

## REGULATING CRYPTOGRAPHIC FINANCIAL INSTRUMENTS FROM INTENT TO EXECUTION

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### Abstract

*Cryptocurrencies are a new class of financial assets that have the potential to disrupt the traditional financial system and provide the premises for a genuinely innovative framework for new economic and financial interactions. The characteristics and technical specifications of these technologies, while the source of innovation, are challenging elements for various regulators. The purpose of this paper is to identify the main regulatory concerns, i.e. what the regulatory intentions are, the philosophy behind them and, to the extent possible, to assess the effects, specifically, whether the intentions align with the manifestations in practice. We consider three of the most significant events with price impact in crypto in the past year and analyze what was the contribution of the crypto legal framework, as well as changes or proposals in the aftermath.*

**Key words:** *Cryptocurrency; Regulation; Taxation; Bitcoin.*

**JEL Classification:** *L51*

### I. INTRODUCTION

The emergence of cryptographic technologies and an entirely new family of financial instruments is a phenomenon that has the potential to disrupt the traditional financial system and provides the premises for a genuinely innovative framework for new economic and financial interactions. These digital assets use a decentralized ledger called blockchain to record transactions and manage transfers, without the need for a trustee or intermediaries. The earliest forms of digital assets to emerge are cryptocurrencies, with Bitcoin being the best-known protocol and the one with the largest market share. However, these technologies have multiple, more complex uses, such as smart contracts or non-fungible tradable instruments. The characteristics and technical specifications of these technologies, while the source of innovation, are challenging elements for various regulators. The anonymity or at least pseudonymity is one of the arguments given by those who propose that these tools are likely to be used in illegal activities, fraud or money laundering. The purpose of this paper is to identify the main regulatory concerns, i.e. what the regulatory intentions are, the philosophy behind them and, to the extent possible, to assess the effects, specifically, whether the intentions align with the manifestations in practice.

Through information optimization and the exploitation of the potential for global collaboration, digital technology facilitates the transfer of information without geographical boundaries, laying the groundwork for the educational activities' added value (Cosmulese et al., 2019). Access to training facilities for the global population mass with educational training needs is another benefit derived from the implementation of the digital revolution and the "Open Education - Orizont 2020" agenda in the sense that through the implementation of the agenda targets, the number of students with an impact on attracting funding sources, the reduction of fixed costs for educational institutions, and the creation of new jobs in education can increase (Cosmulese et al., 2019).

Numerous innovations, along with significant shifts in the market opportunities and the direction of new business models, could aid in the development of fresh, workable defenses against the inescapable old and new risks that confront economic entities (Grosu, 2022).

Although various governmental agencies initially ignored these technologies, with the exponential growth in trading volumes, but more importantly, with the significant growth in value of these cryptographic digital assets, institutions have embarked on extensive processes to create various rules and laws to regulate the sector. The approaches are diverse in scope and scope, ranging from a policy of intervening as little as possible in the system to complete prohibition, even if the effectiveness of some of these solutions has been challenged in practice. At a declarative level, the main objectives of regulation are to protect consumers and investors, to prevent money laundering and terrorist financing and, not least, to ensure the stability of the financial system. The initial vision for the Bitcoin protocol was to create a payment mechanism for transactions that are an alternative to fiat currencies

and do not rely on centralized parties for issuance and processing, hence are unregulated by nature. By using public key cryptography and algorithms, Bitcoin solved the double spending problem and laid the foundation for all other crypto technologies that derived from this idea. At a technical standpoint, these systems are completely governed by their algorithms, in effect the code acting as law (Hassan & De Filippi, 2017). Any law not embedded in the code itself fully relies on human convention and external enforcement, especially when converted to fiat currencies. This means regulators have to confront technologies and digital interactions that were designed to be trust-less and do not rely on any central authority by design. The fact that these instruments have been primarily used for financial speculation, registering a very high volatility certainly is another factor that generated regulatory concern.

Without demonstrating a clear link between, for example, the crypto economy and the stability of the financial system, various authorities have implemented measures that have the effect of artificially increasing trading costs through barriers such as licensing of exchanges and operators in the field, specific reporting requirements, user identity measures and, most importantly, taxation measures. As it is unclear how these measures contribute to the stated objective of consumer protection, in our approach we will screen different regulatory hypotheses by analyzing their validity and legitimacy. There are, however legitimate concerns, as bitcoin and other payment instruments have been used or attempted to be used by various unlawful entities such as crime syndicates, terrorist organizations, agents operating outside the control of law enforcement or even unsanctioned states, such as North Korea (Popper, 2019). While traditional cash is still the main instrument for money laundering and financing criminal groups (Springer, 2015), there is still concern that these instruments are used for illegal activities, despite the fact that tracking technologies of transaction into public ledgers have made it increasingly easy to link accounts to physical people.

## II. TRENDS AND SIGNIFICANT DEVELOPMENTS IN CRYPTO REGULATION

In some sense, rules and regulation in this field cryptocurrencies are artificial from a jurisdictional point of view, as these technologies are intrinsically global, and their digital existence is not characterized by any particular nationality. However, as their value is tightly linked with capital inflows, the major global economies have a disproportionate user base and influence over the trends and developments of the crypto-economy. Because of this, there is high potential for a spill-over effect of national regulation on a global scale. Moreover, while traditional businesses incur a high transaction cost of relocating to a more favorable jurisdiction, this is not the case for cryptocurrency development and trading. At the time of writing, there are over 200 centralized exchanges that offer spot trading, as well as over 300 decentralized exchanges and swap platforms, according to [coinmarketcap.com](https://coinmarketcap.com/), one of the most important websites that track market performance <https://coinmarketcap.com/> as of 23 March, 2023. These operate in various countries, and traders can access exchanges in other jurisdictions than their physical location, provided that KYC compliance is met.

In the United States, the regulation of cryptocurrencies is primarily the responsibility of the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC). The SEC has taken the position that most cryptocurrencies are securities and therefore subject to federal securities laws. The CFTC has classified cryptocurrencies as commodities, which makes them subject to federal commodity laws and regulations. This dual regulatory approach has caused confusion in the market and has been criticized by some as an obstacle to the development of the cryptocurrency industry in the United States. This regulatory hostility has led, among other things, to the exclusion of US investors from most initial coin offerings in 2019. The United States became the country most likely to be excluded from such transactions, followed by North Korea, Iran, and Syria (Lukas Hofer, 2019). Even representatives of institutions responsible for regulating the sector have noted that further analysis is needed, with SEC Commissioner Hester Peirce raising a critical question "*Who have we protected?*" <https://perma.cc/8M3R-X6ES>. Because American entities regulating securities are some of the most active, we believe that the spill-over effects are the most prominent here, as the market momentum is widely affected by economic developments (Lyllah Ledesma, 2023).

In the European Union, the regulation of cryptocurrencies is primarily the responsibility of the European Securities and Markets Authority (ESMA). ESMA has issued guidelines on the regulation of cryptocurrencies, stating that the existing regulatory framework for financial instruments is generally applicable to cryptocurrencies. ESMA also called for a harmonized approach to cryptocurrency regulation across the EU to ensure a level playing field for market participants and prevent regulatory arbitrage.

In Asia, the regulation of cryptocurrencies varies greatly from country to country. Japan has been a leader in cryptocurrency regulation, adopting a permissive approach that has attracted many cryptocurrency exchanges to the country. In contrast, China has taken a more restrictive approach, banning initial coin offerings (ICOs) and limiting the use of cryptocurrencies. South Korea has also adopted a restrictive approach, banning anonymous trading of these instruments. The issue of ICOs raised concern over the legitimacy of the security offerings, as there were very few verifiable investor protection mechanisms, multiple instances of lack of detailed disclosures or low chance of viability. In some cases, exchanges themselves engaged in practices that would be deemed illegal

on regulated markets, such as front-running, wash trading, generating false liquidity or insider trading, without regard to investor protection (Shifflett & Jones, 2018).

One of the most crucial questions regarding this subject is one of defining what asset class or classes can best fit the market behavior of these instruments. Are they currencies, securities or some other sort of token? Switzerland mandated the definition of a new types of securities, „payment tokens”, „asset tokens” and „utility token”, not offered primarily for investment purposes, as part of a program to attract business and the creation of cryptocurrency hubs (Crypto regulations in Switzerland, 2022). Most other countries, however, attempted to fit these instruments into their existing regulatory framework. For example, in the case of ICOs, the US SEC concluded that the Howey test for securities classification applies and the tokens constitute, in fact, investment contracts (SEC, 2017). The term “investment contract” is not defined in the statute but by case law. In 1946, the U.S. Supreme Court held in SEC v. W.J. Howey that “an investment contract for purposes of the Securities Act means a contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party” <https://supreme.justia.com/cases/federal/us/328/293/>.

Since the original 2017 report that the Howey test should apply to crypto-assets, and as a result, tokens would be considered securities, technology developments have made it substantially more difficult to fit these explanations, as decentralized instruments with wide distribution such as Bitcoin does not fit the definition of an investment contract. Regardless of current standing, the entire process generated confusion to users and investors and as the communities understanding of crypto moved beyond the initial realm of currency solutions, new regulatory action was proposed. A significant development was the introduction of SAFT, or Simple Agreement for Future Tokens, a process for entrepreneurs to legally raise funds for the development and distribution of „utility tokens” (Batiz-Benet et al., 2017). This takes into account the potential uses of crypto technologies, ranging from debt and equity securities to collectible items, non-fungible tokens, compute services or other functions. To better visualize the regulatory uncertainty of the matter, (Clements, 2019) graphically summarizes different types of crypto assets with regard to securities regulation:

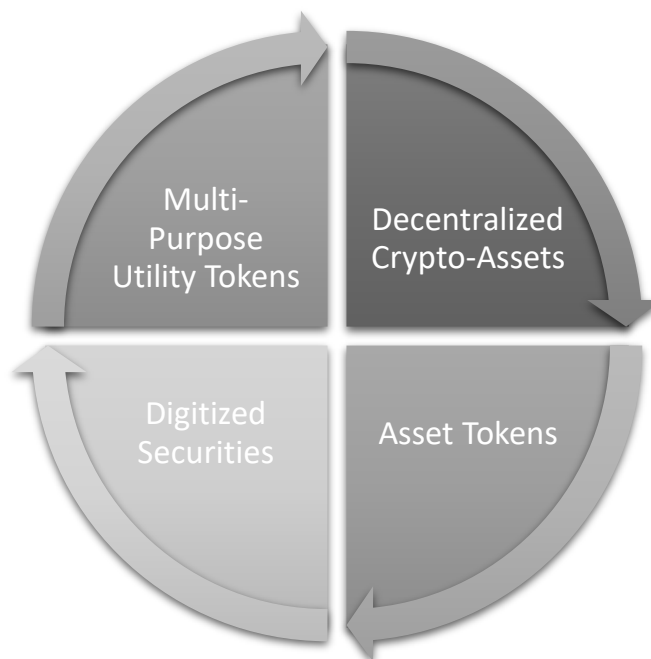


Figure 1: Types of crypto assets

Source: Clements, Ryan. 2019. *Crypto-Assets: Current Research and Public Policy Issues. Working Paper.* Calgary: University of Calgary School of Public Policy.

Digitized securities trade on a blockchain, including both equity and security tokens. These fall clearly under securities jurisdiction.

Asset tokens represent an ownership interest in an underlying asset (such as real estate or art) - potentially securities jurisdiction, but not always.

Multi-purpose Utility Tokens have a specified use or utility and are issued through Initial Coin Offerings or Initial Exchange Offerings. There are potentially securities, but not always, and there is potential that utility tokens shift from securities to non-securities based on use case.

Decentralized Crypto-Assets do not incur capital raising issues and no centralized party is responsible for ongoing development. These do not fall under securities jurisdiction on their own, but may become so based on how they are traded.

Cryptocurrency in general does not fit into legal definitions pertaining to currency or legal tender, with the exception of El Salvador that passed a law on 8 June 2021 deeming Bitcoin as legal tender (Ostroff & Perez, 2021). All things considered, even the opinion of the U.S. Supreme Court mentioned that “*the definition of money has changed over time and that perhaps one day employees will be paid in Bitcoin or some other type of cryptocurrency...*”<https://stockhead.com.au/tech/the-us-supreme-court-just-spoke-about-a-bitcoin-future-for-the-first-time/>. One ongoing development with wide and far-reaching implications is the lawsuit between the SEC and the blockchain developer Ripple, the creator of the XRP currency token. Ripple is a company based in US that developed an open-source protocol for the creation of a real time remittance, currency exchange and settlement network using a native cryptocurrency known as XRP (Chase & MacBrough, 2018). In 2020 the company and two executives were sued by the SEC under the pretense that the company raised over 1 bln USD worth of capital through unregistered sales of their native token that they consider to be securities (Hennelly, 2022). Ripple, on the other hand, who never filed a registration document, as a requirement for companies in the stock market seeking to raise capital, argues that a crypto coin is not a security. The implications of this lawsuit are substantial from a number of viewpoints. Firstly, XRP is one of the largest cryptocurrency projects by market capitalization, ranking 6<sup>th</sup> at the time of writing according to tracking website [coinmarketcap.com](https://coinmarketcap.com) with a total value of over 23 bln USD. Secondly, this endeavor is an attempt by the SEC to become the de facto entity that regulates the crypto-economy, and a win against Ripple would almost certainly spill-off to other crypto projects that are will become vulnerable. The designation of crypto assets as commodities versus securities is a high relevance one, as it is unclear whether the entire undertaking is for the protection of investors and upholding the law, or instead is an effort to expand the jurisdiction beyond the authority currently granted by the congress (Kevin George, 2023). Regardless of the result, it will have a substantial impact on the market and the overall crypto environment and will allow for follow-up research to be conducted.

### III. SIGNIFICANT EVENTS OR PHENOMENA IN THE CRYPTO FIELD AND REGULATORY MITIGATION ACTS

A number of nations have already imposed limits on crypto trading, and more regulation is being debated and on the way. Various researchers have discovered (Fry & Cheah, 2016) (Auer & Claessens, 2018) (Borri & Shakhnov, 2020) that up until 2018 there were mixed effects over regulatory action and the duration of various price effects were relatively short. Moreover, many findings were most likely related to dramatic and shock events and their consequences, and less so because of regulatory action. Generic warnings over the risks of cryptocurrencies have little to no effect on trader sentiment and behavior. However, as the size of the markets have increased in number of participants, trading volumes and overall complexities, some developments had a more significant market spillover with regard to trading volumes and relative prices, indicating that the crypto market has become more intertwined with the financial system. Specifically, the severe restriction of bitcoin trading in China led to a plummet in RMB volumes and subsequent soar in alternative fiat currencies, concurrent with the move of Chinese investors to peer-to-peer exchanges, indicating that the traders moved across borders. The results seem to indicate that the costs for switching between various exchanges and jurisdictions are relatively low.

The price of a stock or cryptocurrency rising in response to a regulatory announcement does not necessarily indicate that the rule is desirable. Generally speaking, the market, not regulators, should determine an asset's worth. Regulators, on the other hand, are rightfully worried about the volume and locations of trading activity. Because of this, studies examining the effects of legislation on the securities market frequently use volume-related metrics rather than price metrics (Lo & Wang, 2000). Based on these findings, (Feinstein & Werbach, 2021) test several hypotheses regarding a number of regulatory announcements, including ones that relate to the status of crypto tokens as securities, anti-money laundering rules, significant law enforcement action or announcements regarding the development of comprehensive specific regulatory regime. The tested hypotheses are centered around changes in trading volume in specific jurisdictions, based on government decision to regulate various aspects, as mentioned above. This is especially relevant considering that assumptions of capital flight upon the enactment of restrictive regulation might be, is offset by some regulators, most notably the United States, by special rules regarding trading conducted by their citizens. In reality, American traders face increased transaction costs or even outright barriers on switching trading action across borders due to extraterritorial application of laws specifically to block or restrict access based on citizenship <https://www.wsj.com/articles/bitmex-founders-charged-in-indictment-that-says-they-flouted-u-s-rules-11601579782>. So even if some jurisdictions are more lenient to traders, they might still have filters and restriction that deter potential trading activity. The results of their test shed light on several implications, most notably that the announcement of regulatory action does not seem to affect trading activity over a long length of time, across many jurisdictions, and across several substantive categories. Some laws, like China's 2017 ban on

initial coin offerings and closure of renminbi-to-crypto exchanges, have a noticeable impact on trading volume in the nation that enacts the regulation. Hard bans of this nature, however, are currently the exception rather than the norm, particularly in jurisdictions with high trading volumes. The previous research we analyzed indicated that trading between jurisdictions is largely unaffected, volume wise, when regulators announce new policies in the field. The causality of price action is much more difficult to gauge, as there are much more factors to be considered, including macroeconomic trends or technology developments.

So, the data suggests that it is difficult to sustain that trading volumes across jurisdictions is affected by regulatory action undertaken so far, so we propose a different approach. We consider three of the most important events with price impact in crypto in the past year and analyze what was the contribution of the crypto legal framework, as well as changes or proposals in the aftermath. We consider the following events: the Mt Gox exchange hack, the Luna Crypto Crash and the FTX exchange collapse.

One of the biggest cryptocurrency exchange hacks in history, the Mt. Gox attack in 2014 saw the loss of about 850,000 bitcoins, which were then valued \$450 million. The breach significantly affected the cryptocurrency market, including how it was regulated. Regulators and lawmakers have become increasingly concerned about the risks associated with cryptocurrency exchanges and the need to strengthen their oversight as a result of the Mt. Gox hack. In order to assess whether their current regulatory frameworks were sufficient to address the risks presented by cryptocurrency exchanges, numerous governments all over the world started to examine them. For instance, the Securities and Exchange Commission (SEC) in the US began looking into whether or not specific cryptocurrency platforms were functioning as unregistered securities exchanges. The SEC also released guidelines on how initial coin offerings (ICOs), a type of fundraising technique used by some cryptocurrencies, should be governed by securities rules.

In response to the breach, the government of Japan, where Mt. Gox had its headquarters, passed legislation requiring cryptocurrency exchanges to register with the Financial Services Agency (FSA) and adhere to certain security standards in 2017. In order to make sure that cryptocurrency exchanges were following the law, the FSA also carried out on-site checks of them. Due to increased scrutiny from lawmakers and regulators following the incident, new regulatory frameworks and guidelines have been created with the goal of lowering the risks connected with cryptocurrency exchanges and other crypto-related activities.

However, it is our assessment that little of the regulation proposed or enacted since would have addressed the actual issue faced with the traders affected by the hack and subsequent bankruptcy of the exchange. Even for exchanges that require compliance with KYC and complies with jurisdictional rules that apply for its operation, there is still a chance of catastrophic technical failure or security breaches that leads to losses. In fact, the Mt Gox hack is not a singular event, and other exchange hacks have happened, albeit with a less pronounced impact. For instance, the Bitfinex breach of 2016 was also significant in scale, yet the exchange continued operation even if there was no legal mechanism for protecting its traders from such an event. There are, however some key differences, as the Mt Gox era is characterized by bitcoin minted in a landscape void of regulation, with wallets owned by individuals who can't use KYC's custodian services and have been since distributed through multiple exchanges in tens of thousands of small deposits which don't require KYC. The Bitfinex situation, on the other hand, evolved quite differently as crypto to cash transactions led to law enforcement tracing of the money laundering scheme and subsequent catch of criminals involved in the entire operation <https://time.com/6146749/cryptocurrency-laundering-bitfinex-hack/>.

Another significant development that has centered around the subject of regulation is the collapse of the Luna crypto network, wiping 60 billion dollars' worth of assets from the crypto space. Stablecoin UST, issued on the Terra blockchain, which served as a platform for the development of stablecoins and other decentralized finance (DeFi) apps, is pegged to the US dollar. To keep a stable value in relation to their pegged currency, in this case the US dollar, stablecoins like UST are created. Multiple methods, including collateralization and algorithmic adjustments to the coin's supply, are used to achieve this stability. Although the price of UST may fluctuate in relation to the US dollar, a significant crash or failure of UST would have necessitated a significant disruption in the underpinning mechanisms that underpin the coin's stability. This is exactly what happened. Due to its association with TerraUSD (UST), the Terra network's automated stablecoin, the Luna cryptocurrency crashed. On May 7, UST worth over \$2 billion was unstaked (removed from the Anchor Protocol), and a large portion of it was rapidly liquidated. There is disagreement over whether this occurred in reaction to higher interest rates or if the Terra blockchain was the target of an intentional attack. The massive sell-offs reduced the price of UST from \$1 to \$0.91. As a consequence, traders began exchanging \$1 worth of Luna for 90 cents worth of UST. Once a large amount of UST had been offloaded, the stablecoin started to de-peg. In a panic, more people sold off UST, which led to the minting of more Luna and an increase in the circulating supply of Luna. Following this crash, crypto exchanges started to delist Luna and UST pairings, and this led to the abandonment of Luna as it became worthless <https://www.euronews.com/next/2022/05/12/terra-luna-stablecoin-collapse-is-this-the-2008-financial-crash-moment-of-cryptocurrency>.

The entire cryptocurrency market, which was already very volatile and having trouble at the moment, was affected by the Luna meltdown. The Luna collapse is thought to have tanked the price of bitcoin and destroyed

\$300 billion worth of value across the entire cryptocurrency market. Crypto industry pioneers Voyager and Celsius declared insolvency. Three Arrows Capital (3AC) was compelled to go out of business. The Luna crypto crash caused a lot of individuals to lose their life savings and experience financial hardship. This has led government officials to push for regulation of stablecoins, yet it remains unclear what will be the actual developments that could prevent such disasters from happening. Other than investigations, the inauguration of task forces, various declarations, hearings and consultations, we have yet to identify some piece of legislation that actually addresses the technical and economic failure that led to the Luna events. As a matter of fact, other stablecoins such as Tether, Circle's USDC and the algorithmic USDD have temporarily lost its peg on several occasions. The figure below showcases the 1-year evolution of USDD and USDC in relationship with the US dollar:



Figure 2. USDD and USDD Dollar peg from March 2022 to March 2023

Source: generated with [coinmarketcap.com](https://coinmarketcap.com)

Despite the fact that the stable-coin USDD is advertised as having collateral in excess of 100%, evidence shows it has systematically traded below the 1:1 peg with at least two extreme prime action events. USDC, on the other hand has been long considered one of the safest stable coin options due to a higher level of transparency regarding the underlying assets used as collateral, and the peg was mostly maintained. However, the Silicon Valley Bank collapse exposed a vulnerability as over 3 billion USD of the USDC cash reserves were deposited at this bank, an event that briefly led to the de-pegging of token <https://www.wsj.com/articles/bitmex-founders-charged-in-indictment-that-says-they-flouted-u-s-rules-11601579782>.

Another significant event to the crypto industry with implication in the regulation spectrum is the failure and collapse of the FTX crypto exchange. Unlike the previous examples, this is a case of fraud that will most likely have several consequences in the future. Prior to its spectacular collapse over the span of a week, the cryptocurrency exchange FTX was one of the biggest in the world. The exchange appears to have failed in part as a result of its close connections to Sam Bankman-Fried's trading firm, Alameda Research, and the fact that the majority of its assets had been created out of thin air (Reiff, 2023). While the exact timeline of the events has been thoroughly covered by the press our main interest lies in the repercussions over the crypto industry, especially with regard to the way in which regulators such as the SEC will use the collapse as justification for tightening regulatory oversight of cryptocurrencies and a possible increased willingness on the part of US Congress or other players such as the European Commission to intervene and pass new legislation regulating digital tokens and exchanges. While some institutions are very aggressive in suggesting that more oversight is needed towards the digital asset industry, it is unclear exactly what safeguards will be proposed to avoid some of the events that plagued the recent history of cryptocurrency. At least in the US, this lack of clarity regarding the legal status of crypto and framework regulation for exchanges has certainly driven some investors and a substantial part of trading activity offshore <https://coinmarketcap.com/alexandria/article/impact-of-ftx-s-collapse-will-go-far-beyond-its-customers>.

#### IV. CONCLUSION

Cryptocurrencies have the ability to function as a brand-new class of financial assets, a cutting-edge tool for business venture funding, a more effective method of sending money across borders, and the cornerstone of a cutting-edge, distributed application economy. They might challenge established players in the financial services

industry and bring about significant gains for investors. However, there is a sizeable amount of fraud and illegal behavior involving cryptocurrencies. Regulators must take action where cryptocurrency trading activities violate already-existing legal frameworks, such as the securities laws, or where they present chances for ineffective regulatory arbitrage. However, the question of how to actually regulate cryptocurrency and what regulation is actually beneficial to the market remains. So far, it has been difficult to distinguish between the genuine concern over market health and investor protection and a power struggle to assert control over regulating this specific industry. While imposing taxation on capital gains, in various form, has been the most immediate action to be taken by regulators, it has been done without governments figuring out how exactly to manage all this and without an associated package of governmental services, protections and guarantees that benefit conventional investors. While countries like Malta, Portugal, Singapore or Germany are tax free with some limitations, on a case-by-case basis, in other places the industry is a taxation minefield, sometimes with both income tax and capital gains tax applied, or even taxation of unrealized gains <https://koinly.io/blog/crypto-tax-free-countries/>.

Most regulation efforts are centered upon fitting the industry its financial instruments under existing regulation framework, which is a difficult task from a technological standpoint. The challenge to regulators stems even from the definition these instruments, whether they are deemed securities or commodities, or currencies, each has legal implications based on the frameworks that are already in place in the financial industry.

Three of the most significant events provide substantial evidence that there is a considerable lag between the fast-moving innovation and technological developments in the field and the reaction of regulators and conventional financial institutions that are threatened by these solutions that were designed from the get go to be non-reliant on fiduciary third parties or laws in the conventional sense. The Mt. Gox exchange hack was the event that initiated the first major movements by authorities, however some of the critical security vulnerabilities are yet to be addressed by protection mechanisms stemming from regulation.

At the same time the Bitfinex hack case shows that current law enforcement together with crypto security companies and researchers have the expertise, resources and the capacity to track the movement of money in the cryptocurrency space. This means that the blockchain is no longer an anonymous tool for deception and money laundering, but it has the potential to be an effective tool for analyzing financial crime. So, this renders the entire argument of crypto being used by criminals for crime mute, or at least it lessens the strength of the arguments in favor of limiting regulation.

The Terra Luna disaster has highlighted that while taxation rules are applied indiscriminately, there is a significant gap in institutional protection benefits to investors. At the same time, fraud cases similar to the FTX case, with a collapse that had impact on the markets, show that having unchecked and unregulated centralized markets are a ticking bomb, and some form of oversight is necessary. The aftermath of these events have shown a rise in the aggressiveness of regulators, however we feel that too little has been done in the actual interest of the consumer, or the investor, and the efforts should be more focused on treating crypto as a completely new asset class with specific technical challenges, and less on punishing innovative technologies and companies for failure to comply to unclear rules.

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#### REFERENCES

1. Auer, R., & Claessens, S. (2018). Regulating cryptocurrencies: Assessing market reactions. *BIS Quarterly Review September*.
2. Batiz-Benet, J., Santori, M., & Clayburgh, J. (2017). The SAFT project: Toward a compliant token sale framework. *SAFT Project White Paper, Cooley*.
3. Borri, N., & Shakhnov, K. (2020). Regulation spillovers across cryptocurrency markets. *Finance Research Letters, 36*, 101333.
4. Chase, B., & MacBrough, E. (2018). Analysis of the XRP ledger consensus protocol. *ArXiv Preprint ArXiv:1802.07242*.
5. Clements, R. (2019). *Crypto-assets: Current research and public policy issues*. Working Paper. Calgary: University of Calgary School of Public Policy.
6. Cosmulese, C. G., Grosu, V., Hlaciuc, E., & Zhavoronok, A. (2019). *The influences of the digital revolution on the educational system of the EU countries*.
7. *Crypto regulations in switzerland*. (2022). <https://rue.ee/crypto-regulations/switzerland/>.
8. Feinstein, B. D., & Werbach, K. (2021). The impact of cryptocurrency regulation on trading markets. *Journal of Financial Regulation, 7*(1), 48–99.
9. Fry, J., & Cheah, E.-T. (2016). Negative bubbles and shocks in cryptocurrency markets. *International Review of Financial Analysis, 47*, 343–352.

10. Grosu, V. (2022). Design of an innovative dashboard for assessment of risks that are specific to e-commerce activity. *Marketing i Menedžment Inovacij*.
11. Hassan, S., & De Filippi, P. (2017). The expansion of algorithmic governance: From code is law to law is code. *Field Actions Science Reports. The Journal of Field Actions, Special Issue 17*, 88–90.
12. Hennelly, J. (2022). The Cryptic Nature of Crypto Digital Assets Regulations: The Ripple Lawsuit and Why the Industry Needs Regulatory Clarity. *Fordham J. Corp. & Fin. L.*, 27, 259.
13. Kevin, G. (2023). *SEC vs. Ripple*.
14. Lo, A. W., & Wang, J. (2000). Trading volume: Definitions, data analysis, and implications of portfolio theory. *The Review of Financial Studies*, 13(2), 257–300.
15. Lukas Hofer (2019). *Why token issuers exclude U.S. Investors*. <https://perma.cc/JUB8-MCTF>.
16. Lyllah Ledesma (2023). *First Mover Americas: Bitcoin Traders Await Fed's Decision*. <https://www.coindesk.com/markets/2023/03/22/first-mover-americas-bitcoin-traders-await-feds-decision/>.
17. Ostroff, C., & Perez, S. (2021). El Salvador Becomes First Country to Approve Bitcoin as Legal Tender. *The Wall Street Journal*.
18. Popper, N. (2019). Terrorists Turn to Bitcoin for Funding, and They're Learning Fast. *The New York Times*.
19. Reiff, N. (2023) The Collapse of FTX: What Went Wrong with the Crypto Exchange?, <https://www.investopedia.com/>.
20. Shifflett, S., & Jones, C. (2018). Buyer beware: Hundreds of Bitcoin wannabes show hallmarks of fraud. *Wall Street Journal*, 17.
21. Springer, C. (2015). *Why is cash still king? A strategic report on the use of cash by criminal groups as a facilitator for money laundering*.
22. \*\*\* About centralized exchanges from: <https://coinmarketcap.com/>.
23. \*\*\* Not Braking and Breaking speech by Commissioner Hester M. Peirce from <https://perma.cc/8M3R-X6ES>.
24. \*\*\* About "investment contract" from: <https://supreme.justia.com/cases/federal/us/328/293/>.
25. \*\*\* About opinion of the U.S. Supreme Court for Cryptocurrency from: <https://stockhead.com.au/tech/the-us-supreme-court-just-spoke-about-a-bitcoin-future-for-the-first-time/>.
26. \*\*\* About increased transaction from: <https://www.wsj.com/articles/bitmex-founders-charged-in-indictment-that-says-they-flouted-u-s-rules-11601579782>.
27. \*\*\* About the Bitfinex situation from: <https://time.com/6146749/cryptocurrency-laundering-bitfinex-hack/>.
28. \*\*\* About Luna and UST pairings, from <https://www.euronews.com/next/2022/05/12/terra-luna-stablecoin-collapse-is-this-the-2008-financial-crash-moment-of-cryptocurrency>.
29. \*\*\* About the Silicon Valley Bank collapse, from: <https://www.wsj.com/articles/bitmex-founders-charged-in-indictment-that-says-they-flouted-u-s-rules-11601579782>.
30. \*\*\* About trading activity offshore, from: <https://coinmarketcap.com/alexandria/article/impact-of-ftx-s-collapse-will-go-far-beyond-its-customers>.
31. \*\*\* About taxation, from: <https://koinly.io/blog/crypto-tax-free-countries/>.