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Disclosures for Digital Assets

Updates on Global Regulation



Introduction

Global financial markets are evolving at a rapid pace. Modern regulatory frameworks have had to continually adapt to ensure the integrity and transparency of securities offerings. Central to these frameworks are robust disclosure requirements that provide investors with essential information about the entities they invest in, their operations, financial health, and associated risks. These disclosures are vital not only at the initial offering stage but throughout the lifecycle of the securities as they are traded on secondary markets.

As the financial ecosystem evolves with advancements in technology and changing investor needs, the regulatory landscape is challenged to keep pace. The emergence of the digital economy and crypto assets represents the latest frontier in this evolution, bringing with it a unique set of challenges and opportunities. Unlike traditional financial instruments, crypto assets may not be governed by a centralized entity, and their value proposition often hinges on innovative technology rather than historical financial performance.

Regulatory bodies worldwide, including those in Canada, The European Union and the United States have been actively working to integrate crypto assets into existing legal frameworks. The International Organization of Securities Commissions (“IOSCO”) has also provided guidance to harmonize disclosure requirements globally. Despite these efforts, significant gaps and inconsistencies remain, particularly in how disclosures are standardized and communicated to investors.

For example, in the past, information such as financial statements could be compared across different companies. This standardization allowed potential investors to make objective comparisons to inform themselves to the best of their ability. This type of standardization and uniformity, in the early stages of the emergence of cryptocurrency, is in need of sophistication.

Broadridge Financial Solutions, Inc. (“Broadridge”) recently launched its data platform ClearFi, a pioneering solution designed to bridge these gaps, generating content for regulatory disclosure that aligns with traditional financial laws and the unique demands of the cryptocurrency market. By combining modern technology with current, objective information, ClearFi aims to streamline the disclosure process, reduce inefficiencies, and enhance compliance in the digital asset industry across various jurisdictions.

This whitepaper focuses on the current regulatory landscape for crypto asset disclosures in Canada and the European Union (“EU”), identifies practical challenges faced by Crypto Trading Platforms (“CTPs”), and demonstrates how ClearFi addresses these challenges. It also delves into the broader applications of ClearFi beyond CTPs, showcasing its potential to revolutionize disclosures for tokenized real-world assets, crypto ETFs, and more.



Regulatory framework for disclosure – Canada and the European Union

The focus of this section is to outline Canadian and European disclosure requirements pertaining to crypto assets and securities. Canada has implemented policies which apply existing securities laws to CTPs and other market participants. Although Canadian securities legislation is dealt with provincially, there is a high level of uniformity throughout each province's legislation. The Ontario Securities Act is a strong benchmark that can be utilized to determine the generally accepted disclosure principles in Canada securities law. The European Commission has developed the Markets in Crypto-Assets ("MiCA") regulation which specifically regulates crypto assets and Crypto Asset Service Providers ("CASPs") throughout the European Union. Throughout the following sections, the general disclosure requirements for public issuers promulgated by the Ontario Securities Act and MiCA will be outlined, and both will be compared to ClearFi's platform to illustrate how ClearFi's financial disclosure ecosystem embodies the spirit of Canadian and European disclosure requirements.

Canada

In Canada, regulatory disclosure requirements are designed to ensure transparency and protect investors in the securities market. The goal is to provide potential investors with comprehensive data to make informed investment decisions. One of the cornerstone principles surrounding the distribution of securities in Canada is the requirement for "full, true, and plain" disclosure to potential investors. This mandate ensures potential investors are provided with material information to make informed decisions. Absent an exemption, a prospectus is a requirement under Canadian securities law to make a public offering of securities. A prospectus is a detailed document that provides potential investors with essential information about the company and the securities being offered.

A prospectus must contain a detailed description of the business of the issuer and its history. This includes, among other things, detailing information relating to the issuer's principal markets, revenues from material products and services, use of proceeds, dividends and distributions, description of the securities being distributed, information on principal securityholders and management, specialized skill and knowledge of the company, new products and risk factors associated with the investment in the issuer's securities (which risk factors include cash flow problems, experience of management, general risks inherent in the business, etc.). Additionally, the issuer must disclose the nature and results of any bankruptcy, receivership or similar proceeding against them and the nature and results of any material restructuring of the issuer or any subsidiary within the three most recent financial years.

Public companies in Canada are also subject to continuous disclosure obligations. They must regularly file annual and quarterly financial statements, along with a management discussion and analysis (MD&A) to keep investors updated on their financial health and operational results. Additionally, any significant changes in business operations or financial conditions must be promptly reported through material change reports.

Application of Canadian securities legislation to crypto trading

Canada was one of the first jurisdictions in the world to adopt comprehensive policies surrounding the regulation of CTPs in compliance with existing securities laws. As a result, no fewer than a dozen CTPs are currently registered in Canada as securities dealers.

The Canadian Securities Administrators ("CSA") and provincial securities regulators like the Ontario Securities Commission ("OSC") regulate CTPs in Canada. The CSA has made regulating crypto assets a priority in recent years.

Many crypto assets may be considered securities under Canadian law, especially if the manner in which they are sold constitutes the sale of investment contracts under the "Howey Test" as adopted in Canada via the *Pacific Coast Coin Exchange v. Ontario Securities Commission* case. Further, the manner in which crypto assets are sold may create a security or a derivative contract (which is itself a security). This might arise, for example, if a CTP sells a client a crypto asset but there is no immediate delivery of the crypto asset into the client's digital wallet (instead there is a right of future delivery of the asset). In this case, the contract between the CTP and the client may itself be a security, as it provides a right of future delivery (a "Crypto Contract"). In the CSA's view, many CTPs that trade crypto assets are subject to securities legislation. However, while the CSA holds this view, it has also acknowledged that the existing securities legislation requirements may need to be tailored through terms and conditions on the registration of CTPs and through discretionary exemptive relief with appropriate conditions. The CSA has publicly stated that its overall goal in its approach to regulating crypto assets is to ensure there is a balance between needing to be flexible in order to foster innovation in the Canadian capital markets and meeting its regulatory mandate of promoting investor protection and fair and efficient capital markets.

The securities regulatory requirements that will be applicable to a CTP will depend on how it operates and what activities it undertakes. Generally, most CTPs in Canada operate as “Dealer Platforms” as they facilitate the primary distribution of crypto assets or are the counterparty to each trade in crypto assets, however they may operate as marketplaces (bringing multiple orders of purchases and sales together to consummate trades using non-discretionary methods) and offer custody of assets.

While CSA staff consider many crypto assets to be securities and/or derivatives, they also recognize their unique nature and have therefore established a tailored disclosure regime. This model requires CTPs to provide information about the crypto assets listed on their platforms, acknowledging the absence of a traditional issuer. CTPs must register with provincial/territorial securities regulators in their respective registration categories. Currently, most CTPs are registered as Dealer Platforms. Registered Dealer Platforms must meet certain requirements to protect investors, like safeguarding assets, managing risks, and providing disclosure to clients. Most of the disclosure requirements are very similar for each CTP

Registered dealer platform disclosure requirements

- CTPs must provide a risk statement (a “Risk Disclosure Statement”) to prospective clients during the account opening process, which explains the features and risks of the crypto assets and the due diligence performed by the CTPs on the crypto asset prior to their listing;
- CTPs must provide a separate statement for each crypto asset (the “Crypto Asset Statement”) before a client enters into an agreement to purchase a crypto asset, which describes the crypto asset in detail; and
- CTPs must provide their principal securities regulator with a copy of the Risk Disclosure Statement prior to delivering it to a client, along with any report, data, document, or information as reasonably necessary for the purpose of monitoring compliance with their dealer registration terms and conditions.

The European Union and application of MiCA to Crypto Trading

The Markets in Crypto-Assets (MiCA) regulation was adopted by the European Union Parliament and came into force on June 30, 2023. This regulation is “a novel, harmonised framework for the authorisation and regulation of crypto asset service providers,” and allows for a common set of rules that enables “a license granted by the competent authority of one Member State” to be valid throughout the European Union. The provisions included in MiCA include investor protections based on the provisions set forth in Markets in Financial Directives (MiFID) with the aim to allow consumers to make informed decisions about investments and outlines “specific rules in relation to custodian liability, stablecoins and the disclosure of consensus mechanisms.”

Those wishing to make public offerings of crypto-assets will be required to publish a white paper to outline information relating to the issuer, the asset, associated risks and information around the technology. This requirement is to ensure retail holders are “informed of the characteristics, functions and risks of crypto-assets that they intend to purchase.” MiCA mandates CASPs and/or token issuers to prepare white papers for crypto-asset issuances, with specific requirements depending on the type of token being issued.

The white paper, along with marketing materials associated with the white paper, must be written in a “fair, clear and not misleading manner.” It must include a short summary, detail material information of the issuer, a description of the project including its underlying technology, and detail rights, obligations and key risks associated with the crypto-asset. CASPs must disclose within their white paper which “blockchain consensus mechanism” is used. Upon completion of the white paper, the entity must notify and deliver the white paper to its competent authority.

The issuer or CASP must outline in the white paper that it is solely responsible for the contents of the white paper and that it has not been audited by any regulatory authority. Similar to Canadian securities legislation that requires disclosure to be “full, true and plain”, the regulations under MiCA require all information, including marketing outside of the white paper, to be “fair, clear, [and] not misleading.” MiCA allows holders of crypto-assets to seek damages from the issuer for any damage caused from information from the white paper that is incomplete or misleading and prevents any contractual exclusion of civil liability.

Crypto Trading Platform (CTPs) – Practical problems

Practical difficulties in meeting disclosure obligations for Crypto Trading Platforms (CTPs)

CTPs encounter significant challenges in adhering to regulatory disclosure obligations due to the inherently decentralized and dynamic nature of the cryptocurrency market. One primary difficulty is the extensive effort required for gathering and verifying information about crypto assets and their associated projects. CTPs often rely on internal resources to monitor diverse and unreliable information sources such as Twitter, Discord, and Telegram. This approach is not only time-consuming but also inefficient, as it lacks an audit trail and objective validation. Consequently, valuable resources are diverted from other critical operations, and the integrity of the gathered information remains questionable.

In Canada, as well as in other jurisdictions, CTPs are continually expanding their token and coin offerings. The more they expand their portfolio offerings, the more they must scale their due diligence processes. This involves extensive review, ongoing monitoring, and detailed reporting on each token and coin, which increases operational costs and liability. The departure of key personnel responsible for these tasks further complicates matters.

Furthermore, the lack of standardized disclosure protocols leads to inconsistencies in the information provided to investors. This variability complicates the compliance process, increasing the likelihood of regulatory scrutiny and potential penalties. In Canada, for example, CTPs must fulfill stringent Know Your Product (“KYP”) obligations as stipulated by National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. This regulation requires securities dealers, including CTPs, to conduct thorough due diligence on the products they offer, ensuring that they understand the nature, features, and associated risks of each crypto asset. The continuous expansion of token listings exacerbates these challenges, necessitating constant monitoring and updating of information, thereby escalating operational costs and liabilities.

ClearFi: A comprehensive solution for CTPs

ClearFi offers an innovative and comprehensive solution to address these practical difficulties by providing a platform that delivers curated and standardized information about crypto assets and their underlying projects. This platform significantly enhances the efficiency of the due diligence process, ensuring that CTPs can meet their regulatory obligations without

extensive internal resource allocation. ClearFi’s detailed reports include summaries of tokens, recent developments and related information, enabling CTPs to fulfill their KYP requirements confidently.

In the Canadian context, ClearFi assists CTPs in generating comprehensive risk disclosure statements that align with the CSA guidelines. ClearFi’s offering seems like a ready-made solution for Canadian CTPs who are required to publish Risk Disclosure Statements and Crypto Asset Statements; CTPs now have a credible resource to draw from when preparing these statements. These standardized statements streamline the compliance process and arguably enhance investor confidence through consistent and transparent disclosures. This uniform approach is particularly beneficial in an environment where each CTP currently publishes varying degrees of disclosure quality, leading to regulatory concerns.

Under the European Union’s Markets in Crypto-Assets (MiCA) regulation, ClearFi’s platform proves to be invaluable. MiCA mandates that CTPs publish a whitepaper for each token, which must detail essential information about the issuer, the asset, associated risks, and the underlying technology. ClearFi can provide information which token issuers and CTPs can use to draft these white papers, ensuring they meet MiCA’s rigorous standards and facilitating smoother listings on CTPs. By acting as a centralized repository of relevant information, ClearFi supports CTPs across Europe in complying with these new regulations effectively and efficiently.

Additionally, by standardizing information about crypto assets, ClearFi’s platform will play a critical role in eliminating investor confusion. When investors perform due diligence, they often encounter varying information about the same asset on different platforms. Inconsistencies can lead to misinformed decisions and decreased confidence in the market. ClearFi addresses this issue by providing a single, source of information that is uniformly disseminated across all participating CTPs. This uniformity ensures that investors receive the same information, regardless of where they access it. Consequently, it simplifies the due diligence process, making it easier for investors to make informed decisions without the added burden of reconciling conflicting data.

Moreover, consistent data protects CTPs by minimizing the potential for regulatory issues and liability arising from misinformation.

ClearFi: Integrating traditional disclosure with modern cryptocurrency demands

Broadridge's role (via ClearFi) as a neutral and trusted intermediary that has integrity in compiling industry information. This is critical as CTPs must rely on accurate data to meet their regulatory obligations and maintain investor trust. By leveraging ClearFi, CTPs can avoid the resource-intensive process of internal information gathering and verification, instead relying on a standardized, objective, and comprehensive source of data. This not only reduces operational costs but also mitigates the risk of regulatory non-compliance. As CTPs continually expand their token and coin offerings in their respective portfolios, ClearFi can help CTPs to scale their due diligence process accordingly, and provide documented approval from directors and/or officers, which is likely to enhance regulatory compliance and satisfy securities regulator staff.

By providing a scalable solution that addresses the disclosure requirements in multiple jurisdictions, ClearFi enhances the overall transparency and integrity of the cryptocurrency market, benefiting both CTPs and investors alike.



Introduction to ClearFi and large global crypto exchange pilot project

ClearFi's platform was designed to assist market participants and regulators to view data for on and off-chain crypto assets and their affiliated projects in a consolidated, robust manner. ClearFi's mission is to educate investors and enable them to make more informed decisions about their current and future crypto asset holdings.

Crypto assets represent a relatively new investment opportunity. However, as is stated above, clear and standardized disclosure data, comparable to traditional investments, is often lacking. ClearFi's platform intends to bridge this gap by allowing users to easily analyze and compare standardized disclosure data on various crypto assets and their affiliated projects, and allow CTPs and other market participants to disseminate disclosure in a manner consistent with applicable securities laws.

Recently, ClearFi has teamed up with a large global crypto exchange in a pilot project to include a link to ClearFi's platform on its Canadian website. This large global crypto exchange's use of the ClearFi platform will supplement, not replace, its own disclosure documents and disclosure obligations, and allow for its users to quickly access the ClearFi platform to view up to date information relating to their crypto asset of interest.

ClearFi's platform includes a sortable list of the crypto assets which are available on this large global crypto exchange's platform, including the ability to sort by asset type. Once a particular crypto asset is chosen, the user is brought to a webpage summarizing the crypto asset in detail, which displays the standardized disclosure information pertaining to the selected asset. This includes general information about the asset and its underlying blockchain technology, as well as relevant updates to the crypto asset and its affiliated project (if any), including changes to technology, security, its regulatory framework, partnerships, and network activity. Users also have access to a list of pertinent risk factors associated with the crypto asset and affiliated project, as well as financial information, tokenomics, the key holders of the asset, its governance structure, and additional supporting materials including access to the crypto project's white paper, if applicable.



In summary, the ClearFi platform was designed to grant both CTPs and investors easy access to standardized information relating to a multitude of crypto assets and allows CTPs and others to supplement their own disclosure documents to ensure they are aligned and in compliance with relevant securities laws. As discussed below under the heading “Beyond Crypto Trading Platforms”, in addition to crypto trading platforms, the ClearFi platform may also be utilized by a variety of other ecosystem participants.

Assessment of ClearFi

Consumer protection and bridging the information asymmetry gap which often exists between securities issuers and investors is at the heart of the Ontario Securities Act and CSA guidance applied to crypto trading, as well as the MiCA provisions relating to disclosure. Regulations mandate specific disclosure that allows for analysis of the issuer’s business, risk factors and its technology in a format that is accessible and user friendly. When considering the ClearFi platform, it is evident to the author that it was not only designed to embody the spirit of these regulations, but to put them into practice. The interface permits users to review and consider information that could be found in a prospectus (including financial metrics, governance, security holders and risk factors), a Risk Disclosure Statement, a Crypto Asset Statement and in a MiCA-compliant white paper.

ClearFi’s platform aligns with the regulatory spirit of both Canadian securities law and the MiCA framework by providing standardized and comprehensive disclosure of crypto-assets. ClearFi curates on-chain and off-chain data, ensuring that investors have access to material financial information necessary for informed decision-making. By adhering to high standards of transparency and utilizing state-of-the-art technology, ClearFi enhances compliance and reduces inefficiencies. ClearFi’s approach ensures that the information is accessible and clear, thereby embodying the core principles of both regulatory regimes.

Beyond Crypto Trading Platforms

Utility of ClearFi for tokenization of real-world assets

Tokenization of real-world assets involves converting physical assets into digital tokens on a blockchain. This is becoming increasingly popular as tokenization can provide increased liquidity for the underlying asset (e.g., real estate, art, etc.), and can allow for fractional ownership, enabling investors to purchase smaller portions of an asset. Tokenization can also reduce the need for intermediaries as transactions can be automated through smart contracts, resulting in lower costs and faster settlement times.

However, it is important to acknowledge that the act of tokenizing real-world assets does not alter the intrinsic nature of the assets themselves. It is crucial for issuers to conduct a thorough legal and regulatory analysis grounded in the characteristics of the underlying asset, and investors must be provided with disclosure on the attributes and risks associated with investing in the underlying asset. ClearFi can play an important role in this process by providing comprehensive and standardized information necessary for investors to make an informed decision to invest in the tokens representing the real-world assets. In the event the tokens representing the real-world assets are deemed securities, there will be an obligation pursuant to Canadian securities law (in addition to the securities legislation of the EU and the US) on the issuer to comply with disclosure requirements, regardless of whether the issuer is selling the tokens to accredited investors only, or is distributing the tokens more widely via a prospectus or offering memorandum. Even where tokenized real-world assets are not deemed to be securities, there will likely be a positive obligation on CTPs or platforms trading tokenized real-world assets to provide substantial and meaningful disclosure about the assets. ClearFi can help token issuers, CTPs and tokenized real-world asset trading platforms to populate this disclosure and the ClearFi platform can serve as a gateway for investors to stay up to date on any material changes affecting the underlying assets.

By providing transparent asset data, ClearFi helps mitigate risks and enhances trust among investors. Whether it is real estate, commodities, or art, ClearFi's platform ensures that all pertinent details about the asset are disclosed, making the tokenization process more seamless and compliant with regulatory standards. This fosters greater investor confidence and opens up new avenues for asset liquidity.

Value proposition for investment advisors

Crypto assets have become a topic of significant interest among investors across generations, including baby boomers, Gen X, and millennials. Many investors are approaching their securities advisors with questions about diversifying their portfolios with crypto assets like Bitcoin and ETH. As the demand for crypto investments grows, advisors face the challenge of expanding their KYP obligations to include these new asset classes and meet securities regulatory requirements.

Securities advisors are required to have thorough knowledge of the products they recommend to clients, ensuring suitability and compliance with regulatory standards. However, this obligation can become complex when it comes to crypto assets, as they have characteristics which are unlike traditional equity and debt securities (such as an underlying blockchain architecture, tokenomics and staking features). Advisors need to be well-informed about various crypto assets, such as Solana (SOL), Matic (MATIC), and staking mechanisms, to provide sound, comprehensive advice. Relying on informal sources, social media (including Twitter/X, Reddit or Telegram) or personal connections for crypto information is not sufficient for advisors to meet these regulatory standards.

ClearFi provides a solution by offering comprehensive and standardized reports on crypto assets. As outlined above, reports include detailed and objective analyses of tokens, tokenomics, blockchain projects, and associated risks, enabling advisors to meet their KYP obligations confidently and in accordance with securities regulations. By utilizing ClearFi's platform, advisors can access objective and standardized information, which provides them with an information/data audit trail which can serve as evidence of their compliance with their KYP requirements.

With the increasing integration of crypto assets into traditional financial markets, securities advisors are seeing a rise in client interest in products like crypto ETFs. For instance, the recent approval of a rule change by the US Securities and Exchange Commission (SEC) to allow NASDAQ, NYSE, and CBOE exchanges to list Ethereum (ETH) Exchange-Traded Funds (ETFs) is a significant and well-publicized sign that this integration is occurring. The recent launch of Wisdom Tree's tokenized open-ended mutual fund as well as Blackrock's tokenized money market fund serve as further evidence of the integration of the crypto and "TradFi" industries. The SEC's aforementioned approval of the rule change allowing for ETH ETFs is expected to drive greater adoption and investor interest in crypto ETFs, making it imperative for advisors to be competent in advising on these products.

ClearFi's platform is invaluable in this context. It provides securities advisors with the necessary tools to understand and evaluate crypto ETFs and other blockchain-based investment products. ClearFi's detailed and standardized reports help advisors stay informed about market developments, regulatory changes, and the specific characteristics of crypto assets, allowing them to offer well-rounded and compliant investment advice.

By providing detailed, and standardized information, ClearFi helps advisors meet their regulatory obligations, support diversified investment strategies, and enhance their professional competence. As the crypto market continues to evolve, ClearFi positions itself as an essential tool for advisors to stay ahead, build trust with their clients, and deliver superior investment advice in our increasingly digital economy.

Benefit for token and coin issuers

In the digital asset industry, "coins" and "tokens" have different meanings. Coins have their own independent blockchain, whereas tokens are built on top of an existing blockchain. For example, Bitcoin and ETH are coins with their own blockchains, while tokens like Tether's USDT and Uniswap's UNI token are built on top of Ethereum's blockchain. Regardless of whether a specific project (i.e. a foundation or related legal entity which deploys the asset) is issuing a token or a coin, ClearFi's platform provides

objective disclosure and can greatly assist issuers in complying with a myriad of regulatory frameworks. For example, as noted above, MiCA requires digital asset issuers to publish a white paper with specific criteria regarding the asset, its associated risks and information around the underlying blockchain technology. Issuers can utilize ClearFi to assist them in populating the statutorily prescribed sections of white paper. As with securities advisors and CTPs, token and coin issuers will have an objective data trail in their file that supports their disclosure in their white papers, which they can produce in the case of a regulatory audit or investigation.

ClearFi governance – leveraging ClearFi as the golden standard

In the cryptocurrency ecosystem, “governance” refers to the systems and processes through which decisions are made and implemented within a blockchain network or a decentralized project. This includes how rules are established, how changes to the protocol are made, and how the interests of various stakeholders (such as token holders, developers, and users) are managed. Governance can be on-chain, involving smart contracts and automated voting, or off-chain, involving discussions and decisions made by community members or developers. Strong governance systems are crucial as they will often determine the nature of how a blockchain ecosystem will develop over time. Governance establishes the types of decisions that need to be made, who is responsible for making them, and how they are communicated.” Effective governance can ensure transparency, accountability and the alignment of a blockchain network’s operations with the interests of its stakeholders.

Unlike traditional corporate governance, which is guided by well-established laws and regulations, crypto governance is often ad-hoc and decentralized. This decentralization, while aligning with the core principles of blockchain technology, leads to inconsistencies and inefficiencies in decision-making processes. For example, many critical decisions in the cryptocurrency ecosystem often occur on informal channels like Reddit and Twitter, potentially resulting in a lack of formality and accountability, making it difficult to ensure clear and responsible decision-making. Additionally, the overwhelming amount of



information on social media can result in misinformation and inefficiency, delaying crucial decisions. Security concerns also arise due to the vulnerability of these platforms to manipulation and spam, compromising the integrity and authenticity of the governance processes.

ClearFi can address these governance challenges by providing a standardized governance framework that ensures formal and transparent decision-making processes. This includes tools for proposal submission, voting, and implementation of decisions.

Additionally, ClearFi’s platform can compile information for industry standard sources, reducing the noise and misinformation prevalent on social media. This ensures that stakeholders have access to relevant data for informed decision-making. ClearFi can streamline discussions and voting, making the decision-making process more efficient. This helps in timely implementation of changes and adaptations.

Finally, ClearFi can incorporate robust security measures to protect the integrity of the governance process. This includes verifiable voting mechanisms and transparent recording of decisions, ensuring accountability and trust among stakeholders.

Systemic risk in the cryptocurrency industry – The ClearFi solution

The cryptocurrency market is extremely interconnected, with connectedness index values ranging from 86-97% according to some analyses. This means most of the price variations are due to spillovers within the market rather than individual characteristics of crypto assets. Strong interconnectedness can amplify price movements and volatility across the entire crypto asset ecosystem. Shocks in one part of the market can quickly spread to other projects.

As in the traditional financial system, a certain level of fraud exists within the crypto asset economy. Common types of crypto fraud include investment scams, market manipulation, and phishing. The decentralized and pseudonymous nature of crypto assets can at times exacerbate these issues.

Many tokens and coins and their affiliated projects are technologically interconnected through cross-chain bridges, atomic swaps, and interoperability protocols. While enabling the transfer of assets across blockchains, these links could also propagate risks more easily between projects.

DeFi risks

Decentralized finance (“DeFi”) amplifies risks also present in traditional finance, like operational risks, leverage, and complex interconnections that make it prone to instability. DeFi governance frameworks are often unclear, untested and open to manipulation, misleading users about safeguards. Uncertainty exists over ex-post remedies for participants. Smart contract vulnerabilities, hacks, and exploits of cross-chain bridges have led to major losses in DeFi. Technological complexity introduces new attack vectors.

High yields in DeFi often rely on recursive leverage and rehypothecation, creating liquidity mismatches and increasing risk of bank-run dynamics.

Stablecoin fragility

Despite their name, stablecoins have occasionally failed to maintain their pegs, as shown by TerraUSD’s collapse and Tether’s periodic depegging events.

Some stablecoin projects are susceptible to runs due to liquidity mismatches, lack of transparency around reserves, and speculative attacks. Their failures can quickly spread contagion. Further, stablecoins are increasingly used as collateral in DeFi, so a major stablecoin collapse could trigger a cascade of liquidations and destabilize crypto markets.

Data and risk monitoring gaps

In its current form, publicly available data on crypto markets has major limitations in scope, quality, and consistency. Off-chain transactions and exposures of financial institutions to crypto are particularly hard to track. Pseudonymity and layered protocols make it difficult to untangle flows and counterparty relationships to map interconnectedness and concentrations.

Lack of standardized data and disclosures by crypto firms and platforms hinders risk monitoring and creates an incomplete picture for investors and regulators.

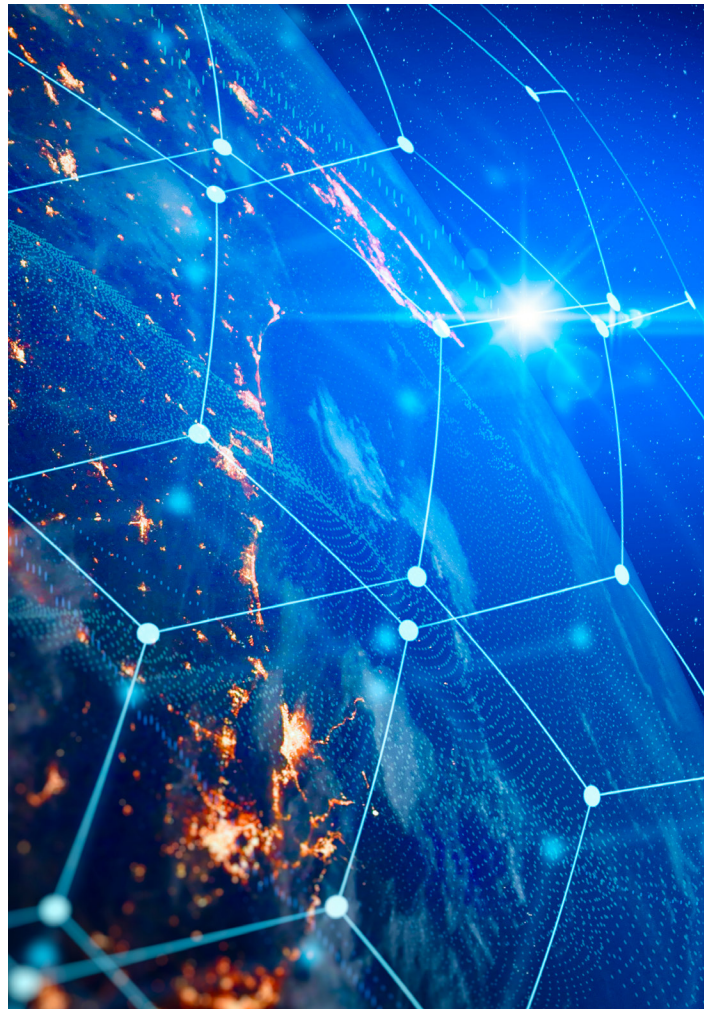
The ClearFi solution

As noted above, regulators in North America, the European Union and elsewhere are increasingly focused on addressing these risks through enhanced supervision, transparency requirements, and enforcement actions targeting fraud and illicit finance. However, they face challenges in applying existing rules to the unique characteristics of crypto assets and keeping pace with market developments.

ClearFi aims to tackle these issues by providing a platform for standardized data and information on crypto assets. By curating on-chain and off-chain data on tokenomics, governance, and other key project characteristics, ClearFi can help investors and regulators better understand and compare risk factors across crypto assets. Importantly, ClearFi plans to leverage machine learning as well as other large data models to identify potential sources of systemic risk at the protocol level. Machine learning models will be trained on historical data to detect patterns associated with fraud, manipulation, or contagion based on transaction flows, market sentiment, or governance structures.

Predictive analytics could highlight projects or activities that exhibit high risk of failure or illicit activity. This intelligence could help inform risk assessments by CTPs, investment advisors, and asset managers with exposure to crypto assets. Surfacing potential red flags early could support timely risk mitigation actions and more robust due diligence. Aggregated risk indicators and network analysis could also aid regulators in mapping interconnections and transmission channels to understand macro-level vulnerabilities.

Additionally, automated compliance checks and risk scoring into the platform could further streamline adherence to disclosure obligations. In summary, ClearFi's combination of standardized crypto asset data and machine learning-based risk analytics has the potential to meaningfully improve systemic risk monitoring and regulatory compliance in the crypto ecosystem. By promoting transparency and surfacing potential sources of instability or illicit activity, ClearFi could help market participants and authorities better identify, assess, and mitigate risks before they undermine the integrity of crypto markets or the broader financial system. Continued development of these capabilities in collaboration with industry and regulatory stakeholders will be key to realizing this vision.



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Our technology and operations platforms process and generate over 7 billion communications per year and underpin the daily trading of more than \$10 trillion of securities globally. A certified Great Place to Work®, Broadridge is part of the S&P 500® Index, employing over 14,000 associates in 21 countries.

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