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Smart Securities[®], Intelligent Markets

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Chairman & President
NAIC/CIPR Webinar
June 5, 2017

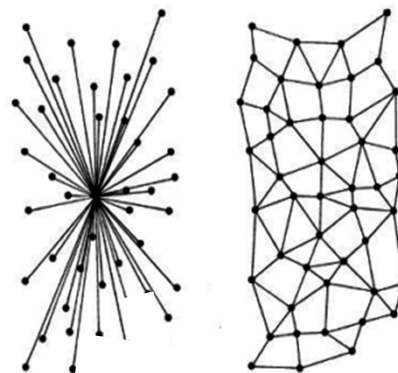
Review: Blockchain & Smart Contracts 101

A blockchain is:

- An immutable, append-only database
- Cryptographically secured
- Distributed + decentralized

Smart contracts:

- Self-enforcing terms and conditions
- Automatically execute administrative actions

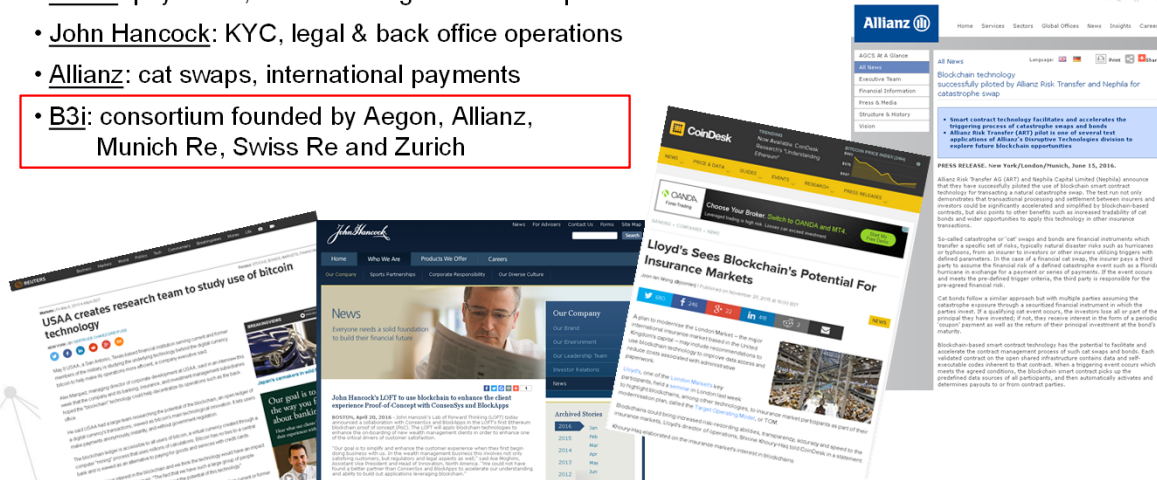


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Update: Insurer Uses of Blockchain Technology

- **USAA**: payments, decentralizing back office operations
- **John Hancock**: KYC, legal & back office operations
- **Allianz**: cat swaps, international payments
- **B3i**: consortium founded by Aegon, Allianz, Munich Re, Swiss Re and Zurich



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Fixing a Low-Probability but High Severity Risk: **Custody**

- Insurers do not legally own the securities they report on Schedule D
- Instead, insurers own IOUs called “security entitlements”
- Benefits of finding a cost-effective way to fix this:
 - Protect insurance consumers by ensuring insurers actually have the money to pay claims when due
 - Make ownership of securities clear and identifiable
 - Eliminate counterparty risk to brokers (T+3 settlement risk & prime brokerage/rehypotheication)
 - Reduce insurers’ operational reliance on intermediaries

Dole Food Had Too Many Shares
It's enough to make you wish for a blockchain.

Funds Challenging Dell Bid Find Shares Aren't Really Theirs

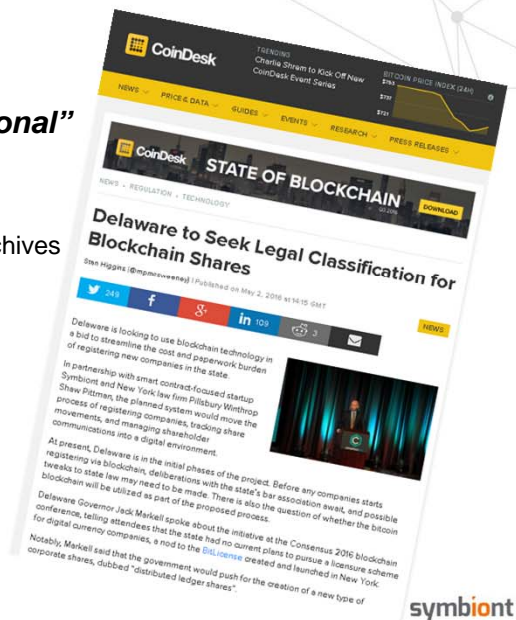
Bank of America to Pay \$415 Million to Settle SEC Probe
The bank's Merrill Lynch brokerage violated rules aimed at protecting customer assets, the regulator says

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Delaware Blockchain Initiative

Delaware will soon begin to store “foundational” documents of finance on a blockchain.

- “Smart Records” – in production at Delaware Public Archives
- “Smart UCC Filings” – stay tuned
- Incorporation Documents – expected later in 2017
 - One problem this change addresses is lack of beneficial owner tracking in securities markets



Update: A Key Ally Emerges—Judge Laster

The Block Chain Plunger:
Using Technology to Clean Up Proxy Plumbing and Take Back the Vote

Vice Chancellor J. Travis Laster
Keynote Speech
Council of Institutional Investors
Chicago, September 29, 2016



http://www.cii.org/files/09_29_16_laster_remarks.pdf

“I want you, the institutional stockholders of America, to take back the voting and stockholding infrastructure of the U.S. securities markets.”

“The current system works poorly and harms stockholders.”

“But the current plumbers—financial intermediaries—do not have an incentive to fix it. They are making healthy profits in a non-competitive market. They might play around the edges, but **real change will have to come from the outside**. The good news is that you have a plunger that you can use to clean up the plumbing. That plunger is distributed ledger technologies, the technology that drives bitcoin...”

“The plumbing needs to be fixed. A plunger exists. The takeover doesn’t have to be hostile. It can be friendly. But it needs to be done.”

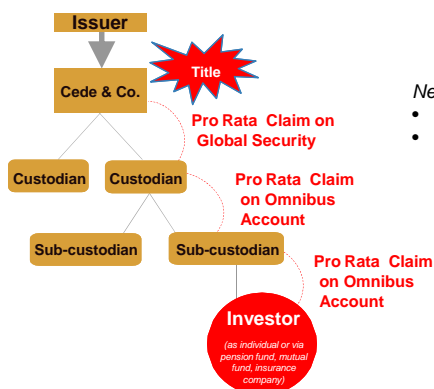
Problem: Lack of Beneficial-Owner Tracking in Securities

In other words, how can regulators measure insurer solvency when securities—especially U.S. Treasuries—may be over-issued?

Pre-1978 UCC Amendment



Post-1994 UCC Amendment



Needlessly introduces:

- Counterparty Risk
- Operational Risk

Source: based on "Restructuring Securities Systems Processing," Bank of Finland Discussion Papers, by Harry Leinonen, June 3, 2003.



UCC Article 8 (Securities): What Happened?

	Pre-1978	1978 Amendment	1994 Amendment
Who Holds Title?	Owner	Owner	Central Securities Depository (Cede & Co.)
Owner Owns	Property Right	Property Right	Contractual Right (IOU)
Legal Status	Title	Title	Contractual Right (IOU)
Evidence	Paper Certificate	Book Entry on Issuer's Records	Your Agent's Records, Their Agent's Records
Legal Form	Security	Security	"Security Entitlement"
Direct vs. Indirect	Direct	Direct	Indirect Pro Rata Share of the Security Entitlement Issued by Your Securities Intermediary, Which Holds an Indirect Pro Rata Share of the Security Entitlement Issued by Its Securities Intermediary, Which Holds a Pro Rata Share of the Global Security Held at the CSD (Cede & Co.)

Sources: "Handbook of Key Global Financial Markets, Institutions and Infrastructure," edited by Gerard Caprio, Jr., Chapter 50 (Securities Settlement Systems), 2013, p. 561; "Revised Article 8 of the Mississippi UCC: Dealing Directly with Indirect Holding," Bryn R. Vaaler, Mississippi Law Journal, Winter 1996, Book 2; "Policy Perspectives on Revised UCC Article 8," James S. Rogers, Boston College Law School Faculty Papers, 1996.



How Might Insurers Reduce Custody Risk?

*Failure along the chain of custody is a **low-probability** but **high-severity** risk.*

- Blockchains enable direct ownership/self-custody in a cost-effective, transparent way
 - Syndicated loans, private equity: blockchains are going into production stage
 - Bonds: stay tuned!
 - Delaware Blockchain Initiative highly significant
 - Timing: 5-10+ years to full implementation, but enabling legislative/regulatory changes underway now
 - Interim options to reduce insurers' custody risk:
 - DTC: each insurer has a direct account
 - Custodians: restrict holding insurer assets in omnibus accounts
 - Broker/dealers: use segregated accounts
 - Examination by Insurance Departments of entire chain of securities custody, esp. DTC & omnibus accounts
- } Costs vs. benefits?

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Blockchains for Insurance Departments?

Public records maintained by state Insurance Departments may lend themselves to blockchains:

- Customer complaint filings and status
- Agent licensing, continuing education status
- Insurance company licensing filings
- New product filings & approval
- Rate filings & approval

How Can We Help You?

- **Consumer Information** - file a complaint, find an agent/company
- **Insurance Agents** - online licensing, continuing education, applications
- **Insurance Companies** - those licensed to sell products in Iowa
- **Securities & Regulated Industries** - broker-dealers, securities agents, investment adviser firms and representatives, pre-need funeral plans
- **State Partnership Exchange Plan Management** - company information regarding Qualified Health Plan criteria and other information for companies about the exchange in development
- **Information for Consumers about Health Care Coverage and the Exchange** - information about health care coverage, the health insurance exchange, its functions, and how it can be accessed.

Source: Iowa Insurance Division, www.iid.state.ia.us

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