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INITIAL COIN OFFERINGS: THE RESPONSE OF
REGULATORY AUTHORITIES

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In recent decades, financial markets have undergone many significant transformations. Recently, Initial Coin Offerings (ICOs) emerged as a disruptive trend in capital formation as part of the broader ecosystem of fintech and blockchain. ICOs are a revolutionary tool for capital formation, and are contributing to disintermediate financial markets. After a brief overview of what ICOs are, how they work, and how they evolved, this Note focuses on the responses implemented by regulatory authorities (in particular securities regulators), highlighting their shortcomings and the potential alternatives. This Note promotes a more functional approach for the regulatory authorities, which are challenged like never before by the urgency of the regulatory issues emerging from the exponential growth of technology.

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INTRODUCTION

In the past decades, the financial and banking industries have undergone several transformations. In particular, new market actors—first the mutual funds, then the private funds (private equity funds and hedge funds)—have facilitated disintermediation¹ and financial innovation.²

In recent years, Fintech, a term coined in 1990³ that refers to any technological application to deliver financial solutions,⁴ has contributed to a reshaping of capital markets. Compared to its predecessors, however, today's Fintech has peculiar characteristics. As Chris Brummer emphasizes, "many of today's disruptors are upstarts with less established and often untested business models and technologies," and "fintech actors pinpoint, and often disintermediate discrete points in the value chain of longstanding business processes . . . operat[ing] simultaneously while pushing constant changes and alternations in financial systems."⁵ Blockchain, a specific implementation of distributed ledger technology ("DLT"), has all of these

1. For an analysis of banking disintermediation see Charles K. Whitehead, *The Evolution of Debt Covenants, the Credit Market, and Corporate Governance*, 34 J. CORP. L. 101 (2009).

2. For an analysis of the different phases of capitalism, see Robert Charles Clark, *The Four Stages of Capitalism: Reflections on Investment Management Treatises*, 94 HARV. L. REV. 561 (1981). The author identifies four phases of American capitalism. The first corresponds to the creation of corporations; the second coincides with the separation of ownership and control. The third phase is characterized by the role of financial intermediation. The fourth phase is characterized by the stronger role of financial intermediation. *Id.* at 562–67.

3. Mark Hochstein, *Fintech (the Word, That Is) Evolves*, AM. BANKER (Oct. 5, 2015), <http://www.americanbanker.com/bankthink/fintech-tGoohe-word-that-is-evolves-1077098-1.html>.

4. See Douglas W. Arner, Ja'nos Barberis & Ross P. Buckley, *The Evolution of Fintech: A New Post-Crisis Paradigm?* (Univ. of Hong Kong Faculty of Law, Research Paper No. 2015/047, 2015). See also Douglas W. Arner, Ja'nos Barberis & Ross P. Buckley, *FinTech, RegTech and the Reconceptualization of Financial Regulation*, 37 NW. J. INT'L L. & BUS. 371 (2017).

5. Chris Brummer, *Prologue* to Daniel Gorfine, *FinTech Innovation: Building a 21st Century Regulator*, IIEL ISSUE BRIEF (Nov. 2017), <https://www.law.georgetown.edu/iiel/wp-content/uploads/sites/8/2018/01/LabCFTC-Chris-Brummer-Dan-Gorfine-IIEL-Issue-Brief-November-2017-Accessible.pdf>.

characteristics and is becoming the topical regulatory issue, challenging policymakers with its complexities of multiple implementations. As a distributed database which holds a secure and immutable record of past transactions, blockchain can easily be adapted to a broad range of activities and objectives.⁶ Although blockchain is mainly used hitherto in the post-trading market operations,⁷ it can potentially be applied to all existing manual processes that require communication and storage of information.⁸ Therefore, this technology is often referred to as a “disruptive innovation” or as a “foundational innovation.”

A major implementation of blockchain as a part of capital formation is initial coin offerings (“ICOs”). ICOs have existed for the past four years under different structures, but they have grown exponentially only in the past two years. In the second quarter of 2017, they outcompeted and outperformed venture capital in financing cryptocurrency and blockchain startups for the first time.⁹ However, neither the American nor the European regulators have been able to adequately regulate this practice. In particular, regulators have trouble defining ICOs in the context of the existing legal framework for financial instruments (namely, the definition of “security”).

In recent years, the way the principal securities authorities reacted to the epochal changes—to blockchain in general and to ICOs in particular—was essentially a “do no harm” approach, which avoids stifling innovation with burdensome regulation. The U.S. Commodity Futures Trading Commission

6. See, e.g., CHARLES BRENNAN & WILLIAM LUNN, *BLOCKCHAIN: THE TRUST DISRUPTER* (2016), <https://www.finextra.com/finextra-downloads/newsdocs/document-1063851711.pdf>. For a discussion on the regulation of disruptive technology, see, for example, Mark Fenwick, Wulf A. Kaal & Erik P. M. Vermeulen, *Regulation Tomorrow: What Happens When Technology is Faster than the Law?*, 6 AM. U. BUS. L. REV. 561 (2016).

7. *Distributed Ledger Technology: Challenges and Opportunities for Financial Market Infrastructures*, EUR. CENT. BANK (2016), <https://www.ecb.europa.eu/pub/annual/special-features/2016/html/index.en.html>.

8. See, e.g., ASTRI, *WHITEPAPER ON DISTRIBUTED LEDGER TECHNOLOGY* (2016), http://www.hkma.gov.hk/media/eng/doc/key-functions/financial-infrastructure/Whitepaper_On_Distributed_Ledger_Technology.pdf.

9. Arjun Kharpal, *Initial Coin Offerings Have Raised \$1.2 Billion And Now Surpass Early Stage VC Funding*, CNBC (Aug. 9, 2017), <https://www.cnbc.com/2017/08/09/initial-coin-offerings-surpass-early-stage-venture-capital-funding.html>.

("CFTC"), who successfully implemented this approach during the mass expansion of the internet, now suggested that it should be re-applied to the blockchain era.¹⁰

This Note will assess the way regulatory authorities, especially securities regulators, react to ICOs. Part I provides a preliminary analysis of the main characteristics of ICOs, focusing on their operational pattern and how they have evolved. Part II analyzes the way ICOs disrupts the market, disintermediates banks and venture capital. Part III assesses the preliminary statements issued by securities regulators on the nature and the risks of ICOs, evaluates their approach, and suggests alternative regulatory strategies, which aim at providing a more effective response to the market in the context of disruptive innovations.

I. ICOs

A. *What Are They and How Do They Work?*

ICOs consist of the sale of a stake in a project with the aim to raise funds¹¹ at an early stage of development. Despite their perceived similarities to Initial Public Offerings ("IPOs") and crowd-funding campaigns on platforms such as Kickstarter and Indiegogo,¹² ICOs remain distinct.

Unlike IPOs, where companies sell stocks via regulated exchange platforms, ICOs sell digital coupons, also called "software presale tokens," to early investors via non-regulated exchange platforms. Tokens are issued through an indelible distributed ledger¹³ in the form of an organization's

10. Christopher J. Giancarlo, Chairman, Comm. Fut. Trading Comm'n, Keynote Address before the ISDA's Trade Execution Legal Forum (Dec. 9, 2016) [hereinafter Giancarlo, Keynote Address].

11. Maria Fonseca, *ICOs and Blockchain Token Funding*, INTELLIGENT HQ (May 5, 2017), <https://www.intelligenthq.com/finance/icos-and-blockchain-token-funding/>.

12. See Josh Finer, *How Blockchain Startups Are Driving an Under-the-Radar Fundraising Boom*, VENTUREBEAT (Nov. 13, 2016), <https://venturebeat.com/2016/11/13/how-blockchain-startups-are-driving-an-under-the-radar-fund-raising-boom/>.

13. See generally *The Market in Initial Coin Offerings Risks Becoming a Bubble*, ECONOMIST (Apr. 25, 2017), <http://www.economist.com/news/finance-and-economics/21721425-it-may-also-spawn-valuable-innovations-market-initial-coin-offerings>.

cryptocurrency¹⁴ (clones of the bitcoin¹⁵ which are created on such protocols as Counterparty, Ethereum, or Openledger). These tokens create the capital inflow required for the financing the project,¹⁶ as they can be purchased online with fiat currency or other digital currencies at a predetermined exchange rate.¹⁷ Unlike common stocks available in an IPO, tokens do not generally confer ownership rights. Instead, a token offers a discount on cryptocurrency before they hit the exchanges,¹⁸ and, combined with the stake in the company, a right to vote on future decisions.¹⁹ Some ICOs provide different levels of participation: voting member, founding member, third party service provider member, or asset gateway member.²⁰

14. Brandon Kostinuk, *Too Many Crypto Coin Crowd Sales Could Crowd Out True Innovators*, AM. BANKER (2016), <https://www.americanbanker.com/opinion/too-many-crypto-coin-crowd-sales-could-crowd-out-true-innovators>.

15. Paul Vigna, *How a Bitcoin Clone Helped a Company Raise \$12 Million in 12 Minutes*, WALL ST. J. (May 17, 2017), <https://www.wsj.com/articles/how-a-bitcoin-clone-helped-a-company-raise-12-million-in-12-minutes-1495018802>.

16. *Id.*

17. Kostinuk, *supra* note 14.

18. This may be an argument in support of the impossibility of defining them as “securities.” See Richard Kastelein, *Initial Coin Offerings (ICOs) Can Disrupt Both Traditional VC and Equity Crowdfunding*, INTELLIGENT HQ (Mar. 31, 2017), <https://www.intelligenthq.com/finance/initial-coin-offerings-icos-can-disrupt-vc-and-equity-crowdfunding/>.

19. Ben Dickson, *Can You Trust Crypto-Token Crowdfunding?*, TECHCRUNCH (Feb. 12, 2017), <https://techcrunch.com/2017/02/12/can-you-trust-crypto-token-crowdfunding>.

20. For example, OpenANX, a cryptocurrency exchange, provides for the following types of investors:

Membership provides the holder with access to the openANX platform, and may convey voting privileges and other benefits as outlined below. The memberships will work through a tiered structure that allow for simple access, voting privileges or commercial (read: business) solicitation of services on the platform (e.g. escrow, legal, exchange, credit, asset gateway) with the relative number of tokens required for redemption varying with the level of benefits.

OAX, OPENANX – REAL WORLD APPLICATION OF DECENTRALIZED EXCHANGES V2.3.8, at 18 (2017), https://www.oax.org/assets/whitepaper/openANX_White_Paper_ENU.pdf. Clause 5.2 further defines “voting membership” and “founding membership.” With regard to the former, it states that “A voting member shall have the privilege to vote on decisions regarding the openANX platform. These votes shall be determined via the Foundation’s terms and shall be communicated to the Membership through the Foundation’s website (www.openanx.org) and via social media and online

Unlike crowdfunding campaigns, ICOs are not donation,²¹ but more generally as a financial stake in the company,²² including the right to vote on future decisions.²³ Therefore, unlike any campaigns conducted on Kickstarter, ICOs have a clear speculative purpose, consisting of material value developed on platforms and cryptocurrencies.

Although ICOs are a rather new phenomenon, a structural pattern seems to have emerged.²⁴ In the first stage, before the launch, ICO initiatives are often announced on cryptocurrency forums such as Bitcoin Talk, Cryptocointalk, or Reddit. This announcement is followed by an executive summary to present the project to investors. These comments are subsequently evaluated when an offering memorandum is drafted (in the form of a white paper),²⁵ providing more detailed information (most importantly the key terms and the investment approach, including the investment strategy, criteria, restrictions, processes, and returns) about the project in order to assist investors in their assessment of the project.²⁶ White papers are not audited by any authority, therefore, these preliminary steps are crucial to building market credibility and investors' trust. The yellow paper, where the technical specifics are provided, is also a key determinant in investors' decision as to whether or not to support a project at this preliminary stage.

A preliminary offer is often made to selected investors.²⁷ After those investors signing the offer, an announcement and

channels." *Id.* at 19. With regard to the latter, it provides that "a founding member shall have all the privileges of a voting member. In addition, a founding member shall have the right to suggest topics for upcoming discussions." *Id.*

21. See *What is a Token Sale (ICO)?*, SMITH & CROWN (June 21, 2016), <https://www.smithandcrown.com/what-is-an-ico/>.

22. See Ben Dickson, *What is an Initial Coin Offering (ICO)?*, TECHTALKS (Dec. 7, 2016), <https://bdtechtalks.com/2016/12/07/what-is-an-initial-coin-offering-ico/>.

23. Dickson, *supra* note 19.

24. For a discussion of the identification of four different phases, see Roger Aitken, *Investment Guide to 'Crypto' Coin Offerings Ratings Blockchain Startups*, FORBES (Jan. 6, 2017, 11:13 AM), <https://www.forbes.com/sites/rogeraitken/2017/01/06/investment-guide-to-crypto-coin-offerings-rating-blockchain-startups/#614e6940121b>.

25. See *id.* Fonseca, *supra* note 11.

26. Fonseca, *supra* note 11.

27. Aitken, *supra* note 24.

a PR campaign of the ICO will be addressed to a broader range of investors (typically including small investors).²⁸ After that, the ICO will be launched and the new venture will sell the cryptocurrency that is used with their software before the software itself is even written.²⁹ The company may have a proof of concept or an alpha version before starting the token sale, and sometimes even a beta version as in the case of Storj.³⁰ The collection of funds in bitcoin is a common practice and may be implemented in one of two ways: employing a public address and allowing the participants to send bitcoin from an address for which they control the private key, or, alternatively, creating an account for each of them and assigning to each of them a unique/individual bitcoin address.³¹ It is best to use a public multi-sig address where all the funds are ultimately held.³² The round of fundraising (usually only one) happens before the startup launching its project, but the duration of ICOs may vary depending on the success of the entrepreneurial initiative among the investors. The most successful ICOs were concluded in a few minutes. In April 2017, the startup Gnosis, an innovative decentralized prediction platform,³³ raised about \$12.5 million by auctioning online tokens. The tokens sold out in 12 minutes.³⁴ In May 2017, the startup Blood raised \$5.5 million in 2 minutes, whereas Brave, a startup developing a new web browser via the so-called Basic

28. *Id.*

29. Josh Finan, *How blockchain startups are driving an under-the-radar fundraising boom*, VENTUREBEAT (Nov. 13, 2016, 9:05 AM), <https://venturebeat.com/2016/11/13/how-blockchain-startups-are-driving-an-under-the-radar-fundraising-boom/>.

30. Trond Vidar Bjørøy, *Blockchain fundings are trendy, but we're still in the Wild West days*, VENTUREBEAT (May 14, 2017, 4:54 PM), <https://venturebeat.com/2017/05/14/blockchain-fundings-are-trendy-but-were-still-in-the-wild-west-days/>.

31. SMITH & CROWN, *supra* note 21.

32. *Id.*

33. Alyssa Hertig, *Ethereum Prediction Market Project Gnosis Sets ICO Launch Date*, COINDESK (Apr. 5, 2017), <http://www.coindesk.com/ethereum-prediction-market-project-gnosis-sets-ico-launch-date/>.

34. Paul Vigna, *How a Bitcoin Clone Helped a Company Raise \$12 Million in 12 Minutes*, WALL ST. J. (May 17, 2017), <https://www.wsj.com/articles/how-a-bitcoin-clone-helped-a-company-raise-12-million-in-12-minutes-1495018802>. See also Gertrude Chavez-Dreyfuss, *Blockchain Startup Gnosis to Freeze Tokens After Strong Sale*, REUTERS (Apr. 26, 2017, 10:08 AM), <http://www.reuters.com/article/us-blockchain-funding-gnosis-idUSKBN17R2RD>.

Attention Tokens,³⁵ raised \$35.5 million in 30 seconds.³⁶ The digital tokens are listed on cryptocurrency exchanges for trading. At the moment there are forty exchanges around the world that serve as secondary markets where cryptocurrencies can be traded for bitcoin in an open marketplace.³⁷ A cryptocurrency's pre-ICO price is arbitrarily determined by the start-up team that structured the ICO,³⁸ whereas the post-ICO price is determined by market supply and demand. This is consistent with the decentralized functioning of blockchain technology, as the participants, instead of a central authority or government, set the price.³⁹ Successful entrepreneurial activities increase the price of the tokens, granting profitable returns to investors;⁴⁰ should the start-up fail, the tokens' price will fall as well.

B. *How Did They Evolve?*

The creation of bitcoin⁴¹ has been associated with the concept of ICOs. While money is directly invested in ICOs, in the context of bitcoin, investors have to buy computing gear to "mine" (i.e., mint cryptographically) the tokens.⁴² The success

35. See generally BASIC ATTENTION TOKEN, <https://basicattentiontoken.org> (last visited Aug. 10, 2018).

36. Jonathan Keane, *\$35 Million in 30 Seconds: Token Sale for Internet Browser Brave Sells Out*, COINDESK (May 31, 2017), <http://www.coindesk.com/35-million-30-seconds-token-sale-internet-browser-brave-sells/>. See also Mathew Ingram, *Startup Raises \$35 Million in 30 Seconds with Crypto Currency Offering*, FORTUNE (June 1, 2017), <http://fortune.com/2017/06/01/startup-crypto-currency/>; Brian Patrick Eha, *Web Pioneer Plans Blockchain-based Digital Ad Platform*, AM. BANKER (Mar. 24, 2017), <https://www.americanbanker.com/news/web-pioneer-plans-blockchain-based-digital-ad-platform>.

37. Tim Lea, *Venture capital 3.0: the initial coin offering explained*, FIN. REV. (May 3, 2017, 7:25 AM), <http://www.afr.com/technology/venture-capital-30-the-initial-coin-offering-explained-20170502-gvxhos>.

38. Richard Kastelein, *What Initial Coin Offerings Are, and Why VC Firms Care*, HARV. BUS. REV. (Mar. 24, 2017), <https://hbr.org/2017/03/what-initial-coin-offerings-are-and-why-vc-firms-care>.

39. *Id.*

40. *The Market in Initial Coin Offerings Risks Becoming a Bubble*, *supra* note 13. See also Charles Dearing, *Rule of Thumb for ICO Investor: Explore Risks Involved*, COINTELEGRAPH (June 9, 2017), <https://cointelegraph.com/news/rule-of-thumb-for-ico-investor-explore-risks-involved>.

41. Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN, <https://bitcoin.org/bitcoin.pdf> (last visited Apr. 5, 2018).

42. *The Market in Initial Coin Offerings Risks Becoming a Bubble*, *supra* note 13.

of bitcoin favored the emergence of “alt-coins,” supported by their own blockchain technology.⁴³ MasterCoin, which raised 5000 bitcoin in a crowdsale⁴⁴ in the summer of 2013, is considered the first example of an ICO connected to the financing of a new venture. In that case, the sale was structured so that users had to send bitcoin to an “exodus” address which held all the funds, with the purpose to trade those bitcoin for some other coin that had yet to be developed.⁴⁵ Two major crowdsale platforms, in terms of relevance and visibility, are Ethereum and Factom, both of which distributed tokens to the public after taking funds in bitcoin.⁴⁶ The creation of Ethereum is the most significant transformation in the ICO market to date, due to its specificities as a decentralized platform incorporating smart contracts.⁴⁷ This capability “allows developers to build applications on top of [Ethereum’s] blockchain layer.”⁴⁸ For this reason, after the creation of Ethereum, a vast majority

43. *Id.*

44. Ethereum refers to “crowdsale” in broad terms: “generally those who are funding can’t have any say on how the money is spent after the funds are raised and mismanagement often causes projects never to deliver anything at all. In this project we will use a democratic organization that will have to approve any money coming out of the system. This is often called a *crowdsale* or *crowd equity* and is so fundamental that in some cases the token can be the reward itself, especially in projects where a group of people gather together to build a common public good.” See *Crowdsale: Raising Funds from Friends Without a Third Party*, ETHEREUM, <https://www.ethereum.org/crowdsale> (last visited Aug. 10, 2018) (emphasis added).

45. Jimmy Song, *Why ICOs are Very Different Than Seed Capital*, MEDIUM (May 22, 2017), <https://medium.com/@jimmysong/why-icos-are-very-different-than-seed-capital-a59e4c78b84a>.

46. *Id.*

47. Smart contracts (a term coined in 1994 by Nick Szabo) are pre-written logic computer programs that can be impartially “executed by DLT itself” (by DLT validating nodes). Their coded terms, a set of pre-defined terms and execution conditions, are agreed by all relevant parties. One or a series of specific events trigger the transaction without relying on a central authority. They are executed by transferring the value between the contract signing parties when the transaction is triggered. See Ameer Rosic, *Smart Contracts: The Blockchain Technology That Will Replace Lawyers*, BLOCKGEEKS, <http://blockgeeks.com/guides/smart-contracts/>. See also Nick Szabo, *Formalizing and Securing Relationships on Public Networks*, FIRST MONDAY (Sept. 1, 2017), <http://ojphi.org/ojs/index.php/fm/article/view/548/469>; Houman Shadab, *What Are Smart Contracts, and What Can We do with them?*, COIN CTR. (Dec. 15, 2014), <https://coincenter.org/entry/what-are-smart-contracts-and-what-can-we-do-with-them>.

48. Kostinuk, *supra* note 14.

of developers has opted for writing smart contracts on Ethereum rather than creating their own new blockchain technology.⁴⁹ Smart contracts automatically generate tokens when receiving “Ether” (or ETH), the cryptocurrency of Ethereum.⁵⁰ The implementation of “smart contracts” via Ethereum or similar platforms has made the overall system more efficient, compared to the difficulties of creating a new blockchain technology.

ICOs have constantly evolved and continue to evolve. In the past two years, they switched from an “uncapped” to a “capped” sales model, further adopting the framework of the so-called “*reverse Dutch auction*.”⁵¹ The continuous evolution in the ICO structure is determined by the need to optimize this method of fundraising, increasing the efficiency while fixing the emerging shortcomings. The Ethereum crowdsale is an example of “uncapped sale”: the quantity of tokens sold to the public was not predetermined (capped) and the sale ran for 42 days.⁵² Two main criticisms arose with regard to uncapped ICOs: first, they were perceived somewhat as an expression of their promoters’ greed; second, from an investor’s perspective, a major concern was related to their exposure to the “high uncertainty about the valuation” of what they were buying.⁵³ Capped sales emerged as a dominant structure between 2016 and 2017. As Vitalik Buterin emphasizes, “capped sales have the property that it is very likely that interest is oversubscribed, and so there is a large incentive to getting in first.”⁵⁴ Examples of these sales include Blood and BAT.⁵⁵ With regard to the former, an amount of tokens equal to \$5.5 million was sold in two minutes, whereas in the latter \$35 million worth of tokens

49. *The Market in Initial Coin Offerings Risks Becoming a Bubble*, *supra* note 13.

50. *Id.*

51. Aaron Watts, *Types of ICO Auctions*, COINCODEX, <https://coincodex.com/article/60/types-of-ico-auctions/> (last visited Aug. 10, 2018).

52. See Vitalik Buterin, *Analyzing Token Sale Models*, VITALIK BUTERIN’S WEBSITE (June 9, 2017), <http://vitalik.ca/general/2017/06/09/sales.html>.

53. *Id.*

54. *Id.*

55. CodeTract, *BAT ICO, USD 35 million in 24 Seconds, Gas and GasPrice*, MEDIUM (June 1, 2017), <https://medium.com/@codetractio/bat-ico-usd-35-million-in-24-seconds-gas-and-gasprice-6cdde370a615>.

were sold in 30 seconds.⁵⁶ The Gnosis ICO (\$12.5 million⁵⁷) marked a further step in the structural evolution of ICOs. To mitigate the inefficiencies and the risks of a “capped sale,” the ICO was structured to opt for the “reverse Dutch auction”: not only the ICO was capped to \$12.5 million, but the time necessary to complete the sale was also based on the quantity of tokens distributed among the investors, with the rest held by the start-up team. Therefore, if the sale is finished on the first day, then only about 5% of tokens would be distributed among purchasers, and the rest would be held by the Gnosis team; if it is finished on the second day, about 10% would be distributed, and so forth.⁵⁸

II.

THE IMPACT OF ICOs WITHIN THE MARKET

Over the past few years, fundraising for new entrepreneurial initiatives has been more and more difficult. The financial crisis coupled with banking regulations significantly diminished resources available for small and medium enterprises (SMEs), especially those with lower ratings, and even more so for new entrepreneurial activities. The introduction of Basel II and III has significantly impacted bank lending activities. Basel III, in particular, by increasing capital requirements and risk-weighted assets, has exerted a higher pressure on banks and their Return on Equity (RoE).⁵⁹ This has led to more prudent business practices, with an aim to smoothen the provision of long-term finance over economic and financial cycles,⁶⁰ but it has significantly constrained the financing instruments available for SMEs and companies with below-investment-grade stock. This has resulted in increased banking dis-

56. *Id.*

57. Hertig, *supra* note 33.

58. Buterin, *supra* note 52.

59. See EUR. BANKING AUTH., OVERVIEW OF THE POTENTIAL IMPLICATIONS OF REGULATORY MEASURES FOR BANKS' BUSINESS MODELS (2015), <https://www.eba.europa.eu/documents/10180/974844/Report+-+Overview+of+the+potential+implications+of+regulatory+measures+for+business+models.pdf/fd839715-ce6d-4f48-aa8d-0396ffc146b9>.

60. ORG. FOR ECON. CO-OPERATION & DEV., THE ROLE OF BANKS, EQUITY MARKETS AND INSTITUTIONAL INVESTORS IN LONG-TERM FINANCING FOR GROWTH AND DEVELOPMENT (2013), <http://www.oecd.org/finance/private-pensions/G20reportlftfinancingforgrowthrussianpresidency2013.pdf>.

intermediation, where corporations obtain funding from non-bank sources, such as non-bank lenders or by issuing bonds. Banking disintermediation has existed since the 70s. The competition between banks and non-banks led to a change in the banking business,⁶¹ and flourished in the aftermath of the last financial crisis,⁶² where the emerging shadow banking system provided a significant amount of resources.

Shadow banking typically encompasses a broad range of institutions and activities,⁶³ including private funds—in particular hedge funds, private equity funds, and venture capital (“VC”)—and insurance companies, as well as the implementation of structured finance initiatives, i.e., high yield bonds and leveraged loans (with so-called “covenant lite” loans⁶⁴), and securitizations. Not all of these institutions and activities can adequately support the creation of new ventures, particularly highly innovative start-ups. In addition, more recent phenomena, such as crowdfunding and peer-to-peer lending, have emerged as part of the broad concept of “shadow banking,” supporting the development of new market platforms such as Indiegogo and Kickstarter. These new activities have triggered a gradual process of democratization and inclusion of small investors.

ICOs further this democratization and inclusion process and help accelerate banking disintermediation. By providing liquidity for small investors who cannot otherwise invest in highly innovative ventures, ICOs allow startup developers to directly fundraise for their activity, bypassing both banking and non-banking entities (i.e., VCs). For example, unlike an IPO, an ICO does not require the underwriting from a banking institution and is much cheaper. ICOs can even be ten times less costly than traditional IPOs, due to the lack of regu-

61. See Charles K. Whitehead, *The Evolution of Debt: Covenants, the Credit Market, and Corporate Governance*, 34 IOWA J. CORP. L. 641, 654 (2009).

62. Leonid Bershidsky, *Shadow Banking Is Getting Bigger Without Getting Better*, BLOOMBERG: OPINION (Mar. 28, 2017), <https://www.bloomberg.com/view/articles/2017-03-28/shadow-banking-is-getting-bigger-without-getting-better>.

63. For a definition of shadow banking, see Steven L. Schwarcz, *Regulating Shadow Banking*, 31 REV. BANKING & FIN. L. 619, 622–23 (2012).

64. Covenant-Lite loans have fewer protective restrictions than traditional loan facilities and allow for payment flexibility and higher level of financing.

latory constraints and procedures, as well as simpler reporting requirements and systematic adoption of digital identity-based processes instead of paperwork throughout the process.⁶⁵ This has led to the emergence of The Argon Group, the first investment bank exclusively focused on cryptocurrencies and token-based capital markets,⁶⁶ which may help revolutionize the more traditional “investment banking” services.

Disintermediation occurs not only in the traditional banking industry, but also at private funds level. This becomes particularly clear when analyzing the relationship between ICOs and VCs, an asset class that has traditionally played a crucial role in financing new, highly innovative start-ups. ICOs are likely to disrupt the fundraising industry, in particular the VC industry, which is a paradox herein: while it has continuously invested in innovation, it did not innovate itself.⁶⁷ In the second quarter of 2017, ICOs’ issuance was greater than that of VCs’,⁶⁸ with \$210 million invested in ICOs versus \$180 million invested into startups by VCs. This trend is expected to continue.⁶⁹

The exponential growth of ICOs largely results from the benefits for startups that ICOs are able to provide due to their specific characteristics, especially when compared to traditional VCs. ICOs’ developers do not sacrifice their equity in the project for the funds they raised.⁷⁰ As online borderless sales, ICOs are directly addressed to a worldwide potential pool of investors, bypassing the typical hurdles existing in the

65. See Aitken, *supra* note 24.

66. See Laura Shin, *This VC is Sure Venture Capital is About to be Disrupted*, FORTUNE (Apr. 18, 2017), <https://www.forbes.com/sites/laurashin/2017/04/18/this-vc-is-sure-venture-capital-is-about-to-be-disrupted/#70739cc9324e>.

67. *The Cryptocurrency Economy: ICOs, Blockchain, Financial Inclusion*, CRITICAL FUTURE (Aug. 4, 2018) [hereinafter *Cryptocurrency Economy*], <http://www.criticalinterviews.co.uk/the-cryptocurrency-economy-icos-blockchain-financial-inclusion/>.

68. See Alex Sunnarborg, *ICO Investments Pass VC Funding in Blockchain Market First*, COINDESK (last updated June 11, 2017, 11:59 UTC), <http://www.coindesk.com/ico-investments-pass-vc-funding-in-blockchain-market-first/>.

69. Connie Loizos, *While Investment Firms Ponder ICOs, This Team is Barreling Ahead with a \$100 Million ICO Fund*, TECHCRUNCH (June 28, 2017), <https://techcrunch.com/2017/06/28/while-investment-firms-ponder-icos-this-team-is-barreling-ahead-with-a-100-million-ico-fund/>.

70. Fonseca, *supra* note 11.

venture capital process.⁷¹ In addition, they benefit from limited accreditation standards, as well as from multiple global exchanges providing continuous access to trading with deep order books.⁷² From a broader perspective, while traditional VCs allow only elite investors to invest in highly innovative projects that are generally unknown to the public⁷³, ICOs are much more inclusive, contributing to increase the diversity and the heterogeneity of those who can participate.⁷⁴ ICOs allow small investors from all over the world to invest due to the low barrier to entry and the borderless nature of the online sale.⁷⁵ These features amounted to an increased rapidity and simplicity to close a round,⁷⁶ and contributed (and will continue in this trend) to the creation of more liquid venture funds.⁷⁷ As a result, ICOs have the potential to disrupt other illiquid asset classes (including private equity and real estate funds).

Not surprisingly, the VC industries' interest for ICOs is growing, but for different reasons. First, the exponential growth of cryptocurrencies may be an invaluable source of profits for VC firms. Cryptocurrencies created from blockchain start-ups generated performances and returns not comparable to any other investment: Ethereum scored an impressive 10000%⁷⁸ in one year, and Litecoin more than the 7000%.⁷⁹ Second, VCs may benefit from the liquidity of cryptocurrencies: rather than investing in "unicorn start-ups," which require long and complex processes of IPOs or acquisitions, ICOs may grant gains to investors much faster, and liquidate the investment (pulling the profits out) much more easily⁸⁰ in two steps, i.e., first, convert their cryptocurrency profits into bitcoin or Ethereum through any of the cryptocurrency

71. *Id.*

72. Sunnarborg, *supra* note 68.

73. *Cryptocurrency Economy*, *supra* note 67.

74. This may potentially increase volatility due to panic sales of inexperienced investors.

75. Kostinuk, *supra* note 14.

76. Sunnarborg, *supra* note 68.

77. *See Cryptocurrency Economy*, *supra* note 67.

78. *See generally* COINBASE, <https://www.coinbase.com> (last visited Dec. 21, 2017).

79. *Id.*

80. Kastelein, *supra* note 18.

exchanges and second, convert them to fiat currency via on-line services such as Coinsbank or Coinbase.⁸¹

As a result of ICOs' disruption, the VC industry may co-opt this potential source of disruption with ICOs in order to benefit from its advantages, similar to what happened in the banking industry with respect to other fintech rivals.⁸² An example of the implementation of ICOs within the VC industry is Blockchain Capital. The ICO for the Blockchain Capital III Digital Liquid Venture Fund⁸³ was launched on April 10, after the release an offering memorandum on April 3.⁸⁴ Blockchain Capital's ICO campaign, which aimed at raising 20 percent of the firm's next fund, was concluded in six hours, raising \$10 million.⁸⁵ With the tokenization of assets via Ethereum, there are significant benefits both in terms of offering more flexibility and "unlocking liquidity in previously illiquid secondary venture markets."⁸⁶ From a regulatory perspective, Blockchain Capital's ICO was the first crowdsale compliant with "know your customer" and "anti-money laundering" regulations. With regard to regulatory constraints, especially regulatory uncertainty, Blockchain Capital decided to do the ICO in Singapore and exploit Regulation S and D exemptions (e.g., Section 506(c)) with the SEC, which allow the activity of raising money from both international and domestic investors, with only ninety-nine accredited American investors and the other 901 investors can be overseas investors. They only had to file docu-

81. *Id.*

82. See Lionel Laurent, *Want to be a VC? Just Flip a Bitcoin*, BLOOMBERG: OPINION (Apr. 18, 2017), <https://www.bloomberg.com/gadfly/articles/2017-04-18/beating-vc-funds-is-as-easy-as-flipping-a-bitcoin>.

83. See generally BLOCKCHAIN CAPITAL, <http://blockchaincapital.com/> (last visited Aug. 10, 2018).

84. Brian P. Eha, *Blockchain VC to Raise Fund Through Digital Token Offering*, AM. BANKER (Mar. 17, 2017), <https://www.americanbanker.com/news/blockchain-vc-to-raise-fund-through-digital-token-offering>.

85. Richard Kastelein, *Global Blockchain Innovation: U.S. Lags, Europe and China Lead*, VENTUREBEAT (Apr. 16, 2017), <https://venturebeat.com/2017/04/16/global-blockchain-innovation-u-s-lags-europe-and-china-lead/>.

86. *Industry Thought Leaders Invest with Blockchain Capital in its Ground-Breaking ICO*, PR NEWSWIRE (Apr. 7, 2017), <https://www.prnewswire.com/news-releases/industry-thought-leaders-invest-with-blockchain-capital-in-its-ground-breaking-ico-300436544.html>.

ments satisfying the “know you customer” regulation, without satisfying any further income or net worth requirement.⁸⁷

III.

THE REGULATORY RESPONSE TO ICOs

A. *Regulatory Capture and the “Do No Harm” Approach*

The debate on new regulatory capture of innovation and its costs is not new. While new regulation may be consistent with the need to pursue public interest objectives, i.e., legal certainty, investors’ protection and financial stability, it is not necessary the optimal choice. Regulated entities may have an interest in the issuance of new regulation that may create entry barriers and frustrate competition. Significant costs are connected with new regulation: increased compliance costs, affecting new competitors particularly, and costs associated with the so-called “rent-seeking”—the large investment incurred by regulated firms to influence regulators in order to obtain privileges instead of creating value for customers.⁸⁸ In addition, by exerting downward pressure over the regulators, the firms may harm the reputation of the regulator, and the result may be the adoption of a regulation that does not maximize the public interest but merely avoids criticism.⁸⁹

Regulatory authorities did not directly address the issue of ICOs. They rather referred more generally to blockchain. Particularly relevant in such context is the position of the CFTC. The CFTC Chairman Christopher Giancarlo, compares the blockchain technology to the internet revolution and supported a “do no harm” approach in regulating blockchain technology. Giancarlo’s speech provided a definition of “do no harm” approach: “Governments and regulators should avoid undue restrictions, support a predictable, consistent and simple legal environment and respect the “bottom-up” nature of the technology and its development in a global marketplace. This model is well-recognized as the enlightened regulatory underpinning of the internet that brought about

87. *Id.* See also Shin, *supra* note 66.

88. See Christopher Koopman, Matthew Mitchell & Adam Thierer, *The Sharing Economy and Consumer Protection Regulation: The Case for Policy Change*, 8 J. BUS. ENTREPRENEURSHIP & L. 529, 534 (2015).

89. *Id.* at 536.

profound changes to human society.”⁹⁰ The CFTC opined that this approach, successfully implemented in the U.S. at the time of the internet transformation (at the time of the Telecommunications Act of 1996 and the following “Framework for Global Electric Commerce”), should be re-applied to blockchain. The adoption of such regulatory approach was a catalyst that allowed the U.S. to play a prominent role in technology innovation, generating \$90 billion in innovation, an unprecedented investment in the cross-continental fiber-optic broadband network, which eventually allowed the U.S. to become the undisputed global leader in the field. In this context, the private sector played a critical role without any interference from the Federal or State law. The internet era shares significant similarities with the development of the blockchain technology, since they are both disruptors and a “moving target.” As Giancarlo further emphasized, the regulation of internet required a balanced approach different from both a “laissez faire” and “knee-jerk” regulation. It was important not to mistakenly apply an old economy policy framework or, alternatively, to expect the development of internet without any guidance and framework. It is critical to build market confidence (especially with regard to e-commerce) without hindering the potential exponential development of internet.⁹¹

Giancarlo emphasized the potential role of regulation in frustrating innovation: “innovators and investors should not have to seek government’s permission, only its forbearance, to develop DLT so they can do the work necessary to address the increased operational complexity and capital consumption of modern financial market regulation,” and regulators should opt for the provision of “uniform principles,” beneficial for investments in DLT and innovation.⁹² Consistent with the regulatory approach adopted in the internet era, regulators should not impede innovation and investments in DLT. Instead, they should contribute to “provide a predictable, consistent and straightforward legal environment,” and avoid “regulatory uncertainty or an uncoordinated regulatory approach.”⁹³ All

90. Giancarlo, Keynote Address, *supra* note 10.

91. Adam Smith, *E-Commerce in the New Century*, 8 NEW ENG. J. INT’L & COMP. L. 1, 4 (2002).

92. Giancarlo, Keynote Address, *supra* note 10.

93. *Id.*

these considerations can be safely extended to the specific issue of ICOs, as part of the broader innovation implemented through blockchain.

B. *What Regulators Did*

Understandably, market authorities did not provide any definitive legal definition or regulatory solution of ICOs. However, since June 2017, regulators from different jurisdictions have issued position papers warning investors on the potential risks and providing possible qualification of ICOs under their respective securities laws. While some market authorities have identified a potential solution in the existing regulatory framework, some authorities opted for declaring ICOs illegal, while the remainder has not taken any position yet.

In Europe, after considering the risks for investors and the potential regulation that may apply to ICOs, the European Securities and Markets Authority (“ESMA”) has identified the potential European regulatory texts that can be applied to ICOs: the Prospectus Directive, the MiFid Directive, the AIFM Directive as well as the Fourth Anti-Money Laundering Directive.⁹⁴ The consideration of the potential applicability in particular of the Prospectus Directive, whose main scope typically encompasses transferable securities, implicitly suggests that the ESMA may potentially qualify the ICOs tokens as “transferable securities,” under European law. Similarly, the Swiss Financial Market Supervisory Authority (“FINMA”) has clarified that in accordance with the specific structure of the ICO, existing regulation may apply in the area of money laundering and terrorist financing, banking law, securities trading, collective investment scheme legislation.⁹⁵ Consistent with a “do no harm” approach, the Swiss legislation that adopts a principle-based regulation for financial markets implements the principle of “technology neutrality.”⁹⁶ Concerned about the risks

94. See *ESMA Alerts Firms Involved in Initial Coin Offerings (ICOs) to the Need to Meet Relevant Regulatory Requirements*, ESMA (Nov. 13, 2017), https://www.esma.europa.eu/sites/default/files/library/esma50-157-828_ico_statement_firms.pdf.

95. See FINMA, *FINMA GUIDANCE* (Sept. 29, 2017), <https://www.finma.ch/en/~media/finma/dokumente/dokumentencenter/myfinma/4dokumentation/finma-aufsichtsmittelungen/20170929-finma-aufsichtsmittelung-042017.pdf?la=en>.

96. *Id.*

that ICOs may pose to investors, the United Kingdom's Financial Conduct Authority ("FCA") emphasized that "[investors] are extremely unlikely to have access to UK regulatory protections like the Financial Services Compensation Scheme or the Financial Ombudsman Service." However, the FCA specified the adoption of a case-by-case approach in establishing its regulatory scope. Although many ICOs may fall outside the regulated space, specific characteristics related to the investment structure may trigger specific legal regimes provided for regulated investments and certain activities of regulated entities. In FCA's view, ICOs may share some similarities with IPOs, private placements, crowdfunding, or even collective investment schemes, and may be categorized as transferable securities with applicable prospectus regime.⁹⁷ Given the applicability of the existing regulatory framework, the Singaporean Monetary Authority of Singapore ("MAS") may be included in the aforementioned group of authorities with some caveats. In fact, the MAS has been one of the firsts that considered regulating blockchain. With regard to ICOs, it took the position that digital tokens offered in Singapore shall be regulated by the MAS "if the digital tokens constitute products regulated under the Securities and Futures Act," and confirmed the decision not to regulate virtual currencies. MAS considered that tokens perform specific functions that go beyond their status as a virtual currency, representing "ownership or a security interest over an issuer's assets or property" and "may therefore be considered an offer of shares or units in a collective investment scheme under the SFA" as well as "a debt owed by an issuer and be considered a debenture under the SFA."⁹⁸ Qualifying digital tokens as securities under the SFA would consequently require issuers to provide prospectuses to MAS and become licensed pursuant to the SFA and Financial Advisers Act.⁹⁹ Additionally, such a qualification would potentially require platforms serving as secondary markets for tokens to have the status of approved or recognized market operator.

97. FIN. CONDUCT AUTH., INITIAL COIN OFFERINGS (2017), <https://www.fca.org.uk/news/statements/initial-coin-offerings>.

98. MONETARY AUTH. OF SINGAPORE, MAS CLARIFIES REGULATORY POSITION ON THE OFFER OF DIGITAL TOKENS IN SINGAPORE (2017), www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-clarifies-regulatory-position-on-the-offer-of-digital-tokens-in-Singapore.aspx.

99. See SINGAPORE STATUTES ONLINE, <https://sso.agc.gov.sg>.

Both the U.S. Securities and Exchange Commission (“SEC”)¹⁰⁰ and the Canadian Security Administrators (“CSA”)¹⁰¹ suggested a case-by-case approach. In the case of a virtual organization called DAO, the SEC applied the well-known *Howey* test¹⁰² to determine whether the tokens offered through ICOs were qualified as securities. Under this test, the SEC concluded that the tokens issued by the DAO were securities.¹⁰³ The CSA applied a four-prong test, similar to the *Howey* test. Both the regulators came to the same conclusion that depending on the facts and circumstances of each individual ICO, the virtual coins or tokens that are offered or sold through an ICO may be securities. The consequence of their qualification as securities is the application of the securities laws¹⁰⁴ to the offer and sale of these virtual coins or tokens in an ICO.

The positions of the German *Bundesanstalt für Finanzdienstleistungsaufsicht* (“BaFin”) and the French *Autorité des Marchés Financiers* (“AMF”) remain uncertain. BaFin highlighted the risks of ICOs but did not take a position on the nature of ICOs’ tokens.¹⁰⁵ The AMF launched a consultation (which was concluded on December 22, 2017), highlighting the possible regulatory solutions, including the existing regulatory framework.

The Australian Security & Investments Commission (“ASIC”) is one of the authorities that have opted for not regulating ICOs, such as the one of Gibraltar, since it did not dispose of an adequate asset of information. However the ASIC has considered that an ICO may trigger the Australian regula-

100. *SEC Investor Bulletin: Initial Coin Offerings*, SEC. & EXCH. COMM’N (July 25, 2017), https://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings.

101. *CSA Staff Notice 46-307: Cryptocurrency Offerings*, ONT. SEC. COMM’N (Aug. 24, 2017), http://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20170824_cryptocurrency-offerings.htm.

102. *SEC v. Howey Co.*, 328 U.S. 293, 301 (1946).

103. Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81207 (July 25, 2017), <https://www.sec.gov/litigation/investreport/34-81207.pdf>.

104. Regarding the nature of the regulation, please note that contrary to the American securities law, the Canadian regulation is not federal.

105. *Consumer Warning: The Risks of Initial Coin Offerings*, BAFIN (Nov. 9, 2017), https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2017/meldung_171109_ICOs_en.html.

tion provided for managed investment scheme (“MIS”).¹⁰⁶ Furthermore, the coins can be qualified both as shares, derivatives, and non-cash payment facility. If the ICO (or the underlying coin) is qualified as a financial product, the platform operator enabling investors to trade in ICOs may be required to be licensed by the ASIC in order to operate in Australia. However, ASIC opted not to enforce such regulation.¹⁰⁷

On the other end of the spectrum, some institutions, such as the Chinese Central Bank and the South-Korean Financial Services Commission, opted for a ban of ICOs instead of identifying a potential regulatory framework. Due to the significant increase of ICOs within their markets, both regulators were concerned about the risk of fraud that ICOs may pose to investors.¹⁰⁸ In addition, the European Central Bank (“ECB”) is assessing the possibility of putting “concrete legal restrictions in place,” due to the risks and doubts posed by digital currencies and bitcoin.¹⁰⁹ It is unclear what those legal restrictions may be and what power the ECB has over ICOs. Nevertheless, it is clear enough that central banks are likely to be skeptical about a technology that was created to bypass them.

C. *What Went Wrong*

How did regulatory authorities effectively approach ICOs? From an assessment of the official statements issued so far, it is not clear whether they voluntarily implemented a specific regulatory approach (“do no harm” approach), or they were silent on the topic. The CFTC has been the sole regulatory agency (and not a securities authority) that explicitly stated that the decision not to regulate blockchain (without specifically referring to ICOs) was to avoid frustrating innovation, fol-

106. *Initial Coin Offerings and Crypto-currency*, AUSTL. SEC. & INV. COMM’N, <http://asic.gov.au/regulatory-resources/digital-transformation/initial-coin-offerings/#legal> (last updated May 2018).

107. *Id.*

108. Rachel Rose O’Leary, *South Korean Regulator Issues ICO Ban*, COINDESK (Sept. 30, 2017), <https://www.coindesk.com/south-korean-regulator-issues-ico-ban/>.

109. See Camila Russo, *Crypto Coin Sales Get Fresh Regulatory Scrutiny as ECB Weighs in*, BLOOMBERG (Oct. 5, 2017), <https://www.bloomberg.com/news/articles/2017-10-05/ecb-is-latest-regulator-to-cast-a-wary-eye-on-crypto-coin-sales>.

lowing the precedent in the internet era.¹¹⁰ It can only be assumed that the other securities authorities implemented a similar decision with regard to ICOs.

However, it is likely that the vast majority of market authorities were excessively passive in responding to ICOs. This may be due to an underestimation of the consequences of ICOs within the markets: they were not prepared to develop adequate expertise of ICOs in time, given that ICOs have only existed for five years (the first ICO, Mastercoin, was launched in 2012). Such underestimation may have resulted from a lack of strategic vision. Alternatively it may be argued that budgetary restraints led regulators to prioritize other missions and objectives. The majority of the securities authorities limited their public action to the publication of official statements that warn investors about the risks, and only preliminarily identified potential categorizations of ICO tokens. In most of the cases, no further statements or actions followed up. In addition, by the time such official statements were issued, two major cryptocurrencies, bitcoin and Ethereum, had already experienced an exponential growth, ICOs had overperformed VCs in the financing of hi-tech start-ups, and many cases of fraud had been reported.

Further, a significant lack of international coordination, similar to other situations in the past, gave rise to regulatory arbitrage. As previously mentioned, an American vehicle was incorporated in Singapore and exploited exceptions under Regulation S and D.¹¹¹ Due to ICOs' cross-border nature, or even "non-jurisdictional" or "extra-jurisdictional" nature, and based on specific precedents (such as the regulation of hedge funds), regulators should have been better prepared in implementing coordinated actions, rather than exclusively (and implicitly) focusing on the "competition" side.

The SEC has become significantly more active since July 2017. Apart from denying the authorization of Winklevoss' bitcoin ETF in February and the Report Investigation issued in July 2017 on the DAO, in October, the SEC Enforcement Division implemented a specific structure within the Cyber Unit, due to the risks emerging from virtual currency and blockchain technology for both investors and market integ-

110. *Supra* Section III.A.

111. *Supra* Part II.

rity.¹¹² This decision came soon after the decision to charge Recoin and Diamond Reserve Club (“DRC”), two ICOs launched by Maksim Zaslaskiy.¹¹³ On December 11, 2017, the SEC confirmed its approach, stating that the offering of digital tokens to investors by a blockchain-based food review services company constituted an illegal unregistered securities offering.¹¹⁴ The same day, the SEC Chairman Clayton issued a statement on the risks of fraud and manipulation connected to ICOs (which are not registered with SEC), inviting investors to actively gather information before deciding to invest.¹¹⁵ Finally, at the Senate Banking Committee Hearing on Virtual Currencies with the CFTC and the SEC on February 6, 2018, after mentioning that ICOs should be regulated as securities if they are securities, SEC Chairman Jay Clayton alluded to the higher risks involved in ICOs, including “substantially less investor protection than in . . . traditional securities markets, with correspondingly greater opportunities for fraud and manipulation.”¹¹⁶ He further emphasized that “[t]he ability of bad actors to commit age-old frauds with new technologies coupled with the significant amount of capital—particularly from retail investors—that has poured into cryptocurrencies and ICOs in recent months and the offshore footprint of many of these activities have only heightened these concerns.”¹¹⁷

112. Stephanie Avakian, *The SEC Enforcement Division’s Initiatives Regarding Retail Investor Protection and Cybersecurity*, SEC. & EXCH. COMM’N (Oct. 26, 2017), <https://www.sec.gov/news/speech/speech-avakian-2017-10-26>.

113. Regarding Recoin, Zaslavskiy did not hire any professional, contrary to what he stated; in addition, he misrepresented the effective amount he raised, declaring an amount between \$2 and \$4 million, instead of the actual \$300,000. With regard to DRC, Zaslavskiy brags about inexistent relationships with diamond wholesalers that, through an arbitrage process, should have granted significant gains for his investors.

114. Munchee Inc., Securities Act Release No. 10445 (Dec. 11, 2017), <https://www.sec.gov/litigation/admin/2017/33-10445.pdf>.

115. Jay Clayton, Chairman, Sec. & Exch. Comm’n, Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 11, 2017), <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>.

116. Jay Clayton, Chairman, Sec. & Exch. Comm’n, Virtual Currencies: The Roles of the SEC and CFTC, Testimony Before the Committee on Banking, Housing, and Urban Affairs (Feb. 6, 2018), <https://www.sec.gov/news/testimony/testimony-virtual-currencies-oversight-role-us-securities-and-exchange-commission>.

117. *Id.*

D. *What Regulators Should Have Done*

In their approach to the regulation of ICOs, regulatory authorities underestimated the importance of timing in their responses, resulting in prolonged uncertainty that is detrimental to both entrepreneurs and investors. Financial innovation exacerbates this problem; disruptive innovations make this problem much more extreme, due to the different paces of development of regulation and innovation. While the former is linear, the latter is exponential. ICOs are a perfect example in this sense, and an analysis of the shortcomings emerging from the responses of securities regulators can be safely extended more generally to the strategies that regulators should implement in order to adequately respond to disruptive changes.

A major issue is the lack of cooperation between regulators and private actors. From this perspective, two strategies are considered: public consultation and complimentary self-regulatory and public regulatory initiatives. Surprisingly, none of the principal market authorities has opted for a public consultation on ICOs, inverting a well-established trend, particularly in Europe, at both continental and national level. Only the French AMF has recently launched a public consultation, closed on the 22nd of December 2017, on the nature of ICOs.¹¹⁸ There are no significant disadvantages connected to public consultations. On the contrary, these instruments could provide important advantages. Public consultations do not require prohibitive investments in terms of economic and human resources and therefore can be implemented easier than other initiatives even with budgetary restraints. Public consultations can assess the needs of the market from both the consumer's (consumer organizations frequently adhere to these initiatives) and the industry's perspectives, as well as collect the views of the main market actors (i.e., the new disruptors and the more established institutional entities). Using public consultation can deepen the knowledge of the market, in particular in the contexts of ICOs, where scarce information is available and established professionals and reputed market

118. See *Discussion Paper on Initial Coin Offerings (ICOs)*, AMF (Oct. 26, 2017), http://www.amf-france.org/en_US/Publications/Consultations-publiques/Archives?docId=workspace%3A%2F%2FSpacesStore%2Fa2b267b3-2d94-4c24-acad-7fe3351dfc8a.

leaders as well as their expertise are lacking. Similar to what happens in a self-regulatory process, public consultation can attract highly qualified private actors, who may have incentives (including the reputational concerns, especially given that ICOs are perceived as the “wild west”) to participate in the public debate. In addition, public consultation can create a more dynamic interaction between institutions and market actors based on transparency between conflicting forces and interests. Opacity has always been associated with the “endemic” conflict of interest¹¹⁹ inherent in financial markets. Even a revolutionary trend such as ICOs has not been immune from this suspicious “opacity,” which is exacerbated in this particular context by the intangible nature of blockchain. An example of successful regulatory strategy, where constant dialogue with market actors led to an efficient regulatory response, was the way the Financial Security Authority (“FSA,” now Financial Conduct Authority, or “FCA”) successfully managed the transition towards a more regulated environment for hedge fund managers in the United Kingdom.¹²⁰ The invitation of market actors¹²¹ was key to a successful regulation, which attracted foreign fund managers and contributed to the success of London as an international hub for hedge funds and private equity funds.

In connection with the implementation of more systematic public consultations, from the perspective of increasing interaction between private and public institutions, it is crucial to foster the cooperation between self-regulators and public regulators, which is conducive to better regulatory solutions in a shorter period of time. This is particularly important for sophisticated and innovative practices such as ICOs, where the regulatory response is characterized by unprecedented time sensitivity and the need for highly sophisticated private compe-

119. See GUIDO ROSSI, *IL CONFLITTO EPIDEMICO* (3d ed. 2003).

120. See Lartea Tiffith, *Hedge Fund Regulation: What the FSA is Doing Right and Why the SEC Should Follow the FSA's Lead*, 27 *NW. J. INT'L L. & BUS.* 497 (2006–2007). See also Laszlo Ladi, *Hedge Funds: The Case Against Increased Global Regulation in Light of the Sub-Prime Mortgage Crisis*, 5 *BYU INT'L L. & MGMT. REV.* 99 (2008).

121. See, e.g., FIN. SERV. AUTH., *HEDGE FUNDS AND THE FSA* 8 (2002), <http://www.fsa.gov.uk/pubs/discussion/dp16.pdf>. See also FIN. SERV. AUTH., *HEDGE FUNDS: A DISCUSSION OF RISK AND REGULATORY ENGAGEMENT* 12 (2005), http://www.fsa.gov.uk/pubs/discussion/dp05_04.pdf.

tence.¹²² Although the dialogue in this context could be extremely fruitful, regulatory authorities (in particular securities agencies) did not encourage any interaction with private actors. After the last financial crisis, the self-regulatory model, in line with the systematic deregulation implemented by financial regulators in the past decade, raised significant critiques. Nevertheless, the cooperation between “private” and “public” regulators is still the best solution, and it is also supported by the International Organization of Securities Commissions (“IOSCO”).¹²³ From this perspective, the abovementioned example of the regulation of hedge funds in U.K. is virtuous. In July 2007, the Hedge Fund Working Group (“HFWG”), comprised of 14 hedge fund managers, decided to create a set of best practice standards for the hedge funds industry. In January 2008, it published the “Hedge Fund Standards: Final Report,” which formalized a set of standards. The HFWG also created the Hedge Fund Standards Board, whose main tasks include monitoring compliance with the standards and updating and revising them periodically. In addition to the best-practice standards formalized by the HFWG, the FSA issued 11 FSA Principles based on a “comply or explain” approach, which aimed for a healthy regulatory environment and then an efficient “principle-based” regulation.¹²⁴

122. The literature on self-regulation is vast. Among all, see Julia Black, *Constitutionalising Self-Regulation*, 59 MOD. L. REV. 24, 26–28 (1996).

123. IOSCO has provided the following principles in relation to self-regulation:

Where the regulatory system makes use of Self-Regulatory Organizations (SROs) that exercise some direct oversight responsibility for their respective areas of competence, such SROs should be subject to the oversight of the Regulator and should observe standards of fairness and confidentiality when exercising powers and delegated responsibilities.

INT’L ORG. OF SEC. COMM’NS [IOSCO], OBJECTIVES AND PRINCIPLES OF SECURITIES REGULATION 5 (May 2017), <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD561.pdf>.

124. The FSA defines Principles-based regulation as:

[P]lacing greater reliance on principles and outcome-focused, high-level rules as a means to drive at the regulatory aims we want to achieve, and less reliance on prescriptive rules. Much of this rebalancing of our use of principles and rules has been and will continue to be executed through changes to the FSA Handbook and related material.

To understand the relevance of self-regulatory initiatives in the context of ICOs, it is useful to note one of their major shortcomings, i.e., the tokens' valuations. They are generally overvalued as well as overcapitalized, and accompanied by some investors' and enthusiasm and incompetence.¹²⁵ In addition, there is a general lack of control. As previously mentioned, white papers are unaudited by any central authority, there is no rating of the new entrepreneurial initiatives.¹²⁶ For instance, a private initiative such as a joint-venture between Ambisafe Inc. and the Russian-based rating agency ICOrating, has been created to "ensure high-quality standards," supporting investors in their due-diligence and identifying potential investment opportunities in cryptoeconomics.¹²⁷ The parameters of evaluating entrepreneurial initiatives take into account different indicators, ranging from economic and financial parameters to more technical elements.¹²⁸ Four categories are identified: the "Investment level," the top-rated investment, the riskier "Speculative level," the "red flags" investments, the "Non-investment level," and the "Default level."¹²⁹ In addition, companies like Deloitte and Price Waterhouse Coopers have specific expertise in identifying vulnerabilities in the start-ups' business models and provide support to investors.¹³⁰ In the

FIN. SERV. AUTH., PRINCIPLES-BASED REGULATION: FOCUSING ON THE OUTCOMES THAT MATTER 6 (Apr. 2007), <http://www.fsa.gov.uk/pubs/other/principles.pdf>.

125. Travis Scher, *ICOs and Appcoins: A Blockchain VC's View*, COINDESK (Nov. 4, 2016), <https://www.coindesk.com/icos-appcoins-blockchain-vc-view/> ("Founders with ideas that would struggle to raise a \$500,000 seed round from experienced venture capital funds are raising millions in token sales. Some may view this as a good thing, with entrepreneurs able to cut out the elitist VC gatekeepers and get voluntarily funded by perfectly sovereign individuals who understand the entrepreneur's vision. I view it as a sign that the market is out of whack.").

126. *Supra* Section I.A.

127. Aitken, *supra* note 24.

128. *Project Evaluation*, ICORATING, <http://icorating.com/methodology> (last visited Aug. 10, 2018). Among these parameters, ICOrating explicitly mentions: "the scale of the problems addressed by the project, level of competition, quality of the project's roadmap, quality of the project's financial plan, the technical side of the project's level of development, details of the ICO, the team's professionalism, marketing." *Id.*

129. *Id.*

130. Steve Wambua, *Five Crucial Things to Look at Before Investing in Initial Coin Offerings (ICOs)*, BENZINGA (May 4, 2017), <https://www.benzinga.com/>

past few months, significant self-regulatory initiatives have taken place in Europe and the U.S.,¹³¹ but lacking coordination with the securities regulators.

A further positive consequence of the cooperation between public authorities and private industry, through public consultations and a stronger coordination between private actors and public authorities, would be a more rigorous cost-benefit analysis. Some of the post-crisis regulatory initiatives were not proportionate to their scopes, mostly due to the fact that regulators did not have adequate information at their disposal, which would have probably led to different outcome if they had. Both over- and under-regulating would frustrate innovation and not adequately safeguard ICOs as the most powerful tool of capital formation emerged in the past years. It would be the antithesis of a virtuous “do no harm” approach.

Due to the time sensitiveness of the interventions, another method which securities agencies should utilize more often and more promptly is the issuance of official statements or position papers, focusing on warning investors about the risks connected to ICOs. The regular issuance of such statements can monitor the evolution of the market trends as well as the potential risks and red flags posed to investors, in particular the unsophisticated ones.

Periodic publication of such official statement can impact the market without necessarily frustrating entrepreneurial innovation. With regard to ICOs, it was too late when regulators started to issue these statement; a significant number of scandals had already arisen in the different jurisdictions, and the overall capitalization of bitcoin had already surpassed the one of Goldman Sachs. One of the reasons for this delay is the legal uncertainty of ICOs under different securities regulations in different jurisdictions. Although public statements issued by securities regulators are not sufficiently strong to subvert the speculative frenzy that characterized the development of

general/17/05/9404395/five-crucial-things-to-look-at-before-investing-in-initial-coin-offerings-icos.

131. For self-regulatory initiatives, see, for example, *The London Token Fundraising Manifesto*, LONG FIN. BLOGS (Oct. 23, 2017), <http://www.longfinance.net/nstm>. In particular, for the European initiative, see ICOCHARTER, <http://www.icocharter.eu/> (last visited Aug. 10, 2018); for the most important self-regulatory initiative in the U.S., see ICO GOVERNANCE FOUND., <https://icogovernance.org/> (last visited Aug. 10, 2018).

cryptocurrencies and the correlated explosion of ICOs, they certainly had some positive consequences: they had an impact on the public opinion and expanded the debate, providing an authoritative angle that is necessary to develop a better understanding of cryptocurrencies and ICOs. An earlier issuance of such statements would not only have allowed monitoring the market developments, but also have buttressed investors' investment decisions. This would have been a way to counterbalance the non-technical and inadequate sources spreading across social media with no control. Bad faith ICOs' promoters (similar to the emergence of forex products in the past few years, but with higher intensity) have exploited social media to spread misleading and non-technical information about their entrepreneurial initiatives. Even in this context, securities regulators did not respond promptly. To invert this trend, securities regulators should directly control or indirectly require stricter control on social media, and revise the rules of investment advertisement, limiting (or banning) such practices that would involve high number of non-sophisticated offerees.

Another important consideration relates to the coordination between regulatory authorities. For example, in the U.S., multiple agencies are concerned with overseeing ICOs. Recently the SEC Chairman Jay Clayton and the CFTC Chairman Christopher Giancarlo jointly signed a note stating that:

The CFTC and SEC, along with other federal and state regulators and criminal authorities, will continue to work together to bring transparency and integrity to these markets and, importantly, to deter and prosecute fraud and abuse. These markets are new, evolving and international. As such they require us to be nimble and forward-looking; coordinated with our state, federal and international colleagues; and engaged with important stakeholders, including Congress.¹³²

At the last Senate Banking Committee Hearing on Virtual Currencies with the CFTC and the SEC on February 6, 2018, CFTC Chairman Giancarlo, the U.S. approach to oversight of virtual currencies encompasses "a multifaceted, multi-regula-

132. Jay Clayton & J. Christopher Giancarlo, *Regulators Are Looking at Cryptocurrency*, WALL ST. J. (Jan. 24, 2018, 6:26 PM), <https://www.wsj.com/articles/regulators-are-looking-at-cryptocurrency-1516836363>.

tory” approach, including the SEC, State Banking regulators, the Internal Revenue Service (IRS) and the Treasury’s Financial Crimes Enforcement Network (FinCEN).¹³³

CONCLUSION

Blockchain is certainly the most disruptive innovation since the internet era and ICOs may be one of the most innovative trends in capital formation in the past years. The implementation of a “do no harm” approach is in principle meritorious, especially given that the last post-crisis regulatory initiatives oriented towards a systematic overregulation and overreaction. However, ICOs, like any other disruptive trend, require regulatory authorities to be proactive and implement any initiative (including guidance to investors) promptly, aiming for order and predictability within the market. This is crucial to safeguard both investor protection and capital formation, two supplementary goals equally involved in the context of ICOs.

A delayed response by regulatory authorities may lead to unintended consequences, which contradicts the objectives of the “do no harm” approach. A market filled with scandals and uncertainty that resulted from delayed regulatory response may induce regulators to issue more burdensome and rigid regulations, which would impede innovation and disruption and, unintentionally, de facto support the more established market actors.

In developing their strategies, regulatory authorities should reconsider their interaction with private actors, as well as the implementation of further instruments, such as periodic publication of official statements, with the purpose to timely warn investors about the risks connected to the new market trends. Both strategies should be oriented to solve the problems resulting from the divergence between the rates at which regulation and technology grow: while the former is linear, the latter is exponential, and this will be the “new normal” in financial innovation and financial regulation.

133. Christopher Giancarlo, Chairman, Comm. Fut. Trading Comm’n, Written Testimony Before the Senate Banking Committee (Feb. 6, 2018), https://www.banking.senate.gov/public/_cache/files/d6c0f0b6-757d-4916-80fd-a43315228060/A2A6C1D8DDBB7AD33EBE63254D80E9E3.giancarlo-testimony-2-6-18b.pdf.