

Regulation of Virtual Currency & Blockchains

Presented by
Reuben Grinberg
Jai Massari

November 5, 2015

Davis Polk

Source: flickr.com/photos/isherwoodchris/3096255994

PRESENTATION TO

FMLG | Financial Markets Lawyers Group

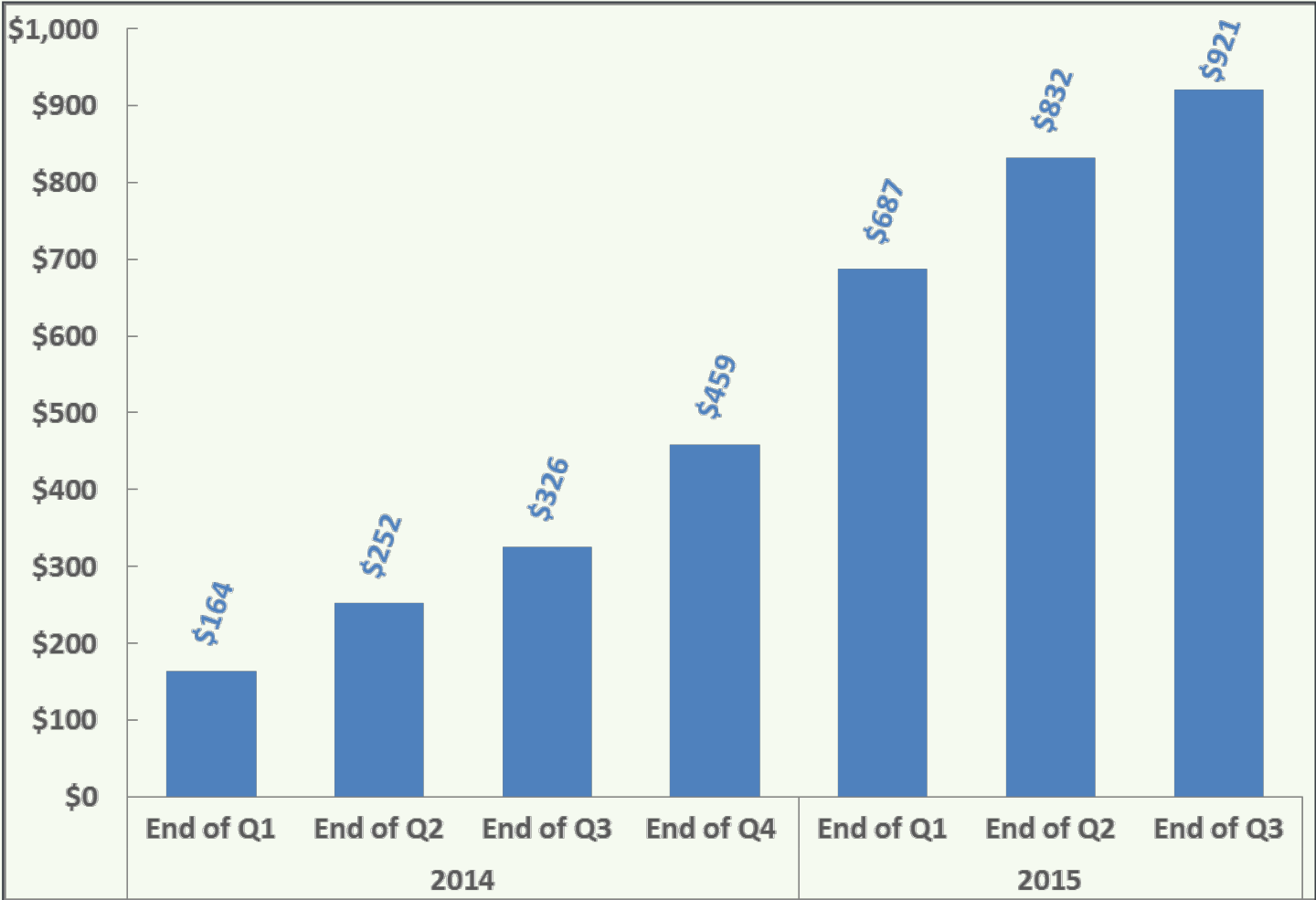
Table of Contents

1. Investment and Interest
2. What is it?
3. Industry Trends
4. Regulation of Virtual Currency
5. Regulation of Blockchain

Investment and Interest

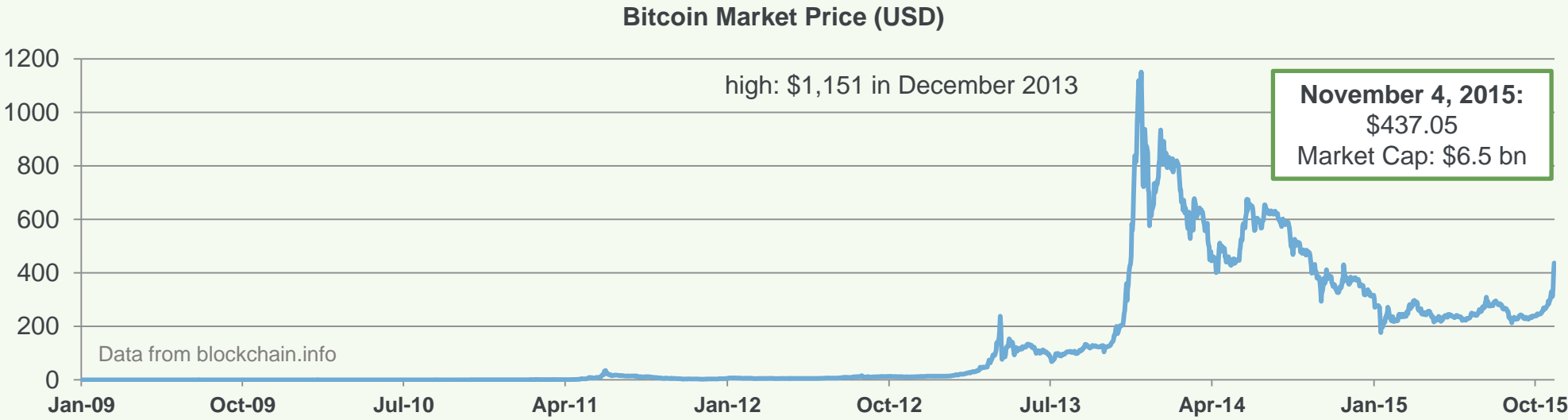
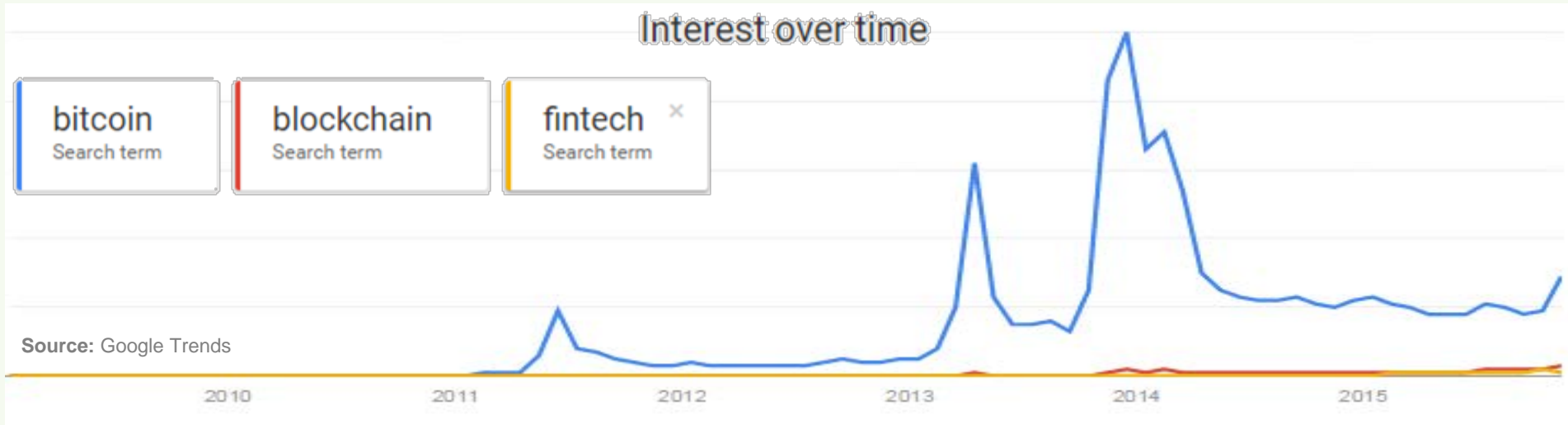
Investment and Interest

Cumulative VC Investment in Virtual Currency & Blockchain Tech (\$millions)



Sources: Coindesk.com, State of Bitcoin Q2 2015, State of Bitcoin Q3 2015

Investment and Interest



Investment and Interest



What is it?

What is Bitcoin?

- **Irredeemable artificial commodity money**
 - Limited total supply (21 million Bitcoins)
 - Sendable from person-to-person over the internet, without a financial intermediary, largely for free, irreversibly, in one hour
 - Not backed by any government, corporation, or commodity or asset
 - Psuedoanonymous, but all transactions effected “on network” are public, as are all “on network” accounts
- **Worth of 1 BTC gauged by supply / demand on exchanges**
 - Based on expectations about current and future uses as:
 - An investment (i.e., store of value)
 - Payment network
 - Other uses (electronic contracts, encoding ownership of assets, etc)
 - Takes into account many risks (regulation, hacks, competing products)

What is Bitcoin?

PROS AND CONS

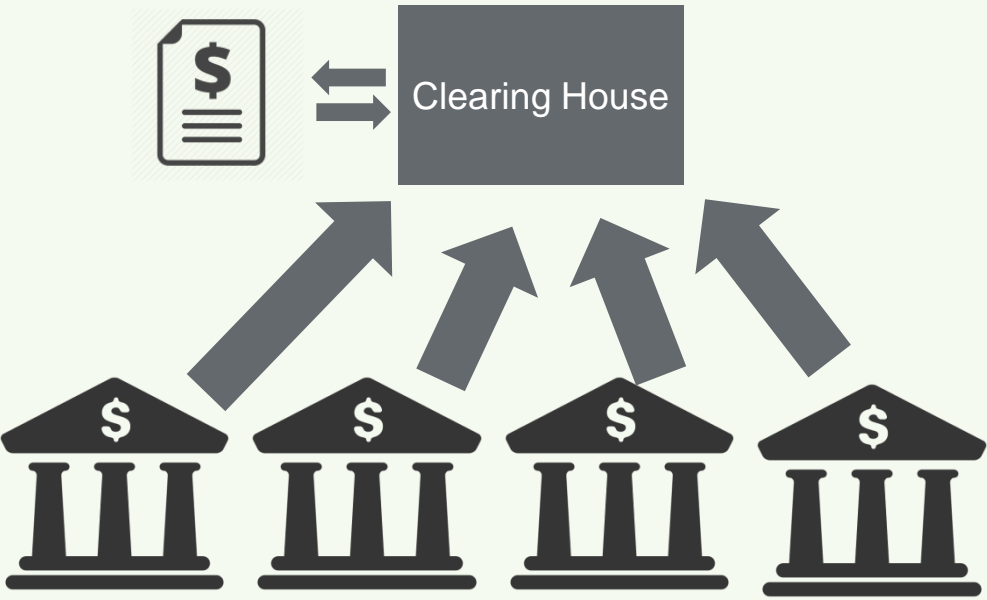
Potential Benefits	Potential Risks/Cons
<ul style="list-style-type: none">• Fast• Low-cost or free transfer• Can be trustless or without intermediaries• Irrevocable• Aligns with political beliefs of some (not inflationary, not controlled by central bank)• Psuedoanonymous• Transfer over internet by anyone with computer or smart phone• Resistant to censorship	<ul style="list-style-type: none">• Volatile• No government backing• Deflationary• Can facilitate money laundering, crime• Not widely accepted (but >100k merchants)• Negligence / malfeasance by service providers• No well defined governance process• Resource intensive• Consumer unfriendly without intermediaries (irrevocable, risky to hold)• “51% Attack”• Regulatory Crackdown• Psuedoanonymous• Can’t support high # transactions• Not fast enough



Success does not have to mean individuals in developed countries using it in day-to-day life.

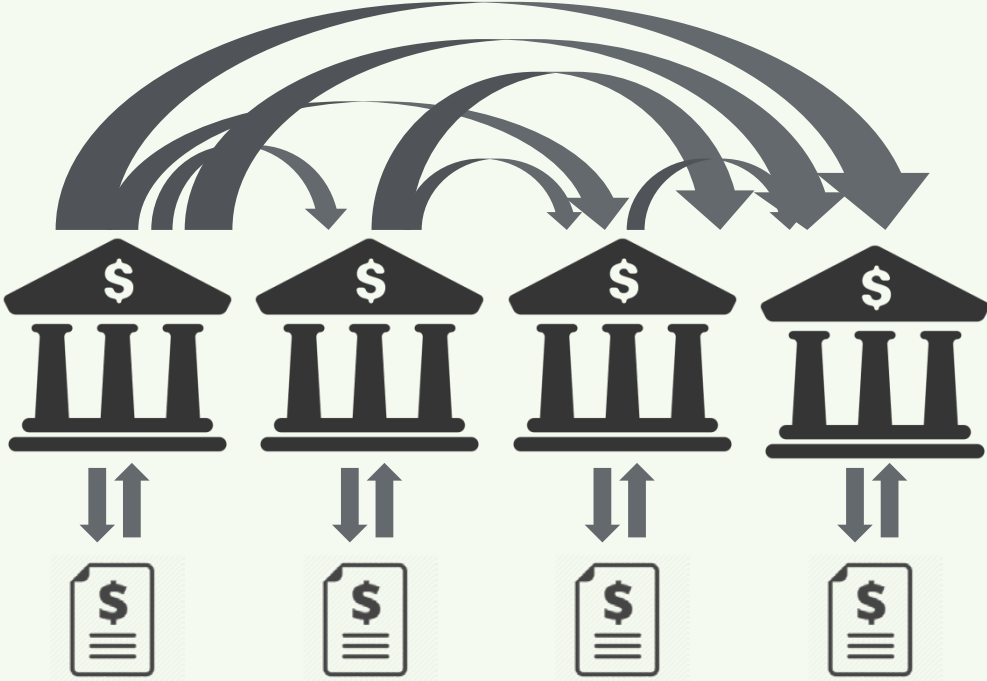
Traditional Settlement of Funds vs. Virtual Currencies

Traditional Settlement of Funds



Centralized Ledger

Virtual Currencies

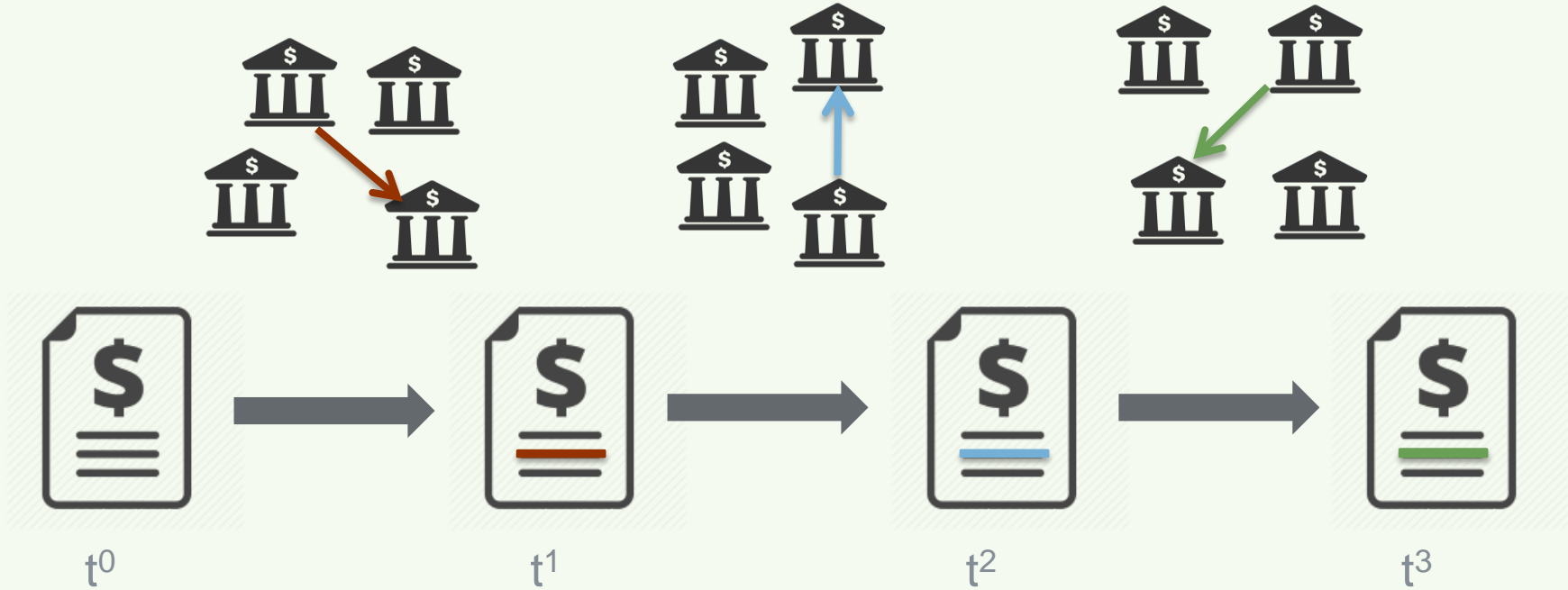


Distributed Ledger

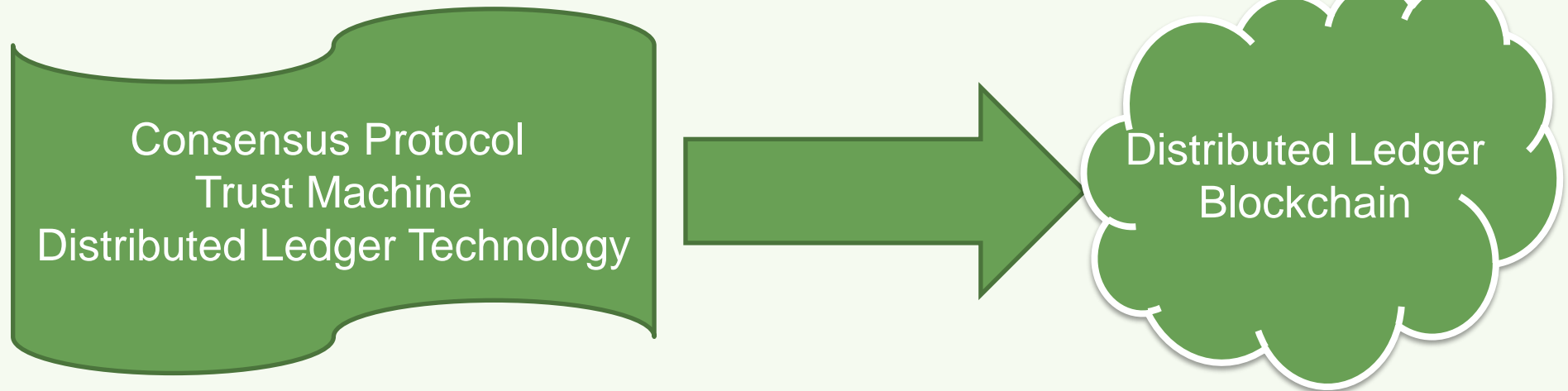
See: Santander, Oliver Wyman and anthesis group, *The Fintech 2.0 Paper: rebooting financial services*

Settlement of Virtual Currency Transactions

Distributed Ledger = The Blockchain



What is Blockchain?



- Money = one use for distributed ledger technology



- Can be used for so much more...

Securities

Loans

Letters of Credit

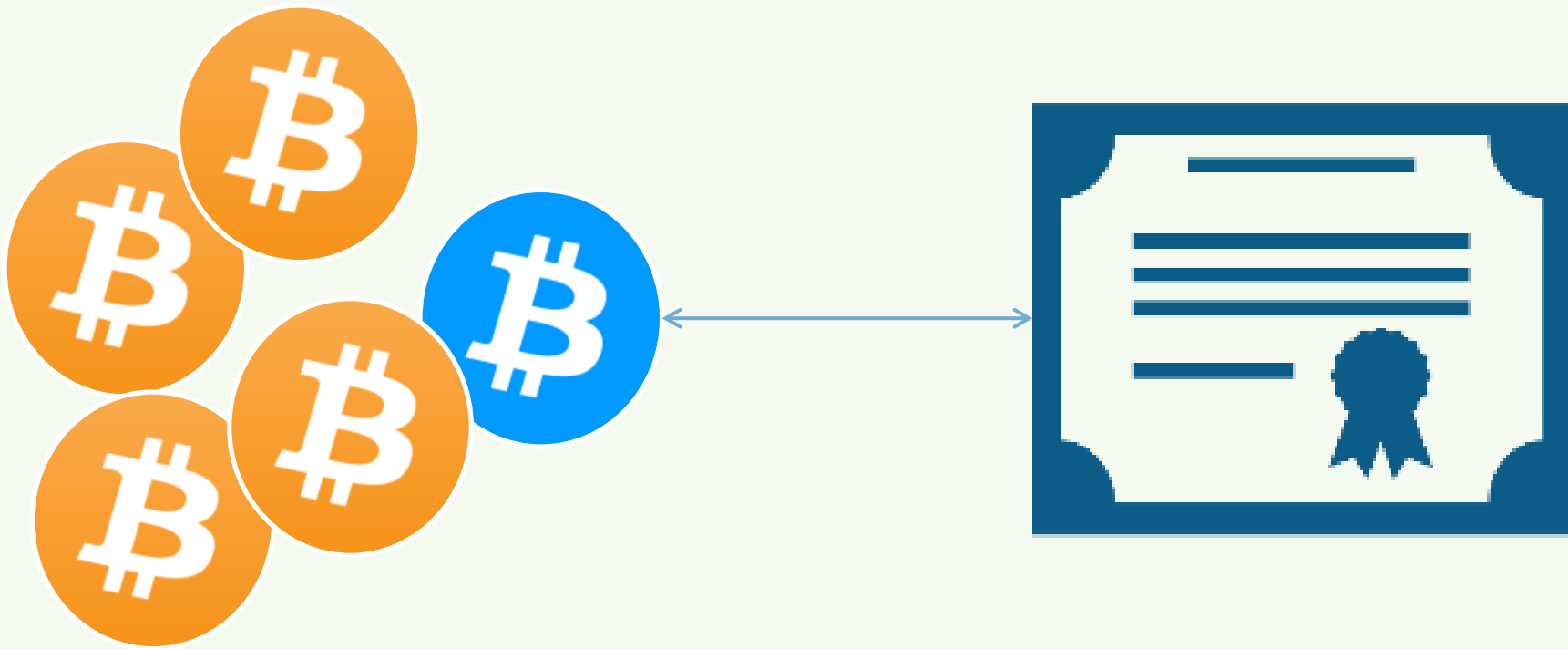
Land Titles

Personal
Identification

Colored Coins

How does this work for things that are not Bitcoin?

Nominal amounts of Bitcoin tagged with **metadata**. This process is called coloring.



Public, Private, and Hybrid

Private Blockchains

- Only the organization controlling the blockchain can write to the ledger and validate
- Transactions can be kept private
- No risk of attack
- Cheaper transactions with less nodes required to validate

Hybrid Blockchains

- A set of pre-selected or “permissioned” nodes can write to the ledger and validate
- “Partially decentralized”

Public Blockchains

- Anyone can access the ledger to write and participate in validating transactions, i.e. the consensus process
- Fully decentralized
- Anyone can see transactions in the ledger
- Users protected from changes by developers
- Network effects

See: CoinDesk, *State of Bitcoin Q3 2015*

Future of Settlement

“Our analysis suggests that distributed ledger technology could reduce banks’ infrastructure costs attributable to cross-border payments, securities trading and regulatory compliance by between \$15-20 billion per annum by 2022.”

Santander, Oliver Wyman and anthemis group, *The Fintech 2.0 Paper*

Potential Pros

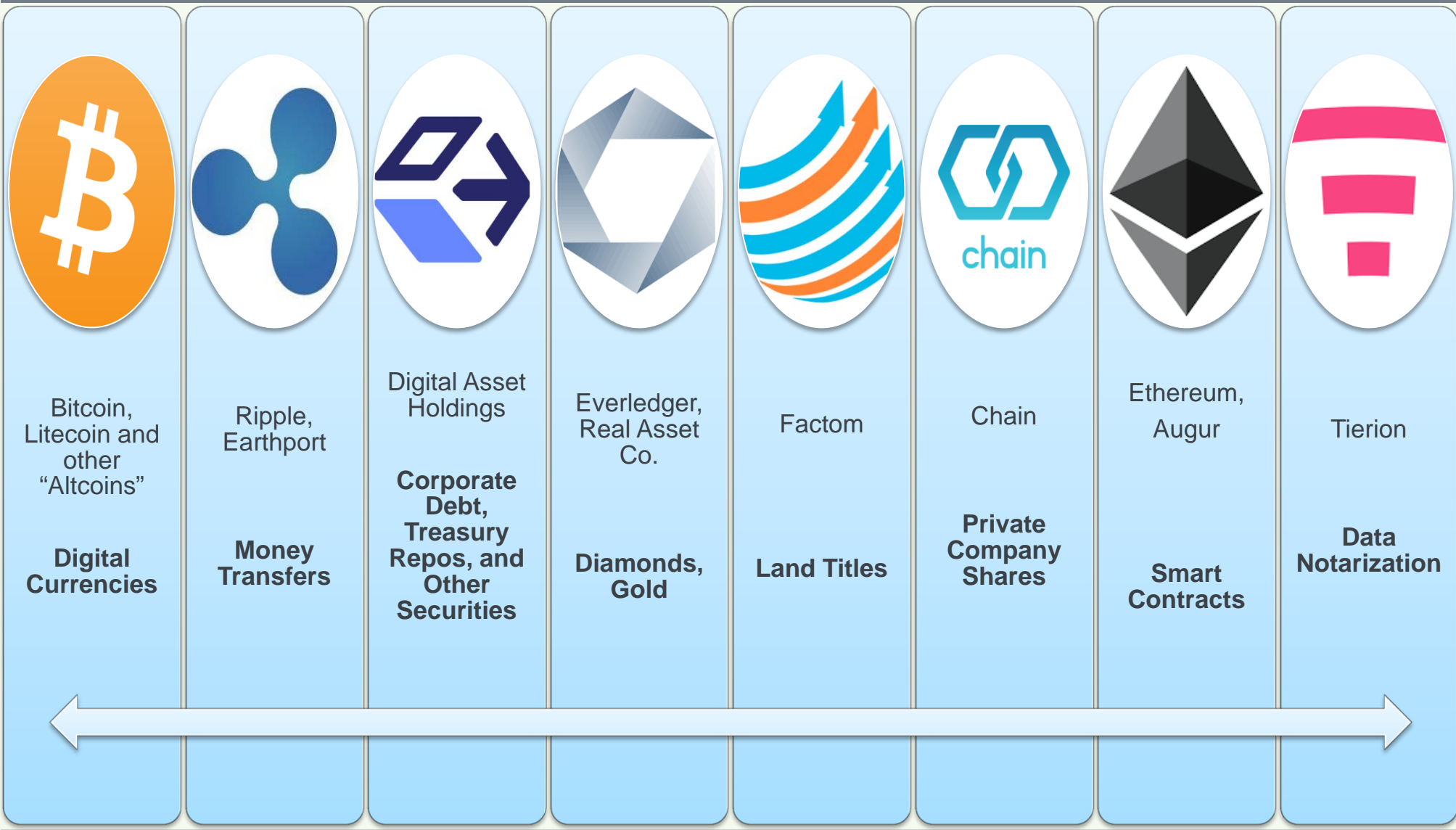
- Lower cost
 - Fewer intermediaries
 - Eliminate / reduce back-office reconciliation
- Reduce settlement risk
- Fast (t3 → t2 → t0)
- Increased innovation

Potential Cons

- Regulatory uncertainty
 - Challenge of applying regulations designed for centralized custody and settlement to distributed processes
- Short term complexity until standards normalize

Industry Trends

Various Initiatives Using Blockchains



The Regulation of Virtual Currency

Regulation of Virtual Currency

Regulatory			
		Federal	State
Prudential	AML	FinCEN	Money transmitter regimes
	Consumer Protection	CFPB	Virtual currency specific regimes (e.g. NYDFS BitLicense; CSBS Model Framework, ULC draft statute)
	Other		
Tax		IRS	State tax agencies
Market		SEC CFTC	State regulators
Enforcement			
Ponzi Schemes		SEC v. Trendon T. Shavers	
Money Laundering		Silk Road / Silk Road 2.0; U.S. v. Ross William Ulbricht U.S. v. Robert M. Faiella and Charlie Shrem	
Failure to Register, Faulty AML		Ripple (\$700,000 penalty)	
Unregistered Offerings / Exchanges		Erik T. Voorhees BTC Trading, Corp. and Ethan Burnside Coinflip / Derivabit	
Deceptive Marketing		FTC v. BF Labs, Inc., d/b/a Butterfly Labs	

Regulation of Virtual Currency

OVERVIEW OF MONEY-BASED REGIMES

FinCEN

Money Services Business

Anyone **in the business of exchanging virtual currency** for real currency, funds, or other virtual currency is a money transmitter and must register as an MSB.

FIN-2013-G001 (March 18, 2013).

States

Money Transmitter

Transmitting money or value

Virtual Currency Specific (NY BitLicense, ULC Draft Statute)

Engaged in Virtual Currency Business Activity in the State

Some exclusions for banks and other regulated entities

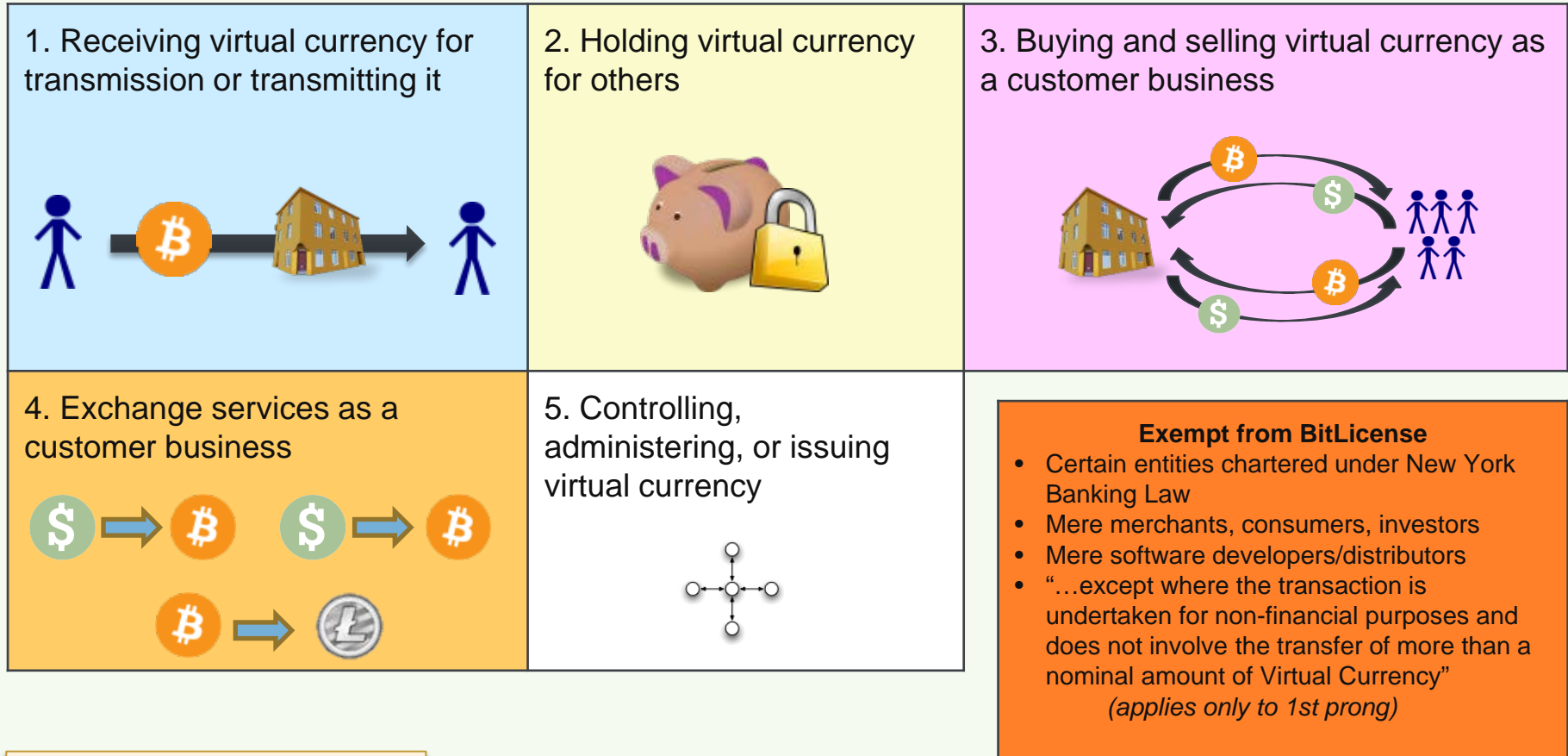
General Requirements:

AML / KYC compliance program
CTR / SARs
Recordkeeping

Consumer protection
Cybersecurity
Capital / Bonding

Regulation of Virtual Currency


VIRTUAL CURRENCY BUSINESS ACTIVITY (NY BITLICENSE)



For more detail, see our [visual memo](#) on the BitLicense rule on bitcoin-reg.com

Regulation of Virtual Currency

STATE MONEY TRANSMITTER LAWS

-  **coinbase** is [registered](#) as a money transmitter (or similar) in 25 states plus Puerto Rico.
- Some states (e.g., [TX](#), [KS](#) and [WA](#)) have put out guidance describing treatment of virtual currencies under their money transmitter regimes.
- [CA](#) recently repealed a provision of state law that prohibited the use of anything but the lawful money of the U.S., legalizing the use of Bitcoin in the state.
- Some states have determined that transactions solely involving virtual currency do not constitute money transmission.

Regulation of Virtual Currency

CFTC

- In its first Bitcoin enforcement action in September 2015 the CFTC confirmed that **“Bitcoin and other virtual currencies” are commodities**
 - “Virtual Currency” in turn was defined as “a **digital representation of value** that functions as **a medium of exchange, a unit of account, and/or a store of value**, but does not have legal tender status in any jurisdiction.”
- This action makes clear that derivatives on virtual currencies are subject to regulation under the Commodity Exchange Act
- In addition, intermediaries that facilitate transactions in, operate trading platforms for, or provide advice about virtual currency derivatives may be subject to registration with and regulation by the CFTC

Regulation of Virtual Currency

SEC

SEC Jurisdiction	Investment Vehicles
<ul style="list-style-type: none"> ▪ The SEC has jurisdiction over securities. ▪ ‘Security’ means “any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate...investment contract, [and] voting-trust certificate...” § 2(a)(1) of the Securities Act of 1933 	<ul style="list-style-type: none"> ▪ Investment vehicles that hold Bitcoins and offer interests in the vehicle are offering securities. ▪ See Winklevoss Bitcoin Trust S-1.
Bitcoin is not a “Security”	Enforcement Actions
<ul style="list-style-type: none"> ▪ Bitcoin not a “Security” for purposes of § 2(a)(1) of the Securities Act. ▪ Not a “note,” “stock” or “investment contract” – lacks important characteristics of these things. <ul style="list-style-type: none"> ▪ No dividends; no right to vote in proportion of ownership; and no promise to pay sum of money (See R. Grinberg, Bitcoin: An Innovative Alternative Digital Currency, 4 Hastings Sci. & Tech. L.J. 160, (2011)). 	<ul style="list-style-type: none"> ▪ SEC remains interested in Bitcoin Ponzi schemes. ▪ Recent actions include charges brought against Trendon T. Shavers, Erik Voorhees and Ethan Burnside. ▪ The SEC has also issued an investor warning on the topic of Bitcoin and virtual currency-related investments.

The Regulation of Blockchain

Regulation of Blockchain

Overstock.com S-3:

“We have collaborated with a **registered ATS** to build a technology platform for trading digital securities, which is now fully operational. This trading platform uses the same **distributed ledger technology** with the same algorithm-based consensus approach as that used for virtual currency.

Digital securities are designed to enable trades to settle immediately or **nearly immediately . . .**

Digital securities will be issued, available for purchase and **traded exclusively on a specific trading system that is registered with the SEC as an alternative trading system, or ATS.**”

Alternative Trading Systems

An “**alternative trading system**” means:

any organization, association, person, group of persons, or system

“That constitutes, maintains, or provides a market place or facilities for **bringing together purchasers and sellers of securities** or for otherwise performing with respect to securities the functions commonly performed by a stock exchange”

OR

“That **does not** (i) **set rules governing the conduct of subscribers** other than the conduct of such subscribers' trading on [the ATS]; or (ii) **discipline subscribers other than by exclusion from trading**”

17 CFR § 242.300(a)(1)-(2).

Alternative Trading Systems

With limited exceptions, an ATS must:

- Register as a **broker-dealer**

OR

- Register as an **exchange**

17 CFR § 242.301(a).

Broker Dealer Requirements:

- Registration on Form BD
- **FINRA membership (for most broker-dealers)**
- Capital requirements
- Annual audit and financial reports
- Use of customer assets and reserve account
- Compliance with margin regulations
- Trade settlement
- Maintenance of books and records
- Trade confirmations
- Reg NMS rules (equity trading) and Reg SHO rules (short sales)
- Anti-fraud and anti-manipulation rules
- Regulatory reporting

Clearing Agency

An “**clearing agency**” means, *inter alia*:

any person

“who **acts as an intermediary** in making payments or deliveries or both in connection with **transactions in securities**”

OR

“who . . . otherwise **permits or facilitates the settlement of securities transactions**”

SEA § 3(a)(23)(A).

Clearing agencies are subject to registration and other extensive regulatory requirements.

Custodian

An **“transfer agent”** means:

any person who engages **on behalf of an issuer** of securities or on behalf of itself as an issuer of securities in, *inter alia*:

“transferring record ownership of securities by bookkeeping entry without physical issuance of securities certificates”

SEA § 3(a)(25).

Transfer agents are subject to registration and other regulatory requirements.

Investment Company

Investment Company Act of 1940:

Applies to an entity that either

- “is” or “holds itself out to the public as being” primarily in the business of investing, reinvesting or trading in securities

Or

- flunks numerical test: generally, if 40% of a company’s assets come from “investment securities”

Exemptions:

- Banks, insurances companies, broker-dealers, finance companies
- Private funds (Sections 3(c)(1) and (3)(c)(7))

Investment Adviser

Investment Advisers Act of 1940:

Applies to anyone who

- For compensation:
 - Engages in the business of advising others as to the value of securities or on investing in/purchasing/selling securities
 - As part of a regular business, issues or promulgates analyses or reports concerning securities

Exemptions (generally):

- Banks, broker-dealers (where advice is solely incidental to broker-dealer business), news publishers, credit rating agencies

What About Other Assets?

Blockchains used to transfer:

- Mortgages
- Loans
- Car Titles

All subject to various state regulatory regimes.

Virtual Currency, Blockchain and Payment Systems Experience

A Long History at the Leading Edge of Payment Systems

Members of our team have:

- Represented companies such as Visa, Green Dot, GCPS (a consortium of six major international banks created to provide a global payments solution for multinational corporations), and CheckFree that have required us to deal with cutting edge technological, regulatory and payments issues.
- Worked closely with the FDIC, Federal Reserve, OFAC, FinCEN, state money transmitter regulators and international regulatory bodies as they have tried to come to grips with these technologies.
- Educated both regulators and legislators about looming issues.
- Assisted our clients in developing a robust compliance environment.

Davis Polk has advised several clients on the evolving regulatory treatment of virtual currencies and blockchain. Examples include:

- Advising banking organizations on potential banking relationships with and investments into Bitcoin companies and consortiums.
- Advising a leading Bitcoin investment vehicle and its sponsor.
- Advising U.S. and foreign Bitcoin exchanges on structuring activities to fall outside CFTC jurisdiction.
- Advising a U.S. Bitcoin mining company on relevant regulatory law and structuring investments.
- Providing counsel to a creator of a cryptocurrency on regulatory and legal obligations and risks.
- Our lawyers have analyzed Bitcoin from the perspective of securities law, commodities / derivatives law, and insolvency law as well as BSA/AML/OFAC.
- A Financial Institutions Group associate, Reuben Grinberg, wrote the first widely cited academic and legal review of Bitcoin and has written extensively on the topic and been quoted frequently in the media. Before joining Davis Polk, Mr. Grinberg programmed trading server software for Bridgewater Associates.
- Other members of our team have experience as Bitcoin entrepreneurs and have worked on one of the SEC's first reviews of the applicability of existing securities laws to Bitcoin and Bitcoin-denominated investment vehicles.
- Our experience with Bitcoin and other cryptocurrencies is part of our broader experience at the leading edge of developments in financial markets and in advising clients on the creation and use of new financial products and markets.

Virtual Currency, Blockchain and Payment Systems Experience

Davis Polk “BitLicense” Visual Memo

Praise for our proposed rule memo: “This is the best and most comprehensive overview of the BitLicense, its provisions, its pitfalls, and how it affects the various actors in the bitcoin ecosystem. Thanks to Davis Polk for sharing. (Of course, only lawyers could break down 40 pages of regulations into a 43 page presentation...but it’s worth the read nevertheless.)”

-Ryan Selkis, Most Insightful Journalist, Blockchain Awards presented by Bitcoin Foundation and Blockchain.info

New York's Final "BitLicense" Rule: Overview and Changes from July 2014 Proposal

June 5, 2015

What Is Covered Under BitLicense?
Types of Business Activities Subject to BitLicense § 200.2(o), (p), (q); § 200.3(c)

"Virtual Currency Business Activity" is defined as any of the following involving New York (as discussed on Slide 18):

1. Receiving virtual currency for transmission or transmitting it (Slide 12)
2. Holding virtual currency for others (Slide 12)
3. Buying and selling virtual currency as a customer business (Slide 13)
4. Exchange services as a customer business (Slide 13)
5. Controlling, administering, or issuing virtual currency (Slide 13)

Exempt from BitLicense (Slide 13)

- Certain entities chartered under New York Banking Law
- State officials, consumers, investors
- More software developers/institutions

Davis Polk bitcoin-reg.com

Bitcoin-Reg.com

Bitcoin-Reg.com is Davis Polk’s virtual currency and blockchain resources website, tracking the latest developments in this fast-moving area.

Virtual Currency Regulation Resources Search Go Davis Polk Menu

Davis Polk State Federal Non-U.S. Davis Polk Materials Davis Polk in the Media About us

State Regulation

Federal Regulation

Non-U.S. Jurisdictions

Recent Updates

- "Ukraine's National Bank Issues Bitcoin Warning." CoinDesk (October 6, 2015)
- "Bitcoin Exchange General Approved for Launch in New York." CoinDesk (October 5, 2015)
- "California's Bitcoin Bill Stalled by State Senator." CoinDesk (September 16, 2015)
- Conference of State Bank Supervisors, State Regulatory Requirements for Virtual

Davis Polk on CFTC's First Bitcoin Enforcement Action

Davis Polk CLIENT MEMORANDUM

CFTC Brings First Bitcoin Enforcement Action, Further Clarifying U.S. Regulatory Landscape for Virtual Currencies

September 28, 2015

On September 17, 2015, the Commodity Futures Trading Commission settled its first enforcement action involving an unregistered Bitcoin derivatives trading platform. Coinflip, Inc. operated an online trading platform called Derivatbit, which connected buyers and sellers of Bitcoin option contracts. Between March and August 2014, Derivatbit had approximately 400 users. The settlement order states that Coinflip, Inc. and its founder and CEO, Francisco Riondan, violated provisions of the Commodity Exchange Act and CFTC regulations governing transactions in commodity options, including provisions that require trading platforms that offer swaps to register with the CFTC. Coinflip and its operator were ordered to cease and desist from future violations of the CEA and CFTC regulations, although the order carried no monetary penalties.

The order confirms the regulatory treatment of Bitcoin (and other "virtual currencies" as defined in the order) under CEA and CFTC regulations, consistent with positions taken informally by the CFTC. In line with the view of CFTC Chairman Massad and other CFTC Commissioners, the order states that Bitcoin and other virtual currencies are "commodities" under the CEA. Based on this characterization, the order applies CEA provisions and CFTC regulations that apply to transactions in commodity options and swaps

Davis Polk Memo Summarizing BitLicense Comment Letters

We have summarized 35 comment letters on the proposal that were published by their authors, and also recent speeches by NYDFS Superintendent Benjamin Lawsky that outlined expected changes to the proposal (e.g., clarifications that more software developers will not be covered). A final version of the rule is expected in 2015, with an effective date shortly thereafter.

- Re-proposed NYDFS BitLicense Regulations (February 4, 2014)
 - Backline against July 2014 Proposal
 - Lawsky's Bipartisan Policy Center Speech on BitLicense Revisions (December 18, 2014)
 - How to Submit Comments
- NYDFS Proposed BitLicense Regulations (July 17,

Davis Polk bitcoin-reg.com

Reuben Grinberg

ASSOCIATE



New York Office
212 450 4967 tel
212 701 5967 fax
reuben.grinberg@davispolk.com

Mr. Grinberg is an associate in Davis Polk's Financial Institutions Group. His practice focuses on bank regulatory advice, including Dodd-Frank Act regulatory implementation, the preparation of living wills, Basel III capital and liquidity, Volcker Rule, and financial institution capital markets and M&A transactions.

In addition, Mr. Grinberg wrote the first widely read and cited academic paper on Bitcoin, and is often cited in the media as an expert on digital currencies. He advises clients on the novel regulatory issues relating to Bitcoin and digital currency-based businesses. Before joining Davis Polk, Mr. Grinberg programmed trading server software for Bridgewater Associates, one of the world's largest hedge funds.

PROFESSIONAL HISTORY

- Associate, 2011-present

ADMISSIONS

- State of New York

EDUCATION

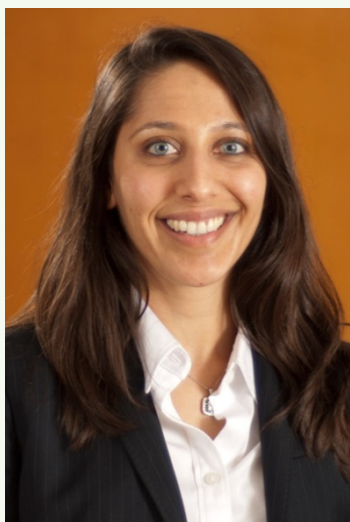
- B.S., Computer Science, Yale College, 2005
- M.Sc., Computer Science, University of Texas at Austin, 2007
- J.D., Yale Law School, 2011
 - Executive Editor, *Yale Law & Policy Review*

OF NOTE – BITCOIN

- Author of [Bitcoin: An Innovative Alternative Digital Currency](#), Hastings Sci. & Tech. L.J.
- Author of [Bitcoin: Today Techies, Tomorrow the World?](#), Milken Institute Review
- Author of [The Failure of Mt. Gox and Other Recent Bitcoin Catastrophes: Why Banks Should Care](#), CLS Blue Sky Blog
- Interviewed by [Bloomberg TV](#), [NY Times](#), [WSJ Law Blog](#), [Fiscal Times](#), among other publications

Jai R. Massari

ASSOCIATE



Washington DC Office

202 962 7062 tel

202 962 7104 fax

jai.massari@davispolk.com

Ms. Massari is an associate in Davis Polk's Financial Institutions Group and the Trading and Markets practice. She advises major global banks, asset managers, and corporations on the requirements, impact and implementation of the Dodd-Frank financial reform legislation. In this area, her practice focuses on derivatives regulation, the Volcker Rule and systemic risk regulation. She frequently works with industry organizations in connection with advocacy efforts on legislative and regulatory proposals.

WORK HIGHLIGHTS

Ms. Massari has been active in providing regulatory advice to:

- Financial institutions and trading platforms on new swap regulations, including registration requirements, cross-border and regulatory impacts
- Asset managers and end-users on requirements on swap requirements under new swap regulations
- Financial institutions on the proprietary trading and covered funds provisions of the Volcker Rule, including development of the Davis Polk Volcker Portal
- Trade organizations in connection with legislative and regulatory advocacy

OF NOTE

- Co-Author, "Regulation Through Substitution as Policy Tool: Swap Futurization Under Dodd-Frank," 2013 Colum. Bus. L. Rev. 667 (2013)
 - Discussed in *The Economist*
- Co-Author, "Swap Trading Relationship Documentation, Confirmations, Portfolio, Reconciliation, and Portfolio Compression," *OTC Derivatives Regulation Under Dodd-Frank: A Guide to Registration, Reporting, Business Conduct, and Clearing*, 1st Edition, 2014

Jai R. Massari (cont.)

ASSOCIATE

- Panelist, Investment Company Institute, 2014 Mutual Funds and Investment Management Conference, "The 900-Page Gorilla: Implications of the Volcker Rule for Regulated Funds," Spring 2014

PROFESSIONAL HISTORY

- Davis Polk since 2011
- Willkie Farr & Gallagher LLP, 2007-2011

ADMISSIONS

- District of Columbia
- State of California

EDUCATION

- B.A., Chemistry, Cornell University, 2000
- J.D., Duke University School of Law, 2007
 - *cum laude*
 - Executive Editor, *Law & Contemporary Problems*