

pwc

6th ICO / STO Report

A STRATEGIC PERSPECTIVE

SPRING 2020 EDITION

In collaboration with:





Executive Summary

ICO / STO Report Spring 2020 Edition: Global Status-Quo

194	 In first half of 2019, global crypto ecosystem experienced solid growth, resulting in a year-to-date peak market capitalization of approximately USD 370 bn by end of June In mid-2019, total funding volume of token offerings considerably dropped from ca. USD 1'322 mn in May¹) to USD 151 mn in June; until end of October, development continued to stagnate with an average monthly funding volume of USD 171 mn (to compare: January – May 2019 USD 653 mn)
BRC	 ICO / STO / IEO FACTS & FIGURES Throughout first ten months in 2019, more than 380 token offerings have been successfully completed, managing to raise a total of ca. USD 4.1 bn Bitfinex (USD 1 bn), Kinesis (USD 194 mn) and GCBIB (USD 143 mn) were largest completed token offerings in 2019 so far, jointly accounting 32% of total raised funding volume year-to-date
1	 GLOBAL PERSPECTIVE TOKEN OFFERINGS Throughout 2018 and 2019 (until October), the USA, Singapore, Hong Kong and the KUK are ranked as leading token offering hubs worldwide (in terms of funding volume and # of completed offerings) Further countries with relatively small-sized domestic financial markets, as for instance British Virgin Islands, Cayman Island, Estonia and Lithuania, continue to be attractive crypto offering locations globally
	 In second half of 2019, STOs did not experience any significant growth (in terms of funding volume and # of completed offerings), but continued to strengthen their general scope / relevance in global crypto token offering sphere (amongst other through corporate directly-issued STOs) Extensive number of tokenization companies implies a strong / well-established tokenization ecosystem; looking forward, underlying infrastructure requires a further comprehensive upgrading
1	 CURRENT / FUTURE RELEVANCE OF IEOs Despite overall stagnating development of crypto / token offerings throughout June until October 2019, relative share of completed IEOs (in terms of # of all completed offerings) considerably increased This development indicates a progressive institutionalization and establishment of this specific Blockchain-based crowdfunding instrument as well as of the associated whole crypto offering sphere

1

In first ten months 2019, over 380 token offerings have raised a total of USD 4.1bn

ICO / STO Report Spring 2020 Edition: Global Scope

DEFINITION & CHARACTERISTICS

Initial Coin Offering ("**ICO**", also token launch or generation) is a term describing a **limited period**, in which a **company** sells a predefined number of **digital tokens** (coins) directly to the **public**, in exchange for cryptocurrencies or fiat currencies.

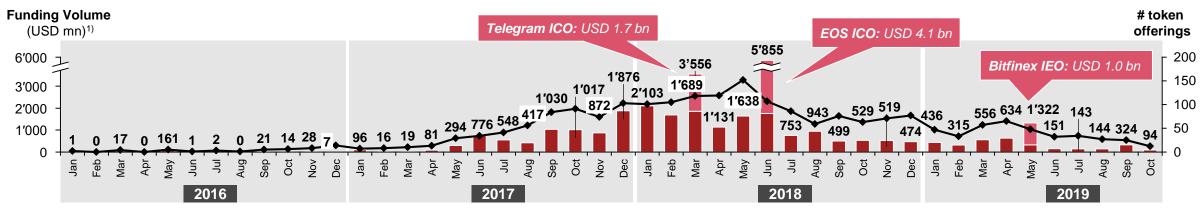
Security Token Offering ("STO") is a sale of tokens with features comparable to normal securities, i.e., fully regulated and approved within at least one jurisdiction.

Initial Exchange Offering ("**IEO**") is an ICO (or STO), which is exclusively conducted on the platform of a cryptocurrency exchange. IEOs are administered by the crypto exchange on behalf of the issuing company, which seeks to raise funds with its newly issued tokens.

Prospectively, ICOs / STOs / IEOs are **alternatives** to classic debt / capital-funding as performed today by Venture Capital / Private Equity firms and banks.

TOKEN OFFERING DEVELOPMENT

Year	Ø Duration (d)	Ø USD mn ¹⁾	Total #	Total volume (USD mn) ¹⁾
2013	41	0.4	2	0.8
2014	68	3.8	8	30.5
2015	32	1.0	10	9.9
2016	39	5.1	49	252
2017	29	12.8	552	7'043.3
2018	58 ²⁾	12.3 ²⁾	1'132	19'689.3
2019 YTD ³⁾	81*	10.8*	380*	4'118.5*
All	49.7	6.6	2'113	31'144.3



MONTHLY NUMBERS AND VOLUMES

ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved.

1) Calculations based on currency exchange rates on end date of ICO. As Ether and Bitcoin exchange rates are highly volatile, actual and current market capitalization of the companies today may differ significantly from figures shown in the table. ICO funding amount until 31.10.2019 considered. 2) Not considering Telegram and EOS. 3) until October 2019. *YTD figures Source: Strategy& analysis; Note: only completed offerings with indicated funding volume considered.

Strategy& | Spring 2020 Edition

Kinesis, besides Bitfinex and GCBIB, has entered top 15 of biggest token offerings in 2019

Overview: 15 biggest token offerings overall since 2016

#	Name	Total raised amount (USD mn) ¹⁾	End of offering (month)	Focus	Industry	Country
1	EOS ²⁾	4'100	06/2018	Blockchain infrastructure for decentralized apps	BC infrastructure	Cayman Islands
2	TELEGRAM	1'700	03/2018	Tokens to enhance messenger ecosystem	Social media	🗮 🛂 British Virgin Islands
3	BITFINEX	1'000	05/2019	Tokens for fee discounts in the iFinex ecosystem	FinTech	Mong Kong
4	TATATU	575	06/2018	Social entertainment on the Blockchain	Entertainment	Cayman Islands
5	DRAGON	320	03/2018	Decentralized currency for casinos	Gambling	Eritish Virgin Islands
6	HUOBI TOKEN	300	02/2018	Token/ Coin for South Korean crypto exchange	FinTech	Singapore
7	HDAC	258	12/2017	IOT platform backed by Hyundai BS&C	Internet of things	Switzerland
8	FILECOIN	257	09/2017	Decentralized market for data storage	Data storage	USA
9	TEZOS	232	07/2017	Blockchain infrastructure for decentralized apps	BC infrastructure	Switzerland
10	KINESIS NEW	194	09/2019	Yield-bearing digital currency based on gold & silver	FinTech	Cayman Islands
11	SIRIN LABS	158	12/2017	Secure open source consumer electronics	Consumer electronics	Switzerland
12	BANCOR	153	06/2017	Enabling direct conversion between tokens	FinTech	Switzerland
13	BANKERA	151	03/2018	Banking for the Blockchain era	FinTech	Lithuania
14	POLKADOT	145	10/2017	Interoperability protocol across multiple Blockchains	BC infrastructure	Switzerland
15	GCBIB	143	01/2019	Multi-asset digital wallet	FinTech	United Arab Emirates

1) Calculations based on currency exchange rates on end date of offering. As Ether and Bitcoin exchange rates are highly volatile, actual and current market capitalization of the companies today may differ significantly from figures shown in the table. Funding amount until 31.10.2019 considered. 2) EOS conducted a two-phased ICO. In the 1st phase (5 days in June 2017), USD 185mn were raised. The second phase lasted 350 days ending in June 2018.

Source: Strategy& analysis; Note: only completed offerings with indicated funding volume considered.

USA, Singapore, Hong Kong and UK continue to dominate global token offering sphere

Countries with most token offering traction (2019 vs. 2018)

LEADING ¹⁾ TOKEN OFFERING COUNTRIES IN <u>2019 YTD²⁾</u>				
Country	Total Raised (USD mn) ³⁾	Total # Closed Offerings ³⁾		
Mong Kong	1'009	4		
1 CAYMAN ISLANDS	238	6		
🖾 UNITED ARAB EMIRATES	149	3		
SINGAPORE	110	11		
💥 UK	98	11		
ESTONIA	96	13		
	8 0	■ 1		
WSA USA	6 6	9		
GERMANY	■ 57	6		
ZARUSSIA	44	4		

LEADING¹⁾ TOKEN OFFERING COUNTRIES IN <u>2018</u>

Country	Total Raised (USD mn) 3) Total # Closed Offering	
🗱 CAYMAN ISLANDS	4'997	25
BRITISH VIRGIN ISLANDS	2'294	21
	2'109	147
USA	1'456	96
💥 UK	916	93
SWITZERLAND	894	69
ESTONIA	651	73
MONG KONG	428	39
🚟 LITHUANIA	■ 282	1 1
	248	17

KEY TAKE-AWAYS

- British Virgin Islands and Scayman Island with strong ranking among leading token offering countries worldwide, due to single large-scale completed offerings (i.e. EOS with USD 4.1 bn funding volume and Telegram with USD 1.7 bn funding volume)
- USA, M Singapore and M Hong Kong rank among the leading countries in terms of # of completed crypto offerings throughout 2018 and 2019 YTD, indicating their strong positioning in token offering ecosystem
- Within Europe, M Switzerland and M OK are leading hubs in the crypto offering sphere in 2018 and 2019 YTD;
 Estonia & M Lithuania, with their relatively small financial markets, continue to strengthen their ranking position among the top token offering countries

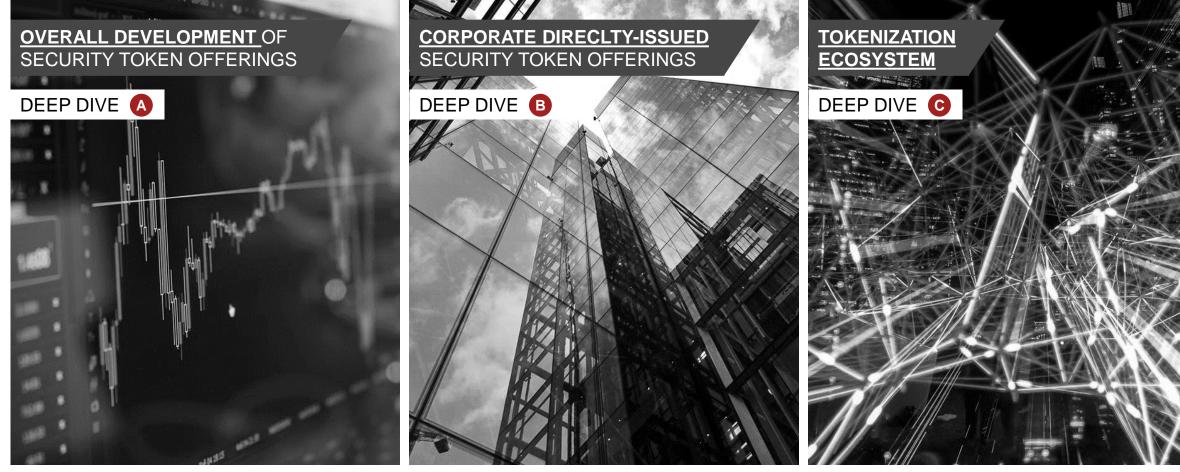
ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved. 1) In terms of raised funding. 2) Token offerings until 31.10.2019 considered. 3) Calculations based on currency exchange rates on end date of ICO. As Ether and Bitcoin exchange rates are highly volatile, actual and current market capitalization of the companies today may differ significantly from figures shown in the table. Source: Strategy& analysis; Note: only completed offerings with indicated funding volume considered.

To assess rise of STOs, three relevant perspectives need to be considered

Perspectives on Security Token Offerings

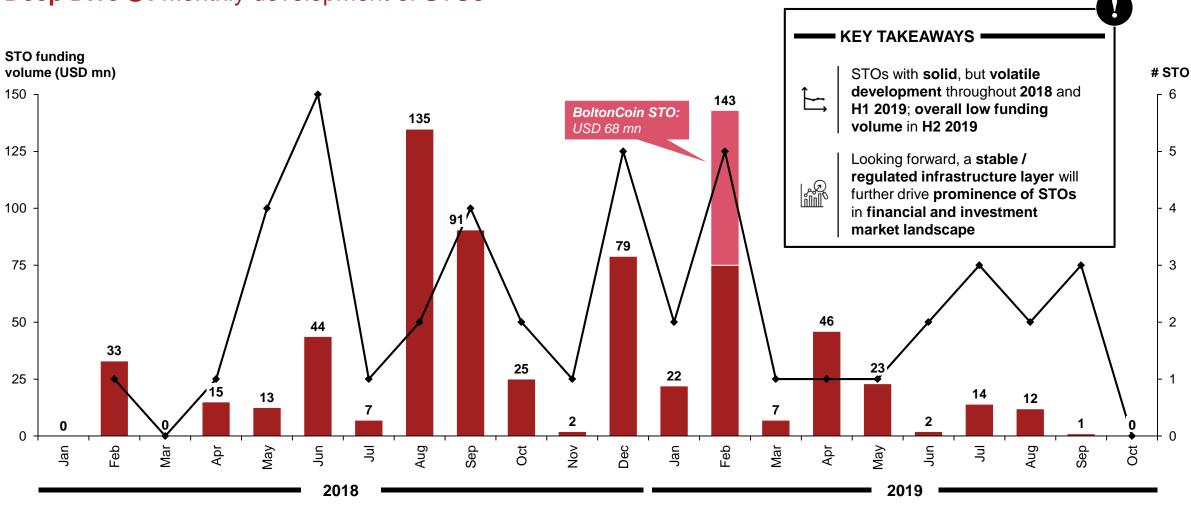
CORPORATE DIRECLTY-ISSUED TOKENIZATION SECURITY TOKEN OFFERINGS **ECOSYSTEM** DEEP DIVE **B** DEEP DIVE C

DEEP DIVES ON FOLLOWING SLIDES



STOs continue to establish as pivotal Blockchain-based crowdfunding instrument

Deep Dive (A): Monthly development of STOs



ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved.

Source: Strategy& analysis; Note: only completed offerings with indicated funding volume considered, excluding corporate directly-issued STOs.

6

More and more established institutions globally conduct corporate directly-issued security token offerings

Deep Dive B: Selected corporate directly-issued STOs

ISSUING INSTITUTIONS ¹⁾ (SELECTION)	SPECIFICATION OF SECURITY TOKEN OFFERING	DATE	RAISED AMOUNT	COUNTRY
AUSTRIAN GOVERNMENT	Issuance / tokenization of an Austrian government bond	10/2018	USD 1.4 bn	AUSTRIA
BANCO SANTANDER Santander	Issuance / tokenization of a bond	09/2019	EUR 20 mn	SPAIN 💰
	Issuance / tokenization of a bond	12/2019	USD 2.8 bn	CHINA 😤
BBVA BBVA	Issuance / tokenization of a syndicated loan	11/2018	EUR 150 mn	SPAIN 💰
DAIMLER DAIMLER	Issuance / tokenization of a 1-year bond	06/2017	EUR 100 mn	GERMANY
	Issuance / tokenization of a bond	10/2019	n/a	GERMANY
	Issuance / tokenization of a referral / loyalty platform	05/2019	n/a	UAE 🗾
J.P. MORGAN J.P.Morgan	Tokenization of gold bars	upcoming	n/a	USA
SOCIETE GENERALE	Issuance / tokenization of a 5-year covered bond	04/2019	EUR 100 mn	FRANCE
	Issuance / tokenization of 2 tranches of AUD-denominated bond ("Bond-i")	08/2019	USD 108 mn	USA ²⁾

Strategy& | Spring 2020 Edition

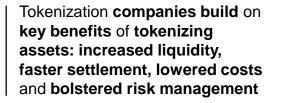
Well-established tokenization ecosystem already in place; strong focus on United States as favorable hub

Deep Dive G: Selected tokenization companies

SELECTED TOKENIZATION COMPANIES

TOKENIZATION COMPANY ¹) (SELECTION)	BUSINESS FOCUS	FOUNDATION	# EMPLOYEES ²⁾
🚟 ALPHAPOINT	Provider of tokenization & trading solutions for illiquid assets	2013	~60
BITMARK	Platform for licensing & peer-to-peer transfers of digital assets	2014	~30
	Provider of tokenization data residency solutions	2010	~250
S CONSENSYS	Provider of Ethereum Blockchain infrastructure	2014	~800
🚹 CUSTODIGIT	Platform enabling access to crypto currencies & digital assets	2018	~10
🚳 FINFABRIK	Platform to create Digital Asset-Backed Securities (DABS)	2016	~20
🕂 GENTWO	Provider of securitization services	2018	~10
HARBOR	Blockchain-based investment platform for alternative assets	2017	~20
🚝 HYPR CORP	Provider of a decentralized biometric tokenization scheme	2014	~60
LIQUID TOKEN	Platform for digitization of various illiquid assets	2014	~10
MASTERWORKS	Investment platform for fine art	2017	~20
	Blockchain-based tokenization platform for illiquid assets	2016	~30
🗱 PARALLEL MARKETS	Tokenization & trading platform for various illiquid assets	2018	~10
NART VALOR	Provider of tokenization, listing & trading solutions	2017	~20
SMARTLANDS	Platform for Blockchain-based securities backed by assets	2017	~10
TEMPLUM	Marketplace for sale / trading of digital assets	2017	~20
TOKENGATE	Provider of a token economy enabling infrastructure	2018	~10
TOKENY SOLUTIONS	Blockchain-based platform for digitization of financial assets	2017	~30
TOKENYZ	Platform for tokenization of traditional assets	2019	~5
TRUSTTOKEN	Tokenization platform for real-world assets	2017	~30

KEY TAKE-AWAYS



Strong focus on illiquid assets and alternatives (e.g., art) to make these assets accessible for small retail investors

Most companies are still in an early stage (~2-3 years old) with a relatively small employee base



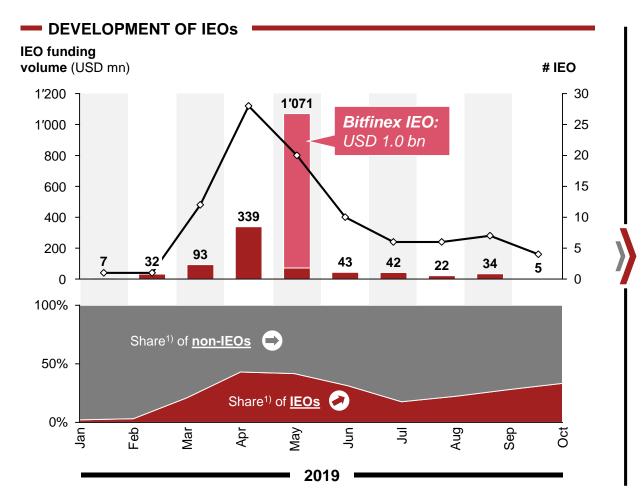
Q

Large number of tokenization companies are based in **S** US, benefiting from the stimulating ecosystem

ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved

1) Tokenization companies sorted in alphabetical order. 2) As of 17th December 2019, according to LinkedIn / company websites, only direct corporate functional / core roles considered. Source: Strategy& analysis

Despite declining development of token offerings in H2 2019, IEOs are experiencing a strong momentum in crypto sphere **Scope of IEOs**



KEY TAKEAWAYS



Until early 2019, **IEOs** did not play any **significant role** in global crypto market / ecosystem (after first IEOs already took place in 2017 - e.g., Bread, Gifto)



IEOs experienced strong momentum (in terms of # completed offerings and aggregate funding volume) in **beginning of 2019**; **Bitfinex** with **largest IEO** (USD 1.0 bn) in **May 2019**

Low level of completed token offerings in second half of 2019; nonetheless, IEOs with relatively strong / increasing adoption, indicating a progressive establishment of this crowdfunding instrument in Blockchain sphere



屾

Looking ahead, the **development / institutionalization** of the underlying infrastructure (i.e. crypto exchanges) and the clarification of the regulatory landscape of associated global crypto offerings will further drive market traction of IEOs

ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved. 1) of all completed crypto offerings (in terms of #). Source: Strategy& analysis; Note: only completed offerings with indicated funding volume considered

We offer a One Firm, Strategy to Execution Client Experience and Offering – across the globe and in all relevant markets

For further insights, please contact the authors of this report



STEVE DAVIES Global Blockchain Leader

steve.t.davies@ pwc.com



HENRI ARSLANIAN FinTech & Crypto Lead Asia

henri.arslanian@ hk.pwc.com



KRIS KERSEY Blockchain Lead USA

kris.kersey@ pwc.com



GÜNTHER DOBRAUZ Leader PwC Legal Switzerland

guenther.dobrauz@ ch.pwc.com



JONAS HEYDASCH FinTech & Crypto Finance Expert

jonas.heydasch@ strategyand.ch.pwc.com

ICO / STO | Strategic Perspective © 2020 PwC. All rights reserved.



HENRIK OLSSON Blockchain Lead Nordics

henrik.olsson@ pwc.com



The authors would also like to thank Chris Ersser, Galen Law-Kun, Vivien Brunot and Louise Broderick for their important contributions towards this report.

JOHN SHIPMAN Blockchain Lead Australasia

john.shipman@ pwc.com



RAPHAEL EBELING Blockchain & ICO Expert raphael.ebeling@ strategyand.ch.pwc.com PwC / Strategy& offers a broad and integrated range of <u>Blockchain</u> <u>AND CRYPTO</u> <u>RELATED</u> SERVICES





Thank you!

strategyand.pwc.com

© 2019 PwC. All rights reserved.

PwC refers to the PwC network and/or one or more of its member firms, each of which is a separate legal entity. Please see pwc.com/structure for further details. **Disclaimer:** This content is general information purposes only, and should not be used as a substitute for consultation with professional advisors.