



Innovation Working Group

Chuck Landes, IAASB Deputy Chair and Innovation Working Group (WG) Chair

IAASB Meeting, New York

Agenda Item 3–A

December 6, 2016

IAASB

**International Auditing
and Assurance
Standards Board**

Purpose of the Session

- Update on Innovation WG's information gathering
 - Developments that may have an impact on international standard setting, and Board's input on these topics
 - Other developments relevant to standard setting
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The IAASB's 2017–2018 Work Plan Consultation – Feedback from Respondents

- Respondents generally considered the IAASB's projects related to Emerging Forms of External Reporting (EER), Agreed-Upon Procedures (AUP), auditor reporting implementation and innovation as having lower priority than the current priority projects
- Other topics variously suggested by a very limited number of respondents that the IAASB may consider for inclusion in its 2017–2018 Work Plan
 - Auditor responsibility with respect to financial measures inconsistent with requirements within the appropriate financial reporting framework incorporated in financial statements
 - Auditor involvement with earnings releases /preliminary announcements
 - Direct engagements
 - Joint audits

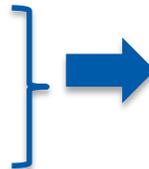
National Auditing Standard Setters – Other Innovation Topics (June 2016)

- Other topics identified by NSS included:
 - Continuous auditing using information technology
 - Compliance and performance engagements
 - Assurance on IT security
 - XBRL
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Update on Previous Ongoing Monitoring Activities and New Developments

Last discussion: September 2015

- Assurance on non-financial information
- Assurance on corporate governance reporting
- Assurance on internal control over financial reporting, including aspects of internal control, such as risk management



December 2016

- Integrated Reporting Working Group: EER
 - Cybersecurity
 - Other emerging developments: revision of Committee of Sponsoring Organizations of the Treadway Commission (COSO) Enterprise Risk Management Framework
- NEW***
- Non-GAAP financial measures
 - Block chain technology

Non-GAAP Financial Measures – Overview

- Definition
 - Numerical measures of a listed/public company's historical or future financial performance, financial position, or cash flows that adjust GAAP amounts in some fashion e.g. EBITDA
- U.S. Securities and Exchange Commission (SEC) has regulations about presentation of non-GAAP (Generally Accepted Accounting Principles) financial measures in SEC filings and other company communications, such as earnings releases and investor presentations
 - Spirit of these regulations is that the non-GAAP financial measures should be relevant and reliable measures that do not mislead investors, and should not be more prominent than the related GAAP numbers
- Note: This does not include broader measures, e.g. integrated reporting

Non-GAAP Financial Measures – Issues

- Both perception and reality that too many companies have crossed fine line in promoting non-GAAP financial measures
 - Pendulum swings this way from time to time like during Dot-Com era
- Current SEC enforcement actions already having big impact as a wake-up call to companies to reign in over-zealousness
- Non-GAAP financial measures have an important place in communicating information to investors as long as it complements (and does not supplement) GAAP measures

Non-GAAP Financial Measures – Auditor's Role

- The preparation of non-GAAP financial measures generally does not fall under a company's system of internal control over financial reporting
- External auditor's opinion on financial statements and, when required, the related effectiveness of the company's internal control, does not cover non-GAAP financial measures
- Non-GAAP financial measures could be within the scope of ISA 720 (Revised)
- Should external auditors have more involvement with a company's non-GAAP financial measures?

Cybersecurity – AICPA ASEC Trust Information Integrity TF and Cybersecurity WG

- Goal is to develop criteria and attestation guidance for reporting on a cybersecurity risk management program
 - Develop and revise criteria for public exposure by ASEC (Assurance Services Executive Committee of the American Institute Of Certified Public Accountants (AICPA))
 - Draft Attest Guide to be approved and published by the AICPA Auditing Standards Board (ASB)
 - Outreach to users, industry and governmental bodies in collaboration with The Center for Audit Quality
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Cybersecurity – Proposed Cybersecurity Reporting

- Developing a reporting package consisting of:
 - Management’s description of the entity’s cybersecurity risk management program
 - Management’s assertion on:
 - The presentation of the description in accordance with a defined set of description criteria
 - The effectiveness of controls to meet a suitable set of control criteria
 - An independent practitioner’s report, that reports on whether:
 - The description is presented in accordance with the description criteria
 - The controls within the program were effective to achieve the entity’s cybersecurity objective based on the control criteria

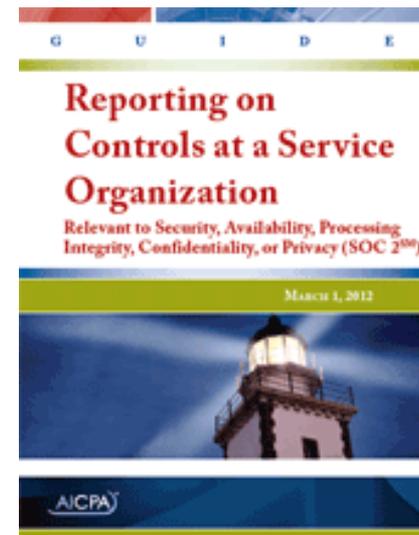
Cybersecurity – Assurance Reporting

- Exposure Drafts:

- Proposed Description Criteria for Management's Description of an Entity's Cybersecurity Risk Management Program (*Description Criteria*)
 - Proposed Revision of Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (*Control Criteria*)
 - Comments due December 5, 2016
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Cybersecurity – Assurance Reporting

- Maintain the Trust Services Criteria for System Reliability
- Maintain the Service Organization Control (SOC) 2 Guide (to be updated in 2017 once revised Trust Services Criteria finalized)
- Plan to develop a Supply Chain/Vendor Management Guide for publication in 2018
- Develop Information Integrity Criteria



Block Chain – Overview

- What is it?

- Shared distributed ledger system on which information about all virtual currency transactions, contracts or assets are recorded and could be made publicly available

- What are the benefits?

- Open, transparent
 - Establishes trust between “untrusting” parties
 - Decentralized/shared between networked participants
 - Strong authentication updates require access control (private keys)
 - Permanent/tamper resistant
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Block Chain – How it is used

WHY IS BLOCKCHAIN RELEVANT FOR CAPITAL MARKETS?

A DIGITAL ASSET = A DIGITAL BEARER TOKEN

Physical Bearer Tokens



Digital Bearer Tokens

Bitcoin	Exists
Currencies	
Securities	Emerging
Commercial IOUs	
Brand/Loyalty Points	
Etc..	

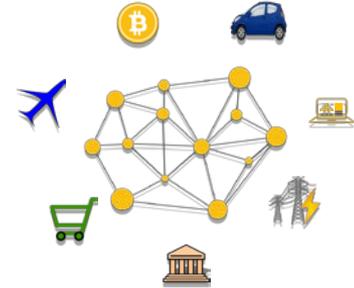
Block Chain – The Future of Smart Contracting



Digital assets



Digital currencies



Internet of things

Block Chain – Investments in Block Chain Technology

FinTech Funding 2013: \$4B 2014: \$12.2B 2015: \$20B

Global

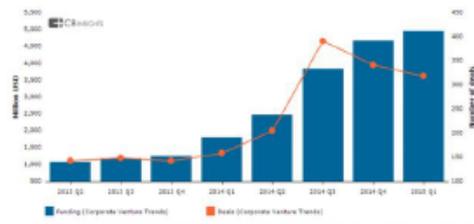
- London Financings have been growing at twice the rate of Silicon Valley
- KPMG 100 Top FinTech Companies:
 - 40 US companies,
 - 20 from EMEA,
 - 18 from the UK
 - 22 from ASPAC.

Sector	Semi-		Total
	Unicorns	Unicorns	
Lending	11	11	22
Payments	11	6	17
Investing	1	5	6
Real estate	2	3	5
Insurance	3	1	4
Accounting	2	0	2
Credit Reports	2	0	2
Security	1	1	2
Bitcoin	1	2	3
Other	2	5	7

Corporate Venture Larger & Smarter

\$16bn Funding on balance
+198.53% Y/Y Funding Growth
1,257 Deals in last year
+111.62% Y/Y Deal Growth

231 Avg Deals per Quarter
\$2.66bn Avg Funding per Quarter
Q1'15 Reported Quarter (9 Funding)
Q3'14 Reported Quarter (9 of deals)



Data Sourced: FT Capital

February - 50 Fin Tech Deals (Source FT Cap)

- 18 - Payments
- 12- Securities & Cap Mkts
- 9 - Banking
- 6 - Finance Mgmt
- 3 - Insurance
- 2 - Finance BPO

Valuations

Infrastructure: 10x, Tools 7-10x Applications: 3-7

Public FinTech Sector Universe

Median Price / Earnings Multiples by FT Sector



slide

Block Chain – High-level Challenges Associated with Block Chain



Nascent technology

Resolving challenges such as transaction speed, the verification process, and data limits will be crucial in making blockchain widely applicable.



Uncertain regulatory status

Because modern currencies have always been created and regulated by national governments, blockchain and Bitcoin face a hurdle in widespread adoption by pre-existing financial institutions if its government regulation status remains unsettled.



Large energy consumption

The Bitcoin blockchain network's miners are attempting 450 thousand trillion solutions per second in efforts to validate transactions, using substantial amounts of computer power.



Control, security, and privacy

While solutions exist, including private or permissioned blockchains and strong encryption, there are still cyber security concerns that need to be addressed before the general public will entrust their personal data to a blockchain solution.



Integration concerns

Blockchain applications offer solutions that require significant changes to, or complete replacement of, existing systems. In order to make the switch, companies must strategize the transition.



Cultural adoption

Blockchain represents a complete shift to a decentralized network which requires the buy-in of its users and operators.



Cost

Blockchain offers tremendous savings in transaction costs and time but the high initial capital costs could be a deterrent.

OTHER

R3 CEV Bank Consortium

APPLICATIONS
(Products & Services)

BITCOIN NETWORK BASED

PAYMENT PROCESSOR

BITPAY

CIRCLE

EXCHANGE

COINJAR

BITSTAMP

KRAKEN

COINBASE

MORE

TRADING PLATFORM

HEDGY

Product: Bitcoin Trading Platform

LedgerX

Product: Bitcoin Options Trading Platform

TeraExchange

Product: Bitcoin Swap Trading Platform

ISSUANCE PLATFORM

LINQ (NASDAQ)

Product: Private Issuance Platform

iS

Product: Debt & Equity Trading Platform

NON-BITCOIN NETWORK BASED

BLOCKCHAIN TOOL PROVIDERS

CHAIN

Tools: Bitcoin APIs & Tools

SYMBIONT

Tools: Smart Contract APIs & Tools

BLOCKSTREAM

Tools: Side stream

MONETAGO

Tools: Bitcoin APIs & Tools

CONSENSYS

Tools: APIs and Tools for Ethereum, Bitcoin and private permissioned ledgers

BLOCKAPPS

Tools: APIs and Tools that are compatible with Ethereum

ERIS INDUSTRIES

Tools: Smart Contract Apps on Eris's off-chain network using Arbitrum and Ethereum compatible

DAH

(Digital Asset Holdings)
Tools: APIs & Tools for Financial Services

ITBIT

Tools: APIs & Tools for Financial Services using Blockchain

INFRASTRUCTURE ADD-ON

COUNTER PARTY

Infrastructure: Smart Contracts

ROOTSTOCK

Infrastructure: Smart Contracts

INFRASTRUCTURE
(Blockchain Networks)

NON PERMISSIONED PUBLIC LEDGER

BITCOIN BLOCKCHAIN

Currency: Bitcoin
Settlement Process: Proof of Work
Ledger Owner: All Users

ETHEREUM

Currency: Ether
Settlement Process: Proof of Work
Ledger Owner: All Users

TENDERMINT

Settlement Process: Consensus (Proof of Stake)

PERMISSIONED PUBLIC LEDGER

HYPER LEDGER

Settlement Process: Proof of Work
Ledger Owner: All Users

RIPPLE

Currency: XRP
Settlement Process: Consensus
Ledger Owner: Trusted Parties

PERMISSIONED PRIVATE LEDGER

BANKCHAIN

Settlement Process: Consensus
Ledger Owner: IBM

Block Chain – Implications for the Profession

- As the technology evolves, more and more businesses may prefer to transact via block chain to transfer assets
- This financial data would then be contained in the block chain's ledger
- This raises obvious implications for accounting, the financial statement audit, and tax...
- How will block chain transform the role of the auditor?
 - Transformation?
 - Reduction?
 - Elimination or Replacement?

Block Chain – Audit/Accounting Opportunities and Challenges

- Opportunities:

- Enhanced trust/confidence
- Enhanced efficiency

- Challenges:

- Need for new accounting and auditing standards for digital assets?
 - Need for new regulations?
 - Need to evolve professional services and related value proposition
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Matters for consideration by the Board

- Impact of these topics on the current projects on the IAASB's agenda.
 - Are there other developments that the Innovation WG should consider?
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