



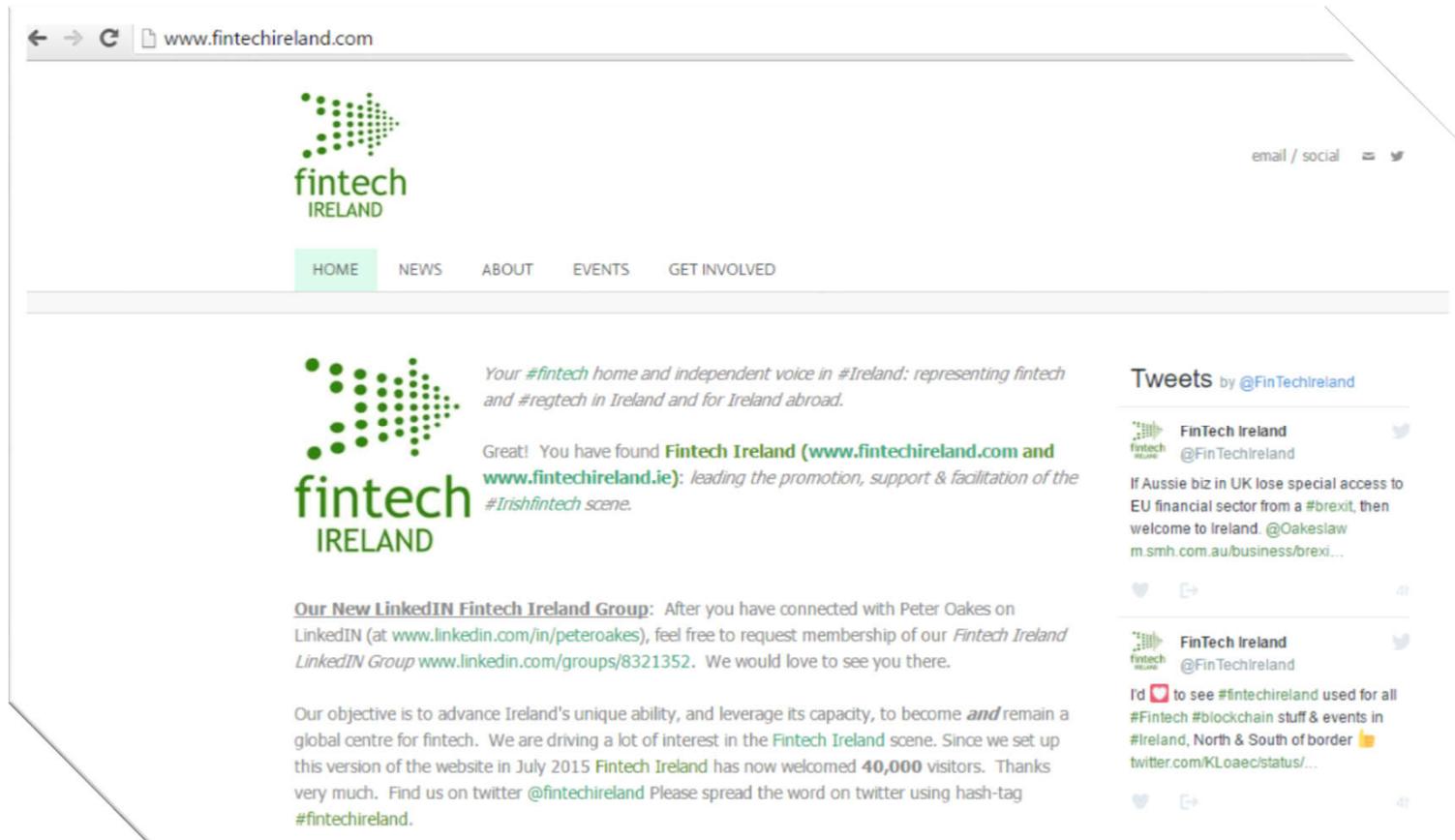
Blockchain: Challenges & opportunities under the current regulatory environment

Tuesday 7th June 2016

Peter Oakes

Slides online now

www.fintechireland.com



The screenshot shows the homepage of the Fintech Ireland website. At the top, there is a navigation bar with the following links: HOME, NEWS, ABOUT, EVENTS, and GET INVOLVED. The main content area features a large heading "fintech IRELAND" and a sub-heading "Your #fintech home and independent voice in #Ireland: representing fintech and #regtech in Ireland and for Ireland abroad." Below this, there is a paragraph that reads: "Great! You have found **Fintech Ireland (www.fintechireland.com and www.fintechireland.ie)**: leading the promotion, support & facilitation of the #Irishfintech scene." Further down, there is a section titled "Our New LinkedIN Fintech Ireland Group" which states: "After you have connected with Peter Oakes on LinkedIN (at www.linkedin.com/in/peteroakes), feel free to request membership of our *Fintech Ireland LinkedIN Group* www.linkedin.com/groups/8321352. We would love to see you there." The final paragraph on the page says: "Our objective is to advance Ireland's unique ability, and leverage its capacity, to become **and** remain a global centre for fintech. We are driving a lot of interest in the **Fintech Ireland** scene. Since we set up this version of the website in July 2015 **Fintech Ireland** has now welcomed **40,000** visitors. Thanks very much. Find us on twitter @fintechireland Please spread the word on twitter using hash-tag #fintechireland." On the right side of the page, there is a "Tweets by @FinTechIreland" section showing two tweets. The first tweet says: "If Aussie biz in UK lose special access to EU financial sector from a #brexit, then welcome to Ireland. @Oakeslaw m.smh.com.au/business/brexi...". The second tweet says: "I'd  to see #fintechireland used for all #Fintech #blockchain stuff & events in #Ireland, North & South of border  twitter.com/KLoaec/status/..."

Peter Oakes

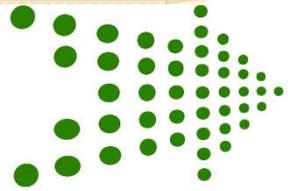


- Executive and non-executive director and advisory committee member to regulated and unregulated companies, including Fintech, RegTech, MiFID and Funds. Panel Member, Fintech20 Ireland
- Solicitor admitted in Ireland, the United Kingdom and Australia
- Founder of Fintech Ireland & Fintech UK (RegTech Ireland & Regtech UK). These groups support 'fintech' & 'regtech' initiatives in Ireland & the UK
- 2014-2016: Board Director & Chief Risk Officer for Bank of America Merchant Services Europe (based in London)
- 2010-2013: Central Bank's first Director of Enforcement and AML/CTF Supervision in October 2010. Member of the Senior Leadership, Operations, Policy & Supervisory Risk Committees
- Over the past 25 years Peter has worked as a regulator (Ireland, UK & Australia) and in the investment management, payments, funds & fintech industries (UK & Ireland) in Board, C-Suite, Legal and Compliance/Risk roles. He has also advised Central Banks, Regulators and their senior management on a wide range of supervisory and enforcement issues

Purpose of 30 minute session

- Focus on blockchain
 - what we are seeing and hearing from:
 - large finserv incumbents
 - active key regulators; and
 - EU Parliament
- Not examining the wider scenes of:
 - digital or virtual currencies; or
 - regtech or fintech

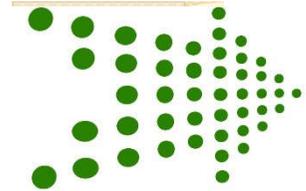
Some examples of what is happening in blockchain (not attempting to cover everything, including the Ethereum Project or smart contracts)



Must be adopted on consistent fintech standards (1/2)

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- <http://ftalphaville.ft.com/2016/06/03/2164713/shared-database-anarchy-blockchain/>
- *We apply this framework within the context of equity markets and believe the biggest challenge is aligning the interests of the various stakeholders, including regulators, in the value chain*
- *Unless blockchain technology is broadly adopted on consistent standards, the network benefits that unleash efficiency and innovation are at risk of not being realised [Morgan Stanley]*



Must be adopted on consistent fintech standards (2/2)

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- *the industry is at risk of repeating the past and creating countless new siloed solutions based on different standards and with significant reconciliation challenges essentially a new system with the same challenges we face today* [Depository Trust & Clearing Corporation]
- BNY Mellon has been involved in a wide range of blockchain proofs of concept
- Others have pitched their readiness to supply their clients with flexible blockchain solutions that address both their needs and those of other suppliers
e.g. Nasdaq, State Street and ICAP

Are we ready to regulate?

- If the technology is still largely in proof of concept stage, a further key hurdle is *whether it can be scaled to service an entire market*
- Other risks evaluated and over which controls need to be demonstrated include *security, economics and regulation*

Bank of Ireland and BNP Paribas announce blockchain breakthroughs

05 April 2016 | 18149 views | 0

- New use cases for the adoption of blockchains in finance are appearing every day, with [Bank of Ireland and BNP Paribas](#) the latest to *demonstrate the disruptive potential of the technology*
- Working with [Deloitte](#), Bank of Ireland has completed *a joint proof-of-concept trial* which demonstrates how financial institutions can *combine the technology with their existing systems* to provide new *client experience* and *regulatory oversight* at a *lower cost*

Blockchain Activity (1/2)

Source: © Magister Advisors, CB Insights

Thanks Peter O'Halloran for permission to reproduce these two slides

<https://ie.linkedin.com/in/peterohalloran>

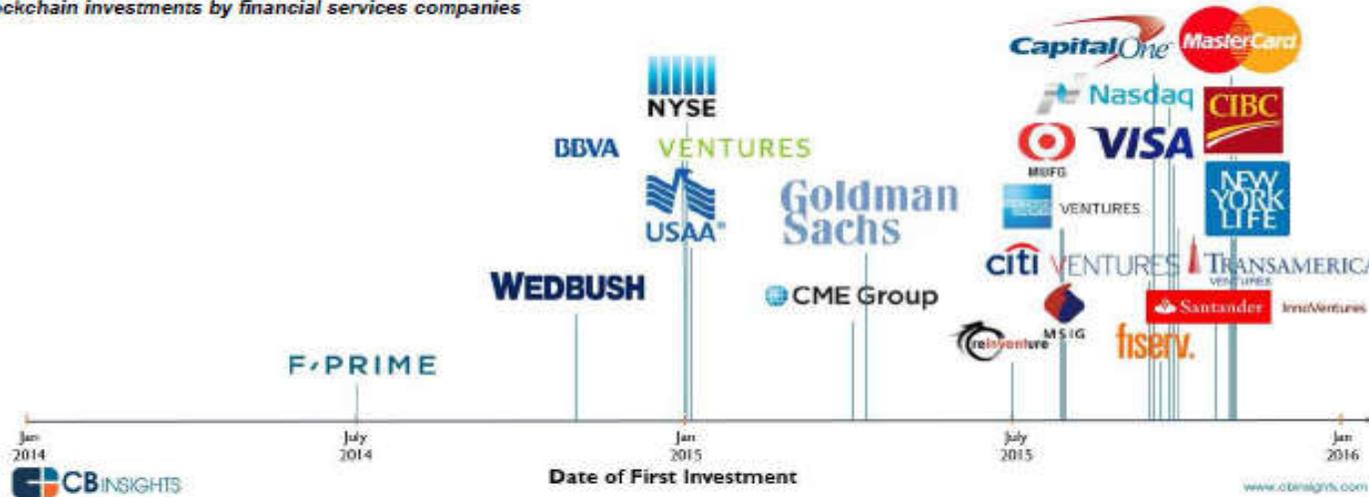


MAGISTER
ADVISORS

Magister Advisors estimates over **\$1B** will be spent by large financial institutions on **Blockchain** over the next **24 months**

Banks, exchanges, and payment companies have all placed bets on bitcoin and blockchain startups

Bitcoin and blockchain investments by financial services companies



Notable bitcoin/blockchain startups



Blockchain Activity (2/2)

Source: © SVB Financial, Santander

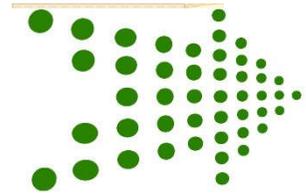
Blockchain (continued)

2016 will be about developing test cases



Santander estimates that the **blockchain could save banks \$15-\$20B per year** in infrastructure costs

Use Case	Benefits of Blockchain
International Payments	<ul style="list-style-type: none"> Using a distributed ledger could reduce costs and improve the speed of settlement in international remittance and correspondent banking
Securities Trading	<ul style="list-style-type: none"> Securities could settle close to real-time, a significant improvement vs. the current three-day cycle
Recordkeeping	<ul style="list-style-type: none"> A decentralized ledger could improve the transparency and accuracy of ownership data



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Cost of innovation/transformational change

- European investment banks continuing to lose marketshare to US peers since the 2007/9 financial crisis
- Given the cost of transformational change in implementing blockchain, the question is:

“How will the large number of actors in this industry makes it possible to pass the additional cost of capital that regulators are imposing on to their clients”?

- All this talk of innovation/transformational change is wonderful, but who is writing the cheque?
- *Thus why should regulators be expected to invest time and effort adopting global standards for blockchain regulation?*

Having made those points, let's look at what is happening in the world of regulation and spotting opportunities

US - SEC

- *One key regulatory issue is whether blockchain applications require registration under existing Commission regulatory regimes, such as those for transfer agents or clearing agencies. We are actively exploring these issues and their implications. [31 March 2016]*

Mary Jo White,
Chairwoman
Securities & Exchange Commission



US - CFTC

- *If Allowed to Thrive, Blockchain May Finally Give Regulators Transparency - Speech*
- *I was on Wall Street, serving as a senior executive of one of the world's major trading platforms for credit default swaps, then the epicenter of systemic risk [12 April 2016]*

Christopher Giancarlo, a Member
of the US Commodity Futures
Trading Commission



Australia - ASIC

ASIC Chief: Blockchain Will Have 'Profound Implications' for Regulators

- *We will need to find the right balance between speed of execution and streamlining of business processes*
- *As regulators and policy makers, we need to ensure what we do is about harnessing the opportunities and the broader economic benefits – not standing in the way of innovation and development [December 2015]*



Greg Medcraft, Chairman, ASIC (& ex-IOSCO)

IOSCO

- *One of the big failures of global financial reform has been the trade repositories ..in the middle of those 29 trade repository complexes, you've got commercial interests, privacy issues, data protection, distrust among regulators and no harmonization of the underlying data*
- *You know who's bought the particular product, so that's good from a market abuse perspective, of controlling market abuse [December 2015]*



David Wright, Secretary-General, IOSCO

UK - FCA (1/2)

- *Might the blockchain transform the way the regulators work? I absolutely agree with that. I think there are a lot of benefits to be harnessed from distributed ledger, in terms of traceability and tracking, that makes it easier for us*
- *I think regulators do now perceive this to be important; the degree of importance will probably differ between regulators [21 January 2016]*



Makoto Seta, Senior Associate, FCA

UK - FCA (2/2)

- *some key opportunities .. include managing regulatory requirements more efficiently, and, an opportunity for us to understand how we can best support developments and potentially adopt some RegTech solutions ourselves. One example could be distributed ledger technology, sometimes more popularly known as ‘block chain’*
- *The current development of distributed ledger technology has the potential to revolutionise financial services; whether it is the panacea of all ills in the financial world is yet to be seen*



Christopher Woolard,
Director, Strategy, FCA

UK - PSR

- Role of the PSR is interesting
- How about making *blockchain* a 'designated payment system', like Bacs, Cheque & Credit, CHAPS, Faster Payments Scheme, LINK, Northern Ireland Cheque Clearing, MasterCard, Visa Europe
- *Lack of a long term UK strategy for Blockchain could result in the UK missing an opportunity*
[January 2016 – Horizontal Scanning Working Group]



EU Parliament (1/2)

- EU Parliament held 4 day conference on virtual currencies, blockchains & distributed ledgers
- EU Parliament passed (542-51 votes) a report on virtual currencies and blockchain also supports a new task force to be overseen by the European Commission
some initial confusion from press releases headlines as to whether MEPs were voting in a heavy-handed approach to blockchain technology regulation

EU Parliament (2/2)

- *One reason why regulating now in detail would be difficult is that we don't know yet what the most important use of blockchain might be.*
- *We don't want pre-emptive regulation, but we do want precautionary monitoring* Jakob von Weizsaecker (German member of the European Parliament) and author of proposal put to EU Parliament on previous slide



Recent Article on Fintech Ireland

Powering forward

The growth prospects for innovative disrupters is immeasurable, writes **Peter Oakes** as he discusses the prospects for Ireland's fast growth fintech industry.



Peter Oakes, founder,
Fintech Ireland

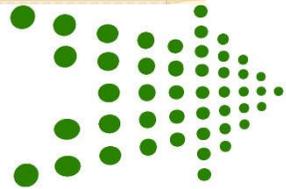
FUNDING FINTECH

First and foremost, the question which every entrepreneur must consider is whether proposed funding terms are fair. Many start-ups obtain their first round of financing, in addition to the founders' own pockets, from family and friends. After that, things are not necessarily easy in Ireland, leading many to look to London and further a field where investors don't seek as much equity as those in Ireland.

To me this is critical. Ireland really needs to up its game in this space if it wants to keep local talent local.

See article from Business & Finance Magazine attached

Examples of other opportunities



KYCkr to float on ASX

fintech- Blockchain is the future of ID

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Kyckr Limited

Proposed ASX code: KYK

Proposed listing date: TBA

Company contact details	www.kyckr.com Ph: 61 2 9276 1271 Fax: 61 2 9276 1284
Principal Activities	Provision of corporate data
GICS industry group	Not yet allocated
Issue Price	20 cents per ordinary share
Issue Type	Equity
Security code	KYK
Capital to be Raised	\$8,000,000
Expected offer close date	30 May 2016
Underwriter	N/A

- David Cassidy, the managing director of Irish float hopeful KYCkr says blockchain is the future of its business identity check business

- *We are being pressured by the banks to have this competency; they want this yesterday ... Blockchain is a given, you have to do it*

Central Securities Depositories

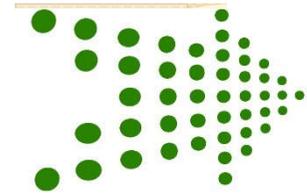
- Note the comments above from securities markets regulators, i.e. SEC, IOSCO & ASIC
- Morgan Stanley anticipate that blockchain presents a threat / opportunity to the [\\$77 billion post-trade market](#)
- Within the equities value chain, [central securities depositories seem best placed to drive innovation](#) as they maintain a record of ownership

Potential solution to structural problems (view of ASX)

- Blockchain represents a potential solution to structural (not cyclical) problems:
 1. costs are increasing
 2. the capital and collateral required to do business is now higher
 3. revenues are under continuing pressure
- *The potential of the technology to improve post-trade efficiency and reduce costs is genuine*



Peter Hiom
Deputy CEO, ASX



What problem is blockchain solving? (view of ASX)

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What problem is blockchain solving?
The problem with traditional databases

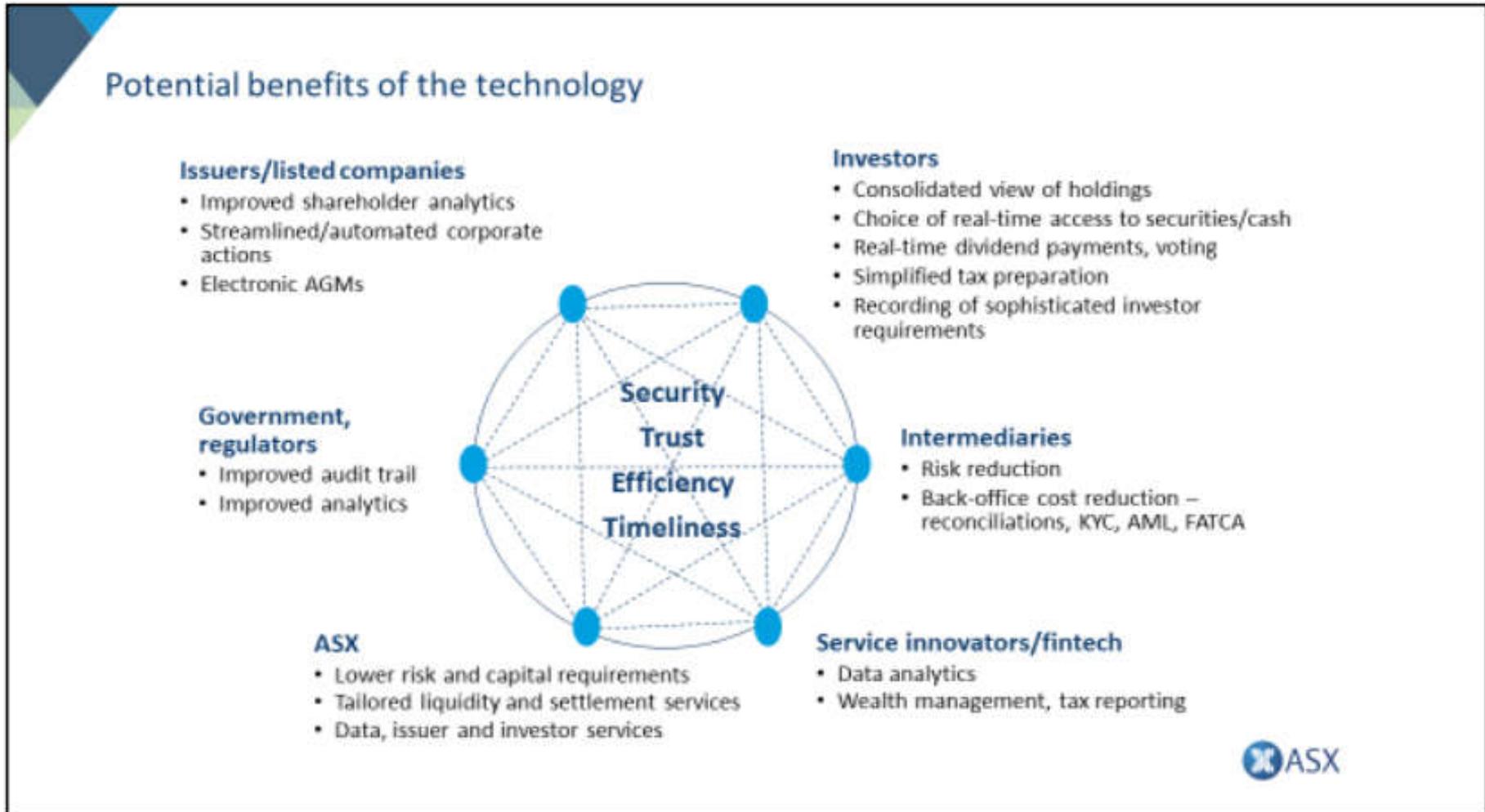


- Digital data = copyable
- A feature for digital media, but a bug for digital assets: if a photo is copied and shared, that's great; if a share is copied, it breaks market integrity
- 'Double spending' problem
- Digital assets are a unique kind of data





Potential benefits of blockchain technology (view of ASX)





ARE YOU ONE OF IRELAND'S TOP
FINTECH20 COMPANIES? APPLY TO BE ON
THE FIRST IRISH FINTECH20 LIST!
SIMON COCKING * JUNE 7, 2016

- Fintech20 Ireland call for submissions
- <http://irishtechnews.net/ITN3/fintech-20-ireland-apply/>

FinTech 20 Ireland

Business Name *

Sectors *

How would you best describe your sectors, eg: payments, FX, lending, Insurance, etc?

Year Founded *

Website *

format: http://www.name.com

Where are you based? *

City / Country - we can only include businesses whose HQ (and parent, if applicable) is based in Ireland

Business Bio *

Tell us about your business in 100 words

Why will your business do well? *

What's different about your company? What problem do you solve?

What have you achieved so far this year? *

Final thoughts

1. Regulators are cautious
focus on ideas which help deal with financial stability, market integrity and/or consumer protection and you should get an audience
2. Entrepreneurs, incumbents & investors are not always aligned
vision, purpose, strategy, execution and funding
3. Don't agree to write a presentation on "the challenges & opportunities under the current regulatory environment", unless you really like a challenge!

Thank you

Contact Peter Oakes to discuss non-executive director & consulting services for regulated financial entities, fintech & other innovative companies



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