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The Rise, Death, and Reincarnation of Initial Coin Offerings

Dmitri Boreiko, PhD, CFA, CAIA, FDP

DECEMBER 27, 2023



- Entrepreneurial Finance
- Fintech
- Blockchain and firms' financing
- ICOs, STOs, IEOs
- DeFi and future of entrepreneurial finance



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New book on ICOs

Understanding Initial Coin Offerings

'Boreiko's book is the book on ICOs.'
Paul P. Momtaz, Technical University of Munich, Germany

Delving into the comprehensive evolution of Initial Coin Offerings (ICOs), this innovative book traces their origins and transition into modern forms such as Security Token Offerings, Initial Exchange Offerings, Initial DEX Offerings and Non-Fungible Tokens. It provides an in-depth analysis of the factors behind the appeal of ICOs, the complex ecosystem surrounding them, and the key developments within the blockchain and cryptocurrency space.

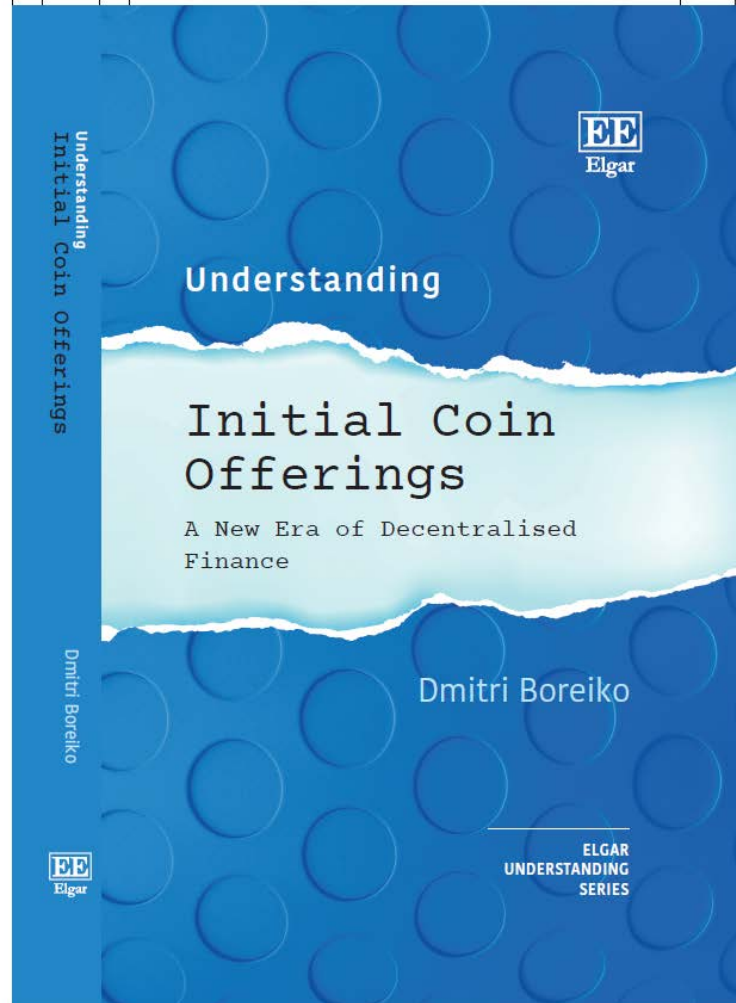
Countering common misconceptions such as equating ICOs with fraud, Dmitri Boreiko emphasizes the need for robust regulation in the field. Chapters explore the economics of ICOs, offer practical research guidance and navigate the complexities of ICO regulation. The book concludes by highlighting emerging mechanisms in blockchain fundraising, focusing on the increased security, transparency and flexibility of newer mechanisms.

Concise and incisive, this is a timely read for economics students focusing on ICOs and blockchain applications, as well as fintech more broadly. Written in an accessible style, blockchain practitioners, investors and entrepreneurs, and start-ups in tech will also find this to be an interesting read.

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- **Personal Savings & Bootstrapping**
 - Most accessible, high control, no external obligations.
- **Angel Investors**
 - Relatively accessible, valuable mentorship, equity stake
- **Venture Capital**
 - High potential funding, more competitive, significant equity exchange
- **Bank Loans**
 - Requires creditworthiness and often collateral
- **Crowdfunding**
 - Access depends on market appeal, beneficial for market validation.



Evolution of funding

Banks

- Online banking
- AI in credit scores

AF

- P2P lending
- Mostly debt-lending
- New technologies

CF

- Equity-financing
- Internet
- Nationally bound

Blockchain

- ICOs (dead)
- STOs, IEOs
- DeX offerings
- NFTs
- Meta Universe
-



- Financial channels and instruments that have emerged outside of the traditional finance system such as regulated banks and capital markets
- Advent of **internet, social media, fintech** led to traditional financial intermediaries' role taken by new actors
 - More innovative and flexible
 - Not subject or exempt from excessive financial regulation (Dodd-Frank legislation (2010) cost \$36b by 2016 to US financial industry (Bloomberg, 2016))
 - Not loaded with overhead costs
 - Operate on completely-unthinkable-before principles
 - Intensive use of internet, social marketing, big data, ML...



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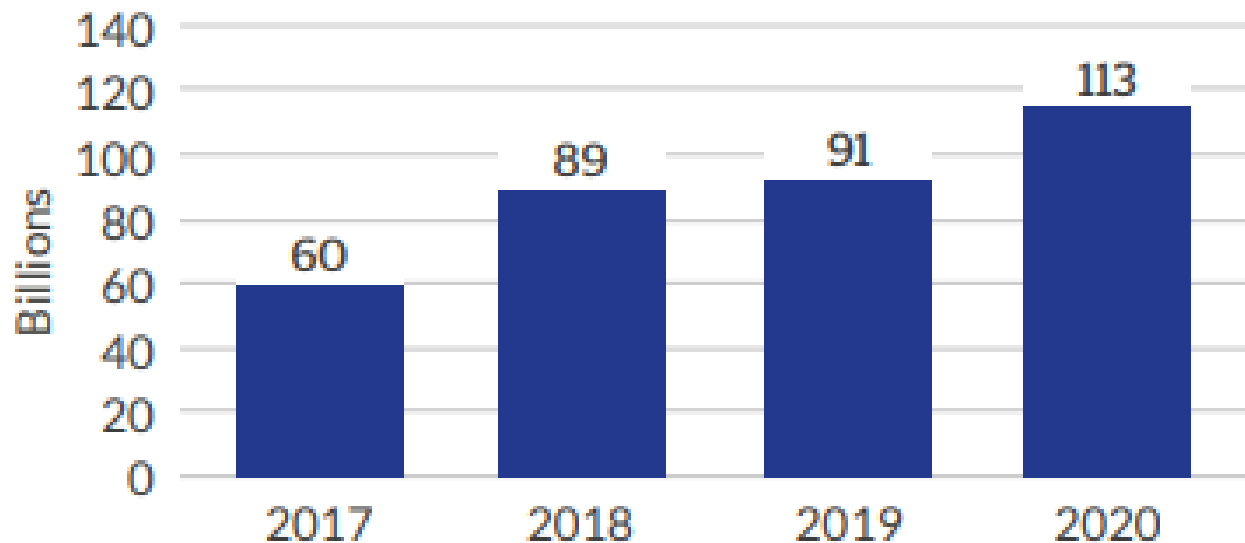
AF sector: large and growing

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Figure 1.2: Global Alternative Finance Volume (excluding China) 2017-2020, USD



** The 2nd Global Alternative Finance Market Benchmarking Report, University of Cambridge (2022)*



AF sector: versatile and diversified

Figure 1.11: Alternative Finance Volumes Attributed to Business Fundraisers, 2015-2020 USD

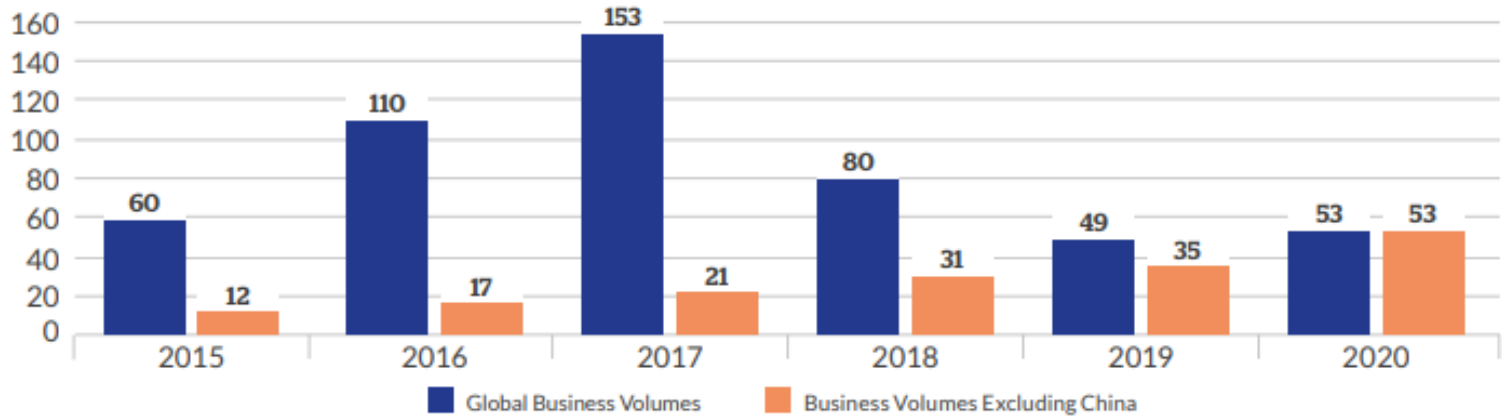
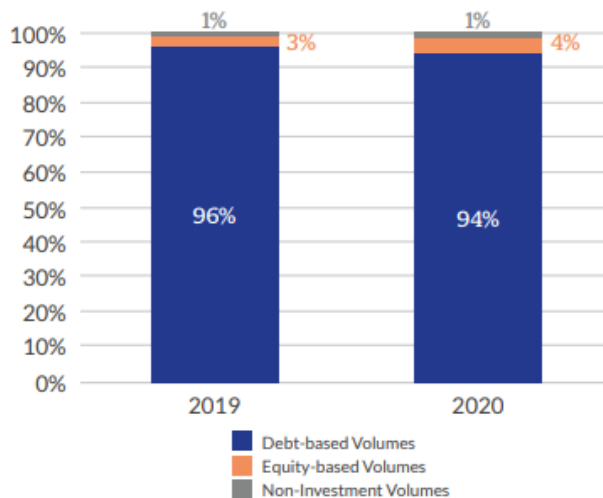


Figure 1.12: Breakdown of Business Financing by Category



- Steady growth through years but mostly debt-based funding

* *The 2nd Global Alternative Finance Market Benchmarking Report, University of Cambridge (2022)*



- Fintech revolution and invention of cryptocurrencies and smart contracts paved the way for new AF channel of raising money
- A phenomenon of the last 7 years
- An alternative form of crowdfunding financing that has emerged outside of the traditional financial system
- The traditional financial industry representatives regard it as new version of the Ponzi scheme
- The opponents of the fiat money treat ICOs as a new legitimate way of raising capital based on new digital-era "gold coin" equivalent



- Nakamoto (2008) suggested a framework encompassing earlier ideas of e-money [ecash (Chaum & Brands), hashcash (Back), b-money (Wei Dai), bit gold (Szabo)]
- 3 January 2009 – first bitcoins mined
- Bitcoin – a medium of exchange based on cryptography to control its creation and management
- A currency, an asset? Continued argument till now
- Alternative blockchains developed later that tried to improve bitcoin
- Many cryptocurrencies as an alternative to bitcoin



Blockchains in financial industry

- Most of the projects are in pilot phase and still have to prove its usefulness
- But one area where blockchain revolutionized and disrupted the status-quo is **start-ups' financing**
- **I**nitial **C**oin **O**fferings, **I**nitial **T**oken **O**fferings, Token sales, Crowdsales, Crowdfunding, Token Contributions are all about one thing:

Attraction of financial resources in exchange for a proprietary cryptoasset to be used in the system or resold



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Blockchain Financing

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ICO: Money exchanged for a token representing a bond, share, etc., which is tradable.



Crowdfunding: Money in return for a product or stake.



Debt Contract: Borrowings under a debt agreement.



Equity: Financial resources exchanged for a stake in the firm.



- Unbounded geographically
- Financed at the start the open-source projects -
“investments non grata” for traditional VCs or other start-
ups’ lenders
- “Completely” anonymous
- FAST. Really Fast
- Unregulated (**practically outlawed**) and not-understood
by traditional banking industry
- Possibly cannot be regulated at all and are subject to
complete worldwide ban to avoid regulatory arbitrage
- Complete removal of financial intermediary between
borrower and lender



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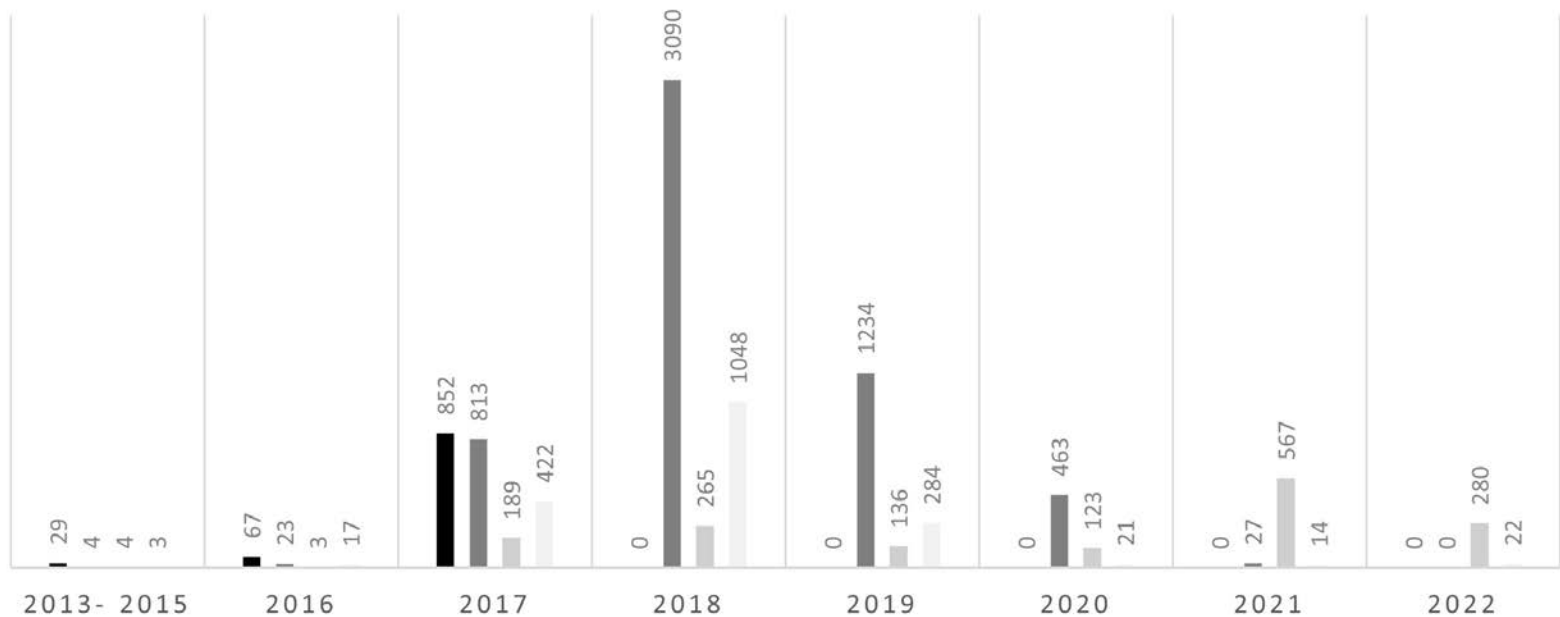
Number of ICOs

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■ Boreiko (2019) ■ Momtaz (2021) ■ Icodrops (2023) ■ Icomarks (2023)





Blockchains and ICOs

- First ICO in 2013 raising meager \$500k
- 2014-2015 - a handful of ICOs worldwide
- 2016 - >50 ICOs raised almost \$100m
- 2017 - 670 Fintech projects attracted \$5b
- 2018 – regulatory crackdown and emergence of Securities Token and Initial Exchange Offerings (STO, IEO)
- 2019 – death of ICOs in its initial form
- 2021 – reincarnation of ICOs in the form of DeX offerings



ICOs: main issues

- Issues raising hundreds of millions \$ in short time, with substantial underpricing, attracting speculators and institutional investors
- Diluted shareholder base – 500-5000(0) investors per issue
- ICO prospectus (White Paper) non-standardized and of free format, lacking information on project's viability and future revenues



- No ex-post commitment and monitoring of the borrowers
- Issuers not incorporating or choosing benevolent jurisdictions (Singapore, Switzerland, Russia)
- Creation of new cryptocurrencies without clear legal status
- Possibility of scam issues and Ponzi schemes
- Concerns with money-laundering – but average investment in ICOs is smaller than US household investment in equity market



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Investment frauds

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N	Fraudster	Year	Type	Est. losses
1	Waste Management	1997	Falsified results	\$6b
2	Bre-X Minerals	1997	Falsified results	\$3b
3	Stratton Oakmont	1998	Pump-and-dump	\$0.2b
4	Enron	2001	Falsified results	\$74b
5	Qwest Communications	2002	Falsified results	\$3b
6	WorldCom	2002	Falsified results	\$11b
7	Bayou Hedge Fund Group	2005	Ponzi scheme	\$0.4b
8	Bernie Madoff	2008	Ponzi scheme	\$65b
9	Wirecard	2022	Falsified results	\$32b
10	FTX	2022	Misuse of funds	\$8b



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Largest ICO frauds

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N	Fraudster	Year	Country	Type of fraud	Est. losses
1	OneCoin	2017	Bulgaria	Ponzi scheme	\$4b
2	Bitconnect	2021	USA	Ponzi scheme	\$2.4-4b
3	Pincoin and Ifan	2018	Vietnam	Ponzi scheme	\$660-870m
4	ACChain	2017	China	Exit scam	\$80m
5	Bitcoiin	2018	USA	Ponzi scheme	\$75m
6	Centra Tech	2017	USA	Exit scam	\$32m
7	Plexcoin	2017	Canada	Ponzi scheme	\$15m
8	Opair and Ebitz	2016	Unknown	Exit scam	\$2.9m
9	Pure-Bit	2018	South Korea	Exit scam	\$2.8m
10	Benebit	2017	Unknown	Exit scam	\$2.7m



- IEOs are being touted as an innovation on ICOs because they are offered directly by online trading platforms on behalf of companies—usually for a fee—to provide immediate trading opportunities for the digital assets.
- Advantages over ICOs:
 - Easier to participate with only one account on the exchange (Binance e.g.)
 - Exchange is staking its reputation behind the offered projects
 - Immediate userbase for start-ups coming from exchange users
 - Reduced need for marketing



Binance's Token Launch Platform

Buy or earn new tokens directly on Binance

\$ 5,915,987,444

Current Funds Locked

\$ 140,487,760

Total Funds Raised

54

Projects Launched

2,566,503

All-time Unique Participants



FC Porto Fan Token

A Binance Fan Token for FC Porto on Binance Smart Chain.

Tokens Offered	4,000,000.0000 PORTO
Sale Price	1 PORTO = 1.00000000 USD

Time left until subscription starts:

03 Days 18 Hours 07 Mins



Lazio Fan Token

A Binance Fan Token for S.S. Lazio on Binance Smart Chain

Tokens Offered	4,000,000.0000 LAZIO	Participants	225,583
Sale Price	1 LAZIO = 0.00201329 BNB	Total committed	8,110,631.9773 BNB

End time: 2021-10-21



CeFi vs DeFi

Centralized
Finance



Decentralized
Finance





- Defi is short for Decentralized Finance
- Most practical application of blockchain:
 - Eliminate third parties: No need to go through a bank, financial institution, or an intermediary like traditional finance.
 - Smart Contract: A generic method of eliminating third parties relies on undeniable logic code on the blockchain network to trigger its execution instead of human intervention.
 - Automation: Use Smart Contracts to simplify the process but still ensure speed and accuracy with each contract.
 - Cost savings: Cutting costs in the role of lawyers, personnel to perform contracts.
 - Autonomy: Once engaged, stakeholders are not subject to external authority, but only to the terms they have agreed to in the Smart Contract. This feature also prevents them from being manipulated by either party, ensuring the safety and security of contractual agreements.



Introduction to DEXs Over ICOs

- DEXs provide a peer-to-peer trading platform without the need for an intermediary.
- Offerings on DEXs, also known as Initial DEX Offerings (IDOs), ensure immediate liquidity and trading.
- IDOs mitigate the risk of price manipulation and provide fairer asset distribution compared to ICOs.



Advantages of DEXs Over ICOs

- **Automated Market Making (AMM):** Facilitates continuous liquidity without the need for large buyers or sellers.
- **Smart Contract Integration:** Funds are raised and managed by secure, transparent, and autonomous smart contracts.
- **Accessibility and Inclusivity:** Lower entry barriers for investors and projects alike, fostering a more democratic fundraising environment.



Mechanism of Fundraising with DEXs

- Founders create digital assets or tokens using smart contracts which are then listed on a DEX
- They contribute an initial amount of liquidity to a pool, pairing the new token with a major cryptocurrency
- Investors buy into the offering directly on the DEX, receiving tokens at an initial price set by the founders
- Successful fundraising is often tied to community backing, with transparent and trust-building measures in place
- Smart contracts handle the exchange of funds, giving founders immediate access to capital raised without intermediaries (put in tokens and withdraw crypto)



- **Decentralization of Finance:** Empowers projects to raise capital directly from the community without centralized control
- **Reduced Costs and Increased Speed:** Eliminates hefty fees and lengthy processes associated with traditional fundraising methods
- **Community Governance:** Investors often receive governance tokens, giving them a say in the project's future decisions
- **Regulators** start paying attention (summer 2023)!!!



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Future of fundraising methods

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- Venture Capital Adaptation
- Crowdfunding Evolution
- Advancements in AF Channels
- Growth of DEX Offerings
- Integration of NFTs
- Expansion of the Metaverse in Fundraising
- Regulatory Developments
- Cross-Platform Interoperability
- ...



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