framework for analyzing crypto-asset implications and creating appropriate policy responses. This analysis excludes Central Bank Digital Currencies (CBDCs). It suggests that the discussion of macroeconomic stability, financial stability, and other related risks should be followed by proposed policy responses and an implementation roadmap for effective risk management.

2. Implications of crypto- assets

The text presents an analysis of the implications associated with crypto-assets, emphasizing varied risks including macroeconomic instability, financial integrity issues and risks to consumer protection. It notes that these challenges may intensify through non-compliance with existing laws. It states the alleged benefits of crypto-assets comprise faster and cost-effective cross-border transactions, financial inclusion, portfolio diversification, and enhanced transaction transparency. The text also suggests that a majority of these proclaimed advantages have not yet materialized and recommends a thorough evaluation of associated costs and benefits for policy-making. It underscores the urgency of recognizing and addressing the apparent risks through international policy interventions.

2.1. Macroeconomic stability

Widespread adoption of crypto-assets could undermine macroeconomic stability, impairing the effectiveness of monetary and fiscal policy, and disrupting capital flows. Crypto-assets could pose risks to monetary stability, particularly if they gain official currency or legal tender status, thus crippling central banks' ability to adjust interest rates. The adoption of crypto-assets could increase fiscal risks through financial sector's exposure to the crypto-asset ecosystem, unclear tax regimes, and their cross-border nature. This could impact tax revenue collection and compliance. The adoption of crypto-assets could also threaten the efficacy of capital flow management measures possible resulting in more unstable capital flows. The adoption could also lead to increased capital outflows, reducing domestic savings or diverting foreign capital that could have been invested domestically. At a larger scale, rapid and widespread adoption could necessitate changes to central banks' reserve holdings and the Global Financial Safety Net. Further, extensive use of stablecoins could fragment global payments. These risks are particularly pertinent for countries with unstable currencies and weak monetary frameworks (EMDEs), as they're more likely to incentivise crypto-asset adoption, leading to increased macro-financial risks.

2.2. Financial stability implications and regulatory issues

Rapid changes in crypto-asset markets and their growing interconnections with the traditional financial system could pose threats to global financial stability, mirroring vulnerabilities in traditional finance such as mishandled leverage, liquidity, and maturity mismatch, operational fragilities, and interconnectedness. The IMF and the FSB identified risk transmission channels, like financial sector exposures, wealth effects, confidence effects, and the use of crypto-assets in payments and settlements. Stablecoins, which integrate crypto-asset markets, traditional finance, and retail market participants, could invoke specific financial stability risks due to their scalability and adoption across jurisdictions. DeFi, resembling the traditional financial system, inherits and potentially magnifies vulnerabilities including operational fragilities and interconnectedness. The international and evolving nature of crypto-assets creates potential for regulatory gaps and arbitrage. Key regulatory issues relate to regulatory powers, governance, cross-border cooperation, data management, and multifunctioning service providers. Emerging Markets and Developing Economies (EMDEs) have increased challenges in implementing regulatory frameworks regarding crypto-assets, facing capacity constraints and risks specific to cross-border crypto transactions. The FSB is examining ways to address such risks.

2.3. Other risks

Crypto-assets pose numerous risks, including legal, financial, market, and environmental risks. Granting such assets legal tender status could result in complex legal issues, due to disparities in internet accessibility and technical requirements across countries. Cross-jurisdictional disparities could also lead to legal uncertainties. Owing to their anonymity and global reach, crypto-assets could be exploited for criminal activities, thereby compromising financial integrity. This can be compounded by the probability of weak or non-existent Anti-Money Laundering and Counter-Terror Financing (AML/CFT) frameworks in certain jurisdictions. Crypto-assets also pose market integrity risks such as insider trading, fraud, and market manipulation. Moreover, some practices of validators on distributed ledgers could be illegal. Concentration risks and potential abuses of market power are amplified by the network effects and economies of scale in crypto-asset markets. Finally, environmental risks arise from the high energy consumption of proof-of-work consensus mechanisms and the lack of controls on parameters influencing energy consumption in permissionless systems. Therefore, to mitigate these risks, robust regulation and effective enforcement, constant monitoring of market developments, and license requirements for crypto-asset providers are essential.

3. Comprehensive policy and regulatory response

The report presents policy and regulatory responses to risks linked to crypto-assets, drawing from existing recommendations set forth by organizations like the IMF and FSB. It discusses the need for robust macro-financial policies, clear financial regulation, and proactive measures to tackle legal risks, financial integrity, market constancy, and investor protection. These principles are vital to an effective crypto-asset policy paradigm. Specific measures may be required in jurisdictions faced with accentuated macroeconomic vulnerabilities, such as certain emerging markets and developing economies. Thorough monetary frameworks that safeguard monetary sovereignty are essential, particularly for those jurisdictions with weak monetary policy guidelines. Monetary frameworks should encompass policy design, implementation, transparency, and legal underpinnings for central bank independence, and should avoid large deficits and high debt levels, which could fuel currency substitutions and promote the use of crypto-assets as payment. Crypto-assets should not be granted the legal status of official currency due to their inherent risks. Any official use of crypto-assets needs to be tightly controlled to minimize fiscal and operational risks. Steps should be taken to address capital flow volatility that could result from crypto-asset adoption, with legal status clarification and effective CFM enforcement. Fiscal risks arising from widespread crypto-asset adoption need to be identified, analyzed and monitored. Effective tax policies must be established to ensure clear tax treatment of crypto-assets and strengthen compliance efforts. Cooperation on cross-border information sharing is vital for tax compliance. Lastly, the paper emphasizes monitoring the impact of crypto-assets on the International Monetary System, to mitigate potential financial stability and integrity risks.

3.2. Financial stability regulation

The Financial Stability Board (FSB) provides a comprehensive framework for the effective regulation, supervision and oversight of crypto-assets activities, markets and global stablecoin arrangements. The regulation embodies the principle of 'same activity, same risk, same regulation' and demands consistent and universal regulation for crypto-assets and stablecoins. The FSB framework features two distinct sets of recommendations for different types of crypto-assets, including the widely used global stablecoins (GSCs) which pose unique financial risks. These recommendations are high-level, providing jurisdictional authorities flexibility for their application and adaptation to the rapidly evolving environment. Appropriate regulatory powers are suggested to regulate and oversee crypto-asset activities and markets comprehensively. Authorities should cooperate both domestically and internationally to promote consistent regulatory outcomes and to enforce relevant laws.

Crypto-asset issuers and service providers are urged to have solid governance frameworks and risk management frameworks that address all operational risks. Robust data frameworks, which support the collection, storage and reporting of data, are deemed necessary for effective regulation, supervision and oversight. The FSB's high-level recommendations for global stablecoins (GSCs) emphasize the need for broad approaches and stress on authorities' role in implementing international standards. GSC issuers should provide comprehensive and transparent information regarding their operations and risk management, and robust legal provisions for redemption rights and value stabilization, especially for GSCs pegged to a single fiat currency. Appropriate recovery and resolution plans are also required to be in place.

3.3. Other policies and regulation

Summary: The text emphasizes a tripartite approach that jurisdictions should adopt for legal consideration of crypto-assets: modernize private law, clarify the financial law usage and treatment of crypto-assets, and mitigate issues linked with under-assessing tax on crypto transactions. Successful implementation necessitates private sector involvement and alignment with international organisations' guidance. Legislative reforms may be necessary to resolve friction between private law and new technologies. Financial integrity regulations necessitate the implementation of the FATF Standards in the virtual-asset sector to deter threats of money laundering and terrorist financing. Providers should be required to implement risk mitigation measures, including customer due diligence, record keeping and reporting of suspicious transactions. The text also urges market integrity regulation through the implementation and application of the IOSCO Principles and Standards to analogous crypto-assets and activities. It highlights the potential risks involved in blanket bans, such as elevated financial integrity risks and potential inefficiencies. Temporary restrictions, particularly for countries facing large capital outflows or significant ML/TF risk, may be warranted but should be seen as a part of a larger policy response.

4. Policy implementation roadmap

The integration of crypto-assets into global finance necessitates internationally coordinated standards for a comprehensive policy framework. The IMF, FSB, and SSBs are working together to develop these policy approaches to crypto-asset activities, aiming to create consistent, comprehensive, and complementary regulations. They have also developed a roadmap for the implementation of this policy framework, with a focus on implementation, outreach, global coordination, and data gap addressing. The roadmap is overseen by the IMF and FSB, who will coordinate with other international organisations and SSBs. The implementation includes policy frameworks for DeFi and multifunction crypto-asset intermediaries, examinations of how standards apply to crypto assets, and integration of crypto-asset policies into IMF assessments. Furthermore, outreach will extend beyond G20 jurisdictions, with programs for outreach through IMF regional training centres and FATF support for lagging countries. Global coordination will continue, led by the FSB, including cross-border regulatory coordination for GSCS and stablecoin arrangements. Lastly, efforts will be made to address data gaps and collect "test data" on crypto-assets, to be completed by the end of 2025.

4.1. Implementation of policy f rameworks by IO and SSB members

After the G20 endorsement of the FSB's high-level recommendations in July 2023, the FSB will review the implementation of the policy frameworks and consider whether additional guidance or recommendations are needed. Their ongoing work involves examining the implications of crypto-assets on financial stability. The IMF will analyse the macroeconomic risks of crypto-assets, focusing on EMDEs. This information will inform the continued work of the FSB and SSBs. An impact analysis on the international monetary system will be developed over time. The FSB and SSBs have a shared workplan for 2023, aiming to develop a global regulatory framework for crypto-assets. Their respective mandates involve examining how their standards apply to crypto-assets and making necessary revisions. The FSB will function as the coordinating body in this work. In March 2022, the IOSCO Board established a Fintech Taskforce (FTF) to develop and implement regulatory approaches for Fintech and crypto-assets. The CPMI and IOSCO are assessing issues surrounding multicurrency or asset-linked stablecoins, focusing on required additions or clarifications to existing guidance. In December 2022, the Group of Central Bank Governors and Heads of Supervision (GHOS) endorsed a global prudential standard for banks' exposures to crypto-assets. The FATF is promoting and monitoring the global implementation of the FATF Standards for the Crypto-Asset Sector. They aim to identify jurisdictions with significant crypto-asset activity and monitor progress. The IMF will incorporate the FSB recommendations in its surveillance program, aiming to highlight any existing implementation gaps.

4.2. Outreach beyond G20 members

FSB members will spearhead the implementation of the FSB framework to inspire jurisdictions outside the FSB's member network to execute two clusters of high-level recommendations. The globally inclusive IMF will persist in fostering the adoption of high-level crypto-asset recommendations. The IMF is set to establish an outreach program that will boost understanding and application of IMF and FSB efforts relating to crypto-assets. Taking into account a number of crypto-asset activities are licensed or registered in non-FSB member jurisdictions, the FSB plans to collaborate with SSBs and other international organisations to endorse effective implementation outside its membership. To support this, the FSB intends to engage with a broader set of jurisdictions, track regulatory advancements among non-FSB members, and monitor cross-border issues related to crypto-assets. The FATF, with its extensive network, is committed to aiding the implementation of AML/CFT controls for crypto-assets across all jurisdictions, focusing on those with significant activity. The FATF plans to accelerate its crypto-asset sector standards and offer support and counsel to jurisdictions experiencing delayed implementation.

4.3. Global coordination, cooperation and information sharing

The Financial Stability Board (FSB) will continue its role as a central hub for information sharing, regulatory and supervisory coordination for crypto-asset activities and global stablecoin arrangements. This includes managing cross-border risks specific to emerging market and developing economies (EMDEs) and enhancing regulatory coordination. The FSB will tackle regulatory issues linked to stablecoin arrangements operating in jurisdictions lacking a sturdy regulatory and supervisory framework in line with FSB recommendations.

The shared workplan between FSB and the Standard-setting Bodies (SSBs) focuses on promoting a consistent international response to potential and existing risks in crypto-asset markets. This includes providing detailed guidance by SSBs, along with monitoring and public reporting. The International Monetary Fund (IMF) will continue coordination with its members to enhance the IMF and FSB framework for crypto-assets, including SSB standards and guidelines, while continually monitoring macro-financial risks in crypto-assets.

4.4. Addressing data gaps

The increase in new crypto-assets for payments creates potential hurdles to data collection and analysis, such as cross-border usage and currency substitution. This rapid cryptoization poses risks to monetary independence and economic stability. Data to measure these impacts, however, is limited. In response, the G20 Finance Ministers and Central Bank Governors launched the Data Gaps Initiative-3 (DGI-3) in November 2022, which includes Recommendation 11 on "Digital Money". This recommendation aims to create a framework and collect test data on digital money, including crypto-assets, to enhance macroeconomic statistics, aiding financial stability analysis. The initiative, led by the IMF and partnered with the BIS, ECB, and FSB, seeks to deliver estimates of crypto-asset flows by Q4 2025. The methodological guidance will be updated per developments in crypto-assets to maintain a relevant macroeconomic framework. The Task Team will also explore alternative data sources, potential partnerships with industry players, and collaboration with statistical agencies and regulatory bodies for better data requirements on crypto assets.

Annex 1: Recent publications from international organisations and standard- setting bodies

In 2023, International Monetary Fund (IMF) outlined effective policies for crypto-assets regulation, addressing members' queries on their rise and potential risks. Simultaneously, IMF also released a note on macrofinancial implications of crypto-assets, discussing potential costs, benefits, and policy responses. In 2022, Financial Stability Board (FSB) provided an assessment of financial stability risks from crypto-assets markets and emphasized the need for prompt policy responses. Further, FSB finalised an international regulatory framework addressing financial risk perspective in relation to crypto-assets in July 2023. Bank for International Settlements and Financial Action Task Force (FATF) also contributed to the analysis and risk mitigation strategies. IOSCO provided comprehensive reports on DeFi evolution, and how it resembles traditional financial markets but with added risks due to non-compliance with existing regulatory frameworks. Group of Central Bank Governors and Heads of Supervision (GHOS) endorsed a global regulatory standard for banks' crypto-asset exposures. Moreover, IOSCO issued policy recommendations for regulation of crypto-asset service providers globally in May 2023.

Annex 2: FSB high- level recommendations

The Financial Stability Board (FSB) provides several high-level recommendations on the regulation, supervision, and oversight of crypto-asset and global stablecoin (GSC) arrangements. Authorities must have appropriate powers, tools, and resources to regulate crypto-asset and GSC activities effectively. Authorities should apply comprehensive regulation and supervision to crypto-asset activities, following the 'same activity, same risk, same regulation' principle. Cross-border cooperation, coordination and information sharing is essential to ensure regulatory consistency. Crypto-asset issuers and service providers should have a comprehensive governance framework, an effective risk management framework addressing all material risks, and robust provisions for data collection, recording and reporting. They should further disclose comprehensive, clear and transparent information regarding their operations, risk profiles, and financial conditions. Authorities must identify interconnections within the crypto-asset ecosystem and the wider financial system, monitoring and addressing the arising financial stability risks. As for recommendations on GSC arrangements, authorities should have powers and resources to thoroughly regulate GSC activities. GSC arrangements should have clear governance structures, effective risk management frameworks, systems for data storage, and accurate reporting. They should disclose comprehensive information about the operations, governance and risk management. Authorities should also mandate recovery and resolution plans for the GSC arrangements and ensure they meet all applicable regulatory, supervisory and oversight requirements before commencing operations.

Annex 3: Detailed shared FSB -SSB workplan

The enclosed text details the shared workplan for the Financial Stability Board (FSB) and multiple Sectoral Standing Bodies (SSBs), focusing extensively on the regulatory risks associated with crypto assets and markets. The FSB intends to finalize recommendations for the control and supervision of these assets and markets by July 2023, with the goal to address financial stability risks. Relatedly, the International Organization of Securities Commissions (IOSCO) will be applying its principles and standards to equivalent crypto assets and activities to tackle potential threat to market integrity and investor protection. The policy recommendations from these organizations are expected by the end of 2023. The document also underscores the joint focus on DeFi's financial stability risks, with policy implications expected to be completed by the end of 2024. The FSB is also working on assessing financial stability implications of multifunction crypto-asset intermediaries with regulatory implications being considered, and the assessment is to be completed by the end of 2024. The FSB is targeting to finalize high-level recommendations for Global Stablecoins (GSCs) by July 2023 to address potential financial stability risks. There is also ongoing work to explore cross-border regulatory coordination for GSCs, primarily in Emerging Market and Developing Economies (EMDEs), starting late Q3 2023 and continuing into 2024. Multiple bodies, including the Basel Committee on Banking Supervision (BCBS) and the Committee on Payments and Market Infrastructures (CPMI), are monitoring and addressing banks' and insurers' exposure to crypto assets. Additional work involves the study of tokenisation of assets, with completion expected in 2024, and the potential implications of distributed ledger technology (DLT) for financial market infrastructures.

Glossary

The glossary defines multiple terms related to the crypto-assets and blockchain ecosystems. "Algorithmic stablecoin" retains a stable value through supply adjustment protocols responding to demand changes. "Blockchain" is a distributed ledger that holds transaction details in information blocks, and these blocks are appended via a computerized validation process. A "crypto-asset" is a privately-issued digital asset relying chiefly on cryptography and distributed ledger or similar technology. The "crypto-asset ecosystem" refers to the complete set of crypto-asset activities, markets, and participants. "Crypto-asset markets" serve as spaces or systems offering trade in crypto-assets and related instruments. "Crypto-asset services" include various activities such as crypto-asset distribution, exchange, custody, trading, and more. Individuals or entities offering these services are cited as "crypto-asset service providers". "Decentralized Finance (DeFi)" defines alternative financial markets, products, and systems operating via crypto-assets and 'smart contracts' built using distributed ledger or comparable technology. "Digital asset" refers to a digital value representation useful for payment or investment. "Global stablecoin" is a stablecoin extending across multiple territories and possessing potential systemic importance in one or many jurisdictions. A "stablecoin" aims to uphold a stable value relative to a stated asset, while a "stablecoin arrangement" combines multiple functions intending to preserve a stable value. "Smart contract" is self-executing code in a distributed ledger environment that automates agreement performance between entities. Finally, "wallet" refers to an application or device for storing cryptographic keys for crypto-asset access, which can be custodial or non-custodial.

References

The documents listed are a series of references from varied sources. They cover a broad range of topics related to financial technology and digital currencies. Some notable studies and reports include works on the role of asset purchases during COVID-19 by Adrian et al. of IMF; analysis of crypto prices and potential risks by the same author; a study on energy efficient design of digital currencies in Ecological Economics; legal and regulatory considerations for digital assets by Allen et al. at the University of Cambridge; and so on. An extensive work by the Financial and Payments Systems Task Team entitled “The Recording of Crypto Assets in Macroeconomic Statistics” is mentioned. Additionally, works by IMF on digital money and related policies, crypto asset adoption by Furceri et al., and the FITT report on crypto assets and macroeconomic statistics are mentioned. Several works related to regulation, taxation, and legal aspects of cryptocurrencies and their impact on macroeconomic policies are mentioned from sources such as the Bank for International Settlements, Financial Action Task Force, International Monetary Fund, Financial Stability Board, and the Organisation for Economic Co-operation and Development among others.