

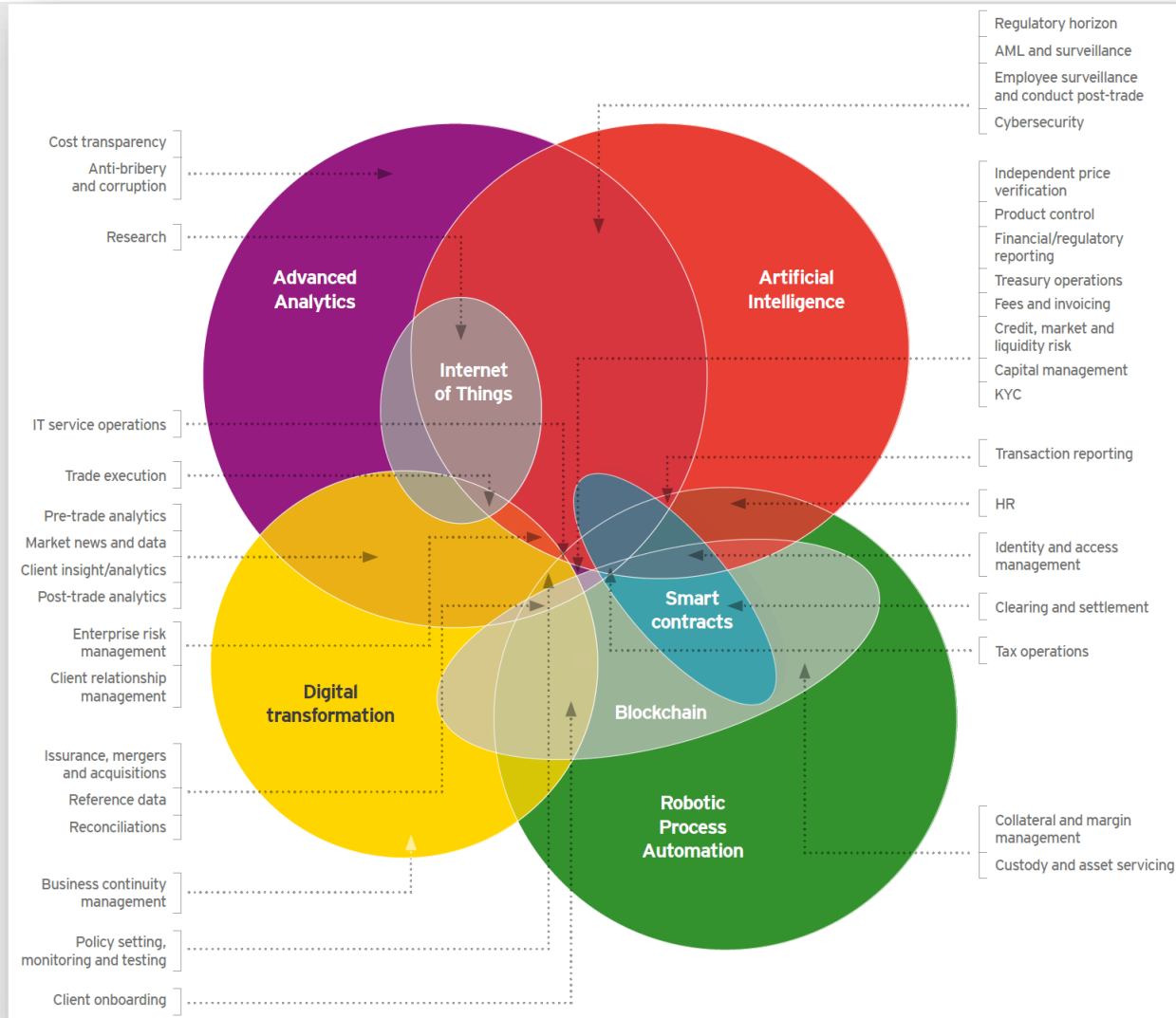
# Blockchain

A financial regulatory framework?

# Today's discussion

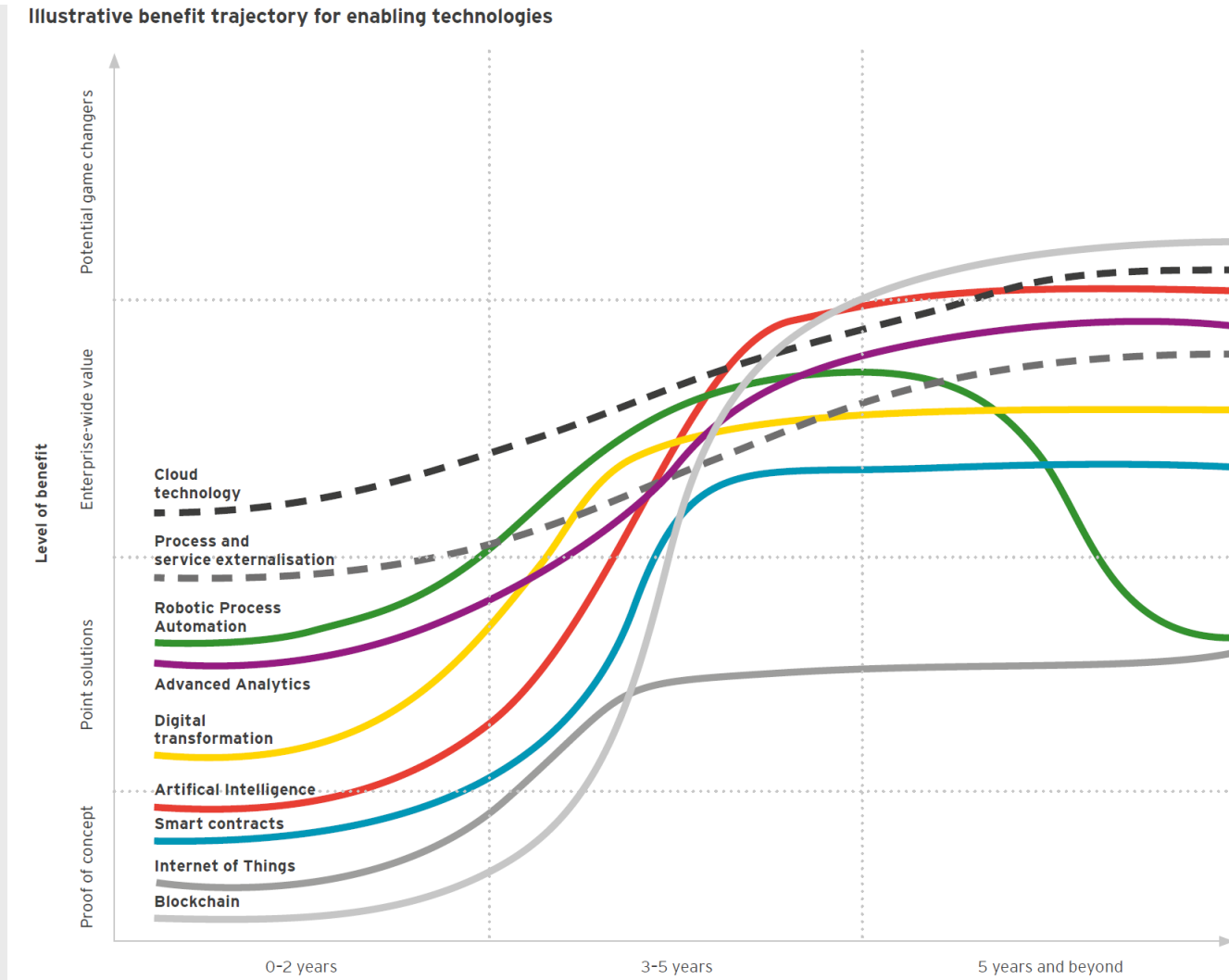
1. **What exactly?**
2. General considerations
3. Regulatory framework for **cryptocurrencies**
  - a. General
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6. Conclusion: what to expect?

# Blockchain is a part of Fintech



Source: EY, Capital Markets: innovation and the FinTech landscape, Sept. 2016

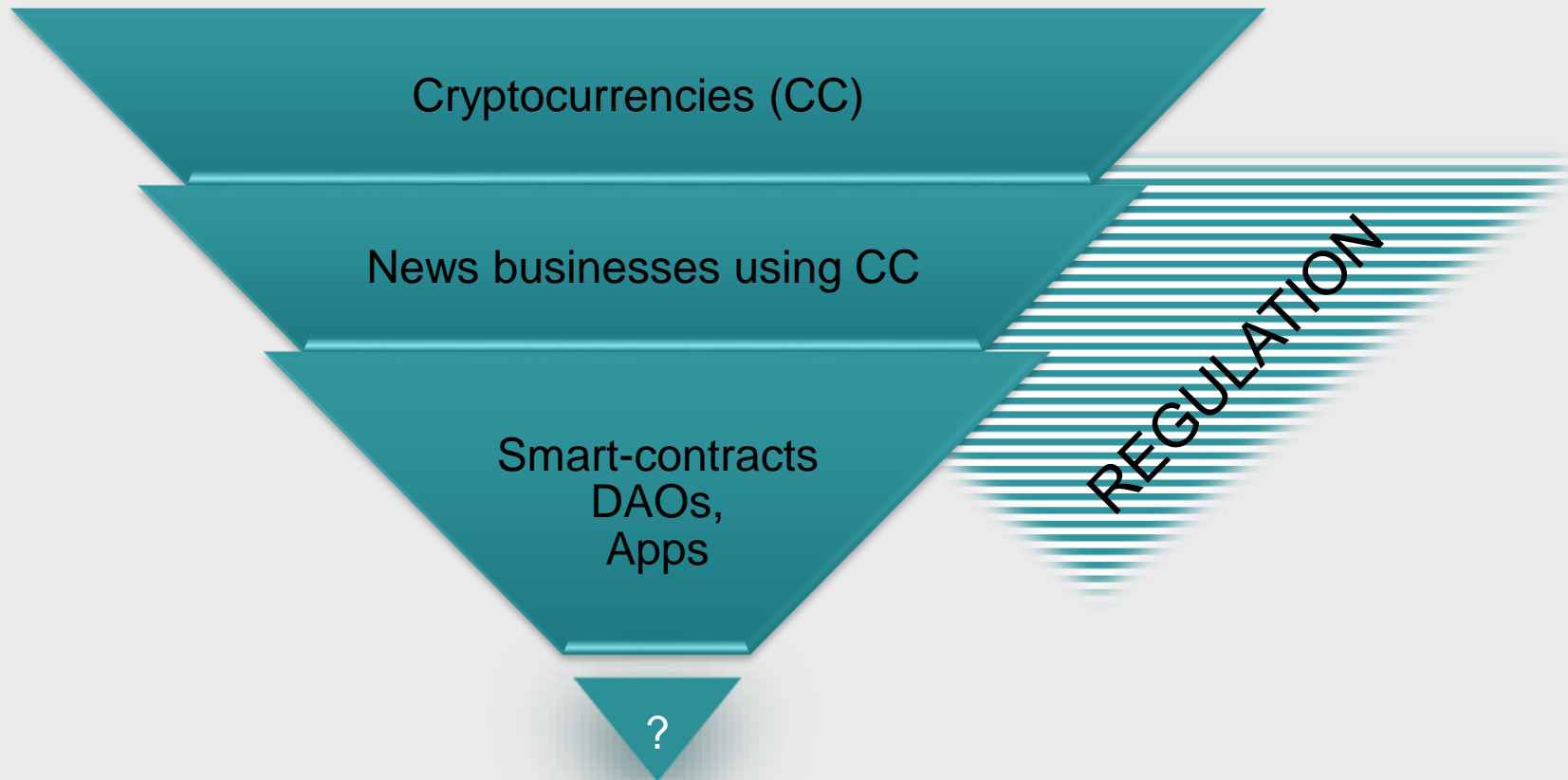
# Blockchain: a potential “game changer”



Source: EY, Capital Markets: innovation and the FinTech landscape, Sept. 2016

# A technology with some scattered regulations

**Blockchain** : Many definitions but basically a P2P decentralised technology  
Markets development in number of steps:



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# General considerations for Block. regulation

- **Blockchain's characteristics:**
  - Peer to peer (P2P)
  - From decentralised → to distributed
  - Public ledger
- **Comparison with other “Fintech” innovations outside the Blockchain**
  - Most of the time centralised with human intervention, administration and/or monitoring
  - Eg. centralised crowdfunding: same problems for investment pooling but with a material connection (“real life”)
- P2P decentralised technology **impacting any potential country** :
  - Decentralised = without any national nexus?
  - No countries / regulators concerned
  - or
  - All countries / regulators concerned ?

# General considerations for Block. regulation

- **Tie-points for a regulation may be found in “real life” connections:**
  - Citizenship/location of investors / consumers / “victims” / users, etc.
  - Currencies into which CC. is converted (CHF / \$ / € )
  - Location of miners / processing service providers / wallet providers
  - Location of platform’s creators
  - Location of app’s creators (often linked with a “real”-based company)
  - Location of funds’ receivers (“real” companies receiving pooled funds)
  - etc...
- **2 different regulatory approaches coexist – if any:**
  - Either an *ad hoc* Blockchain regulation, or
  - Regular regulation applied *mutatis mutandis* for Blockchain
- **Often a *post-approach* regulation**
  - Regulation after several years of using: Bitcoin almost 8 years
  - Regulation on an evolving framework
  - Attempts to transpose existing “real life” regulation to new innovations
  - A “clé en main” solution cannot be expected



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# I.a Cryptocurrencies : notion

- **Used as mean of payment for buying goods and services**
- **Blockchain's characteristics:**
  - Peer to peer (P2P) network
  - Decentralised → no intermediaries for exchange / clearing houses
  - Not attached to a specific country or (governmental) institution
  - +
  - Transactions are irreversible and quasi in real time
  - Highly personal
  - Pseudo-anonymous → open source: transaction viewable from anyone, and registered in a public ledger
- **Virtual currency**
  - ≠ “fiat” money / “real” money” / “conventional currencies”
  - ≠ e-money → transcription of fiat money via electronic tools

# Pseudo-anonymity

The screenshot shows the Blockchain.info website interface. At the top, there is a navigation bar with the Blockchain.info logo and menu items: Accueil, Graphiques, Statistiques, Marchés, API, Portefeuille, and Français. Below the navigation bar, the main content area is titled "Index Blocs récemment extraits de la blockchain bitcoin" with a "Plus..." link on the right. The index is presented as a table with the following columns: Hauteur, Âge, Transactions, Total envoyé, Relayé par, and Taille (kB). Below the index table, there is a section for "Dernières transactions" listing several transactions with their hashes, ages, and amounts. To the right of the transactions is a "Recherche" section with a search bar and a "Search" button. Below the search bar is a "NEWS" section with a list of recent news items.

Hauteur	Âge	Transactions	Total envoyé	Relayé par	Taille (kB)
431466	20 minutes	2093	19,887.17 BTC	F2Pool	999.82
431465	26 minutes	2276	27,291.07 BTC	BW.COM	998.09
431464	45 minutes	2992	37,757.64 BTC	F2Pool	999.83
431463	1 hour 17 minutes	148	364.80 BTC	F2Pool	122.06
431462	1 hour 17 minutes	636	12,090.23 BTC	ViaBTC	300.31
431461	1 hour 21 minutes	1654	14,376.16 BTC	AntPool	740.44

**Dernières transactions**

b814b0b1c35794b909fa52fe8...	< 1 minute	0.02071894 BTC
239749543d7e6a83ca12c6c9...	< 1 minute	5.59560075 BTC
eff076a2c31374b37814d888b...	< 1 minute	1.08920031 BTC
97b36bafcb8a1c481e92869c8...	< 1 minute	0.44383538 BTC
ce936428f21b33fefa5f584e...	< 1 minute	0.13978882 BTC
10985402d16c438f593fa1b7b...	< 1 minute	0.06511921 BTC
2d2d303b23e11c125bbf5a4f...	< 1 minute	0.0405166 BTC
ae351e4351c9cf7f6fa3413d3...	< 1 minute	1.20046179 BTC
e983fcccbebbcfb8147c2af43...	< 1 minute	0.19643264 BTC

**Recherche**

Vous pouvez entrer une hauteur de bloc, une adresse, un hash de bloc, un hash de transaction, un hash160 ou une adresse IPv4...

Adresse / Firstbits / IP / SHA hash

**NEWS**

- Magnr - Bitcoin Trading Platform | Trade with Leverage  
Magnr ← 1 minute il ya
- A new year, a new round of shitcoin: Why you should beware the Altcoin Rebrand  
jr/bitcoin 12 minutes il ya
- Goldman Sachs To Cut Jobs In Asia While Bitcoin Thrives  
jr/bitcoin 23 minutes il ya
- Bitcoin news for the week of 9/19/16  
Blockchain.info 34 minutes il ya
- Spells of Genesis Game Resets for Further Development  
jr/bitcoin 43 minutes il ya
- Does buying and holding Bitcoin long term support the movement?  
jr/bitcoin 46 minutes il ya
- Global Banks Partner to Form Blockchain Payments Network

# I.b Cryptocurrencies (C.C) :

## Swiss regulatory framework (1)

- No Swiss specific regulation & legal provisions for Blockchain in general
- Federal Constitution: art. 99 (1) & arts. 1-2 CPIA
  - Swiss Francs: single recognised currency with legal consequences  
e.g. legal tender, for debts recognition, bankruptcy
  - Electronic / scriptural money : **not** a currency (FF 1998 3485, 3507)
  - So even more true for C.C... Other payment instruments exists with no legal tender: eg. WIR currency
- Art. 81 FMIA: payment system ?
  - **Entity** that *clears & settle* payment obligation based on uniform rules and procedure  $\neq$  French version : “On entend par système de paiement toute **organisation** fondée sur des règles et procédures communes qui sert à compenser et régler des obligations de paiement».
- Art. 61 FMIA: central securities?
  - A **central** securities depository is the operator of a central custodian or a securities settlement system. A central custodian is an **entity** for the central custody of securities and other financial instruments based on uniform rules and procedures.

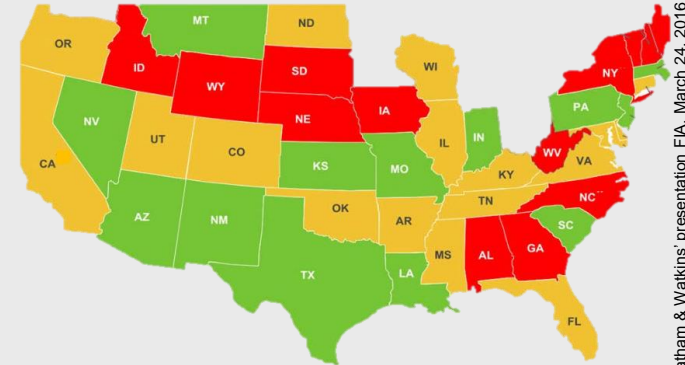
# I.b Cryptocurrencies (C.C.) :

## Swiss regulatory framework (2)

- **Evolution of FINMA's and Swiss position – notably on CC:**
  - Fall 2013: Parliamentary postulates
  - 2013 : FINMA Annual report → first definition by FINMA
  - 2014 : FINMA FAQ sheet Bitcoins → warnings
  - 2014: Federal Council report on virtual currencies
  - 2014: FINMA Annual report
  - 2014: FINMA Enforcement report: pre. investigations into BTC trading
  - Oct. 2015: FINMA's Protection of investors position: “*VCs play a special role in the black economy*”
- 2015-2016: Some regulation's adjustments (AML, Video-Online identification)
- 2016 Fintech Desk, multiple public interventions, parl. motions
- Fall 2016: **A dualist approach: a “ Fintech Sandbox” & a newly created “authorisation for financial innovations” :**
  - A “license light” in comparison with **banking** license requirements
  - A principle-based authorisation → large and flexible framework
  - Principle of technology neutral regulation
  - Still AML requirements - if applicable
  - For centralised organisations **and** for distributed innovations ?

# I.c Cryptocurrencies

## International regulatory framework



### One country, several positions on the definition:

- FED → no supervision or regulation
- SEC → Property, not a currency
- CFTC → BTC is a commodity
- NYDFS → BitLicence for VCs rules
- FinCEN → Exchange Platforms declared a “*Money Transmitter*”
- US District judge → Florida: BTC is a property, not a currency  
→ NY: BTCs are funds/money (18 U.S.C. § 1960(b)(2))

### Others?

- Banned → Russia, Iceland, Bangladesh (jail?)
- Cautions with varied interpretations → France, Germany, Canada
- E.U → Multiple analyses and positions (BCE, ESMA / EIOPA / EBA...)
- India → Seven Digital Cash LLP

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## II.a Innovations based on cryptocurrencies

- Business models built on obtaining, using, transferring CC as units of payment or underlyings
- **Mainly:**
  - Platforms of Crowdfunding, Crowdlending and Crowdinvesting
  - Platforms for conversion CHF/USD  $\Leftrightarrow$  CC (Kraken)
  - Platforms for wallets / wallets providers
  - Exchanges or financial instruments based on CC.
    - **Poloniex**: cryptocurrency exchanges
    - **TeraExchange**: a BTC derivatives platform (BitcoinSwaps, Tera Bitcoin Price Index (TeraBit))
    - BTC advisors



# II.b Innovations based on cryptocurrencies

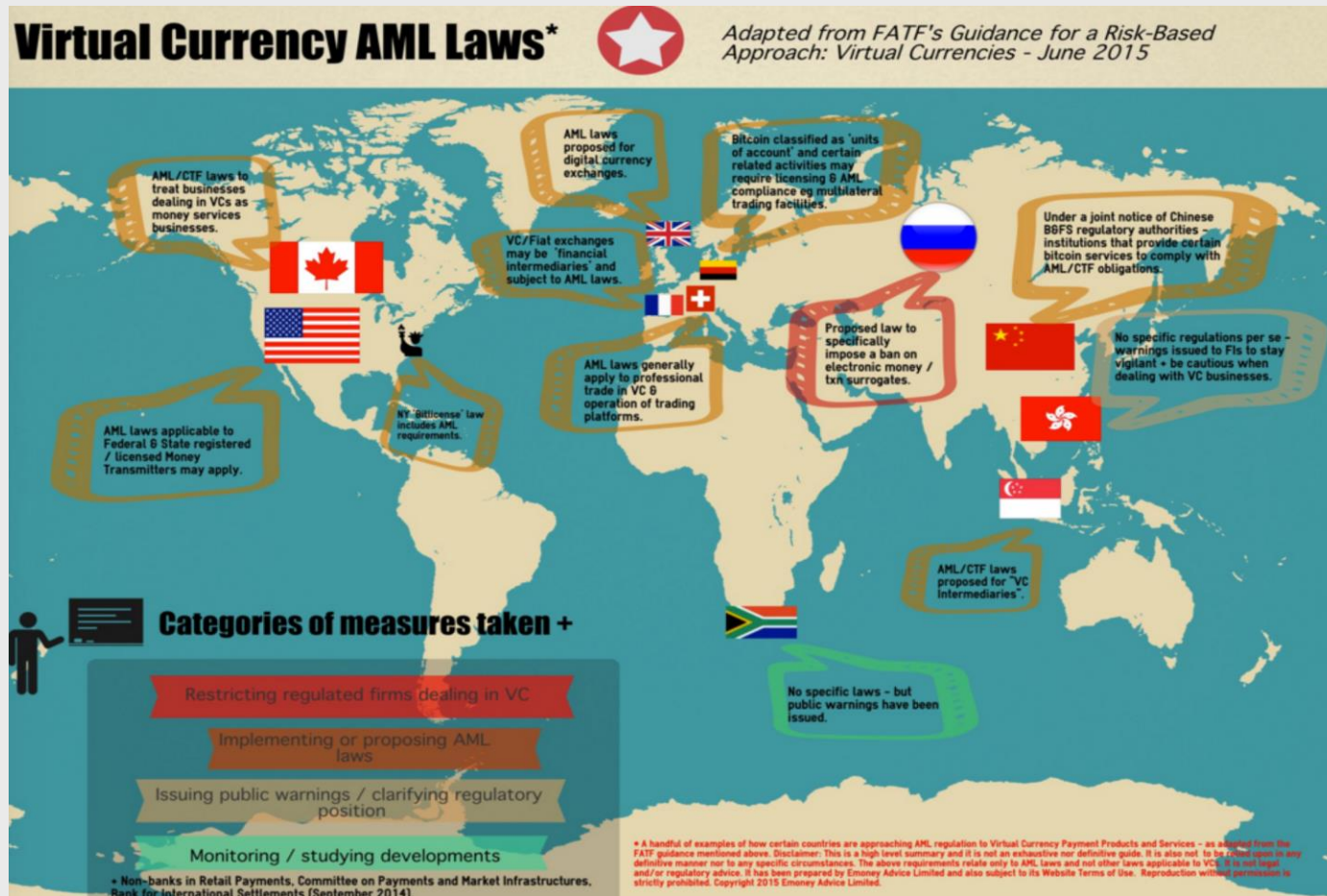
## Swiss regulatory framework

- **Actual regulatory Framework for centralised entities**
- May require authorization(s) depending on the business model
  - **Banking Act**
    - Accepting/advertising for more than 20 deposits from the public on a permanent basis
      - Exception art. 5 par. 3 lit. c BO
    - License requirements heavy for start-ups
  - **AMLA**
  - Models on investment schemes or pooling → **CISA?**
    - Notion of “investors” very strict.
    - “Investment club”: hardly applicable
- Upcoming Fintech Sandbox & a newly created “authorisation for financial innovations” : what should be included?
- **No self-regulation at the moment**

# II. b innovations based on cryptocurrencies

## International regulatory framework (1)

A diversified AMLA Framework based on FATF guidance:



Source  
<http://www.hedgethink.com/regulation/an-introduction-to-bitcoin-and-cryptocurrencies-part-1/>

# II. b innovations based on cryptocurrencies

## International regulatory framework (2)

### Harmonisation for a regulation upcoming?

- E.g European Commission (AML/CFT regulation with KYC identification)

### Enforcement cases based on CC illegal uses:

- SEC Enforcement actions:
  - Ponzi Schemes & Securities and Wire Fraud
  - Failure to register BTC-related securities offerings
  - Illegal Offering of Complex Derivative Products (Dodd-Frank)
- CFTC Enforcement's action
  - Coinflip: unregistered Swap execution facility
  - TeraExchange: failure to sanction “wash trading”
  - Bitfinex: Offering Illegal Off-Exchange Financed Retail Commodity Transactions and Failing to Register as a Futures Commission Merchant
- Enforcement cases from US DANY for unlicensed business, AMLA / Banking Secrecy Act violations)

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# III.a distributed ledger innovations

## Notion

- **Smart contracts**
  - Program operating a specific action autonomously and automatically
  - Blockchain technology characteristics
  - More than storage and CC.
- **Distributed ledger for financial activities**
  - Smart property & Smart Lock
  - Clearing and settlement of trades
  - Syndicated loans
  - Issuance of primary shares, smart securities (e.g. smart bonds, smart OTC)
  - Collaterals ( transferable tokenized assets)
- **DAOs & Apps** without intermediaries (eg. no Uber, no Airbnb), supported by smart contracts

→ Always with the same ideology : “ the code is Law” ≠ Humans’ failures”

# III.a Distributed ledger innovations

## Examples

- **Ethereum**: platform to run smart contracts, decentralised app & DAOs
- **Metaco**: smart-contracts trading solutions
- **Monetas**: platform for financial/legal transactions based on smart contracts.
- **The DAO**: decentralised org. for an autonomous investments' governance
- **Etheropt**: decentralized options exchange
- **Digital Asset Holdings & SIX Securities Services**
- **Consortium R3** with Credit Suisse & UBS
- **Project ConsenSys** ( Ethereum-based digital Bank)
- **Ripple**: distributed technology for direct bank-to-bank settlement
- **Overstock.com**: to issue potential digital securities based on Blockchain

# III.b Distributed ledger innovations

## Swiss regulatory Framework

- **Same regulatory Framework for centralised entities (II.b)**
- No specific regulatory framework for distributed ledger at the moment
- Legal provisions (BA, AMLA, CISA, SESTA, FIDLEG) applicable?
  - For smart contracts
  - For decentralised platforms/app
- Are the Sandbox and authorisation for innovation adapted for decentralised and distributed ledger innovations ?
- No self-regulatory framework and rules of conducts for FinTech

# III b. Distributed ledger innovations

## International regulatory Framework

- **A supporting and hearing approach before regulating if necessary:**
  - BoE → Fintech Accelerator program : poss. Block. regulation upcoming
  - FCA → Project Innovate, Sandbox, and considering Blockchain businesses approval coming from the Sandox
  - OCC → White paper on responsible innovation
  - CFTC → Studies of *smart derivatives*
  - SEC → Fintech Forum to discuss blockchain and impacts on investors
  - MAS → Consultation paper on Fintech regulatory Sandbox Guidelines with a Regulatory Sandbox Approach.
  - ASIC, HKMA, etc.
- **Remaining international regulatory issues:**
  - Issues on integration and resilience from global participants
  - Issues on investors' and consumers' protection (hacking, sufficient information, irreversibility of transfers)
  - Relations with current reporting regulations: EMIR? Dodd Frank? REMIT?
  - Pseudo-anonymity towards regulators?



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# Conclusion: what to expect for Switzerland?

- **Swiss Parliament**
  - Latest parliamentary motions on Blockchain on Sept. 2106
- **New Fintech License**
  - Federal Council (April 2016): new proposition for Fall 2016
  - *Fit for Fintech*” but with “one fit all businesses” authorisation? A banking license “light” or a real adapted financial services license for Tech?
  - **Innovative Sandbox?** How? Only for startups? Or all for “traditional players” (banks, insurance, etc).
- **New cooperation: synergy among regulators or innovation leaks?**
  - E.g. MoUs between FINMA and Singaporean MAS in Fintech fields or between the UK FCA and Australian ASIC
- **Need for self-regulatory rules of conduct**

# Thank you for your attention!



Questions?  
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# Disclaimer

*This presentation is for information only and does not represent nor substitute for legal advice from qualified lawyer.*

*Please note that the information in this presentation is as of September 28 , 2016 and may rely on public information which was not verified by any regulator.*