



Virtual Currencies – Bitcoin Risk

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World Bank Conference
Washington, D.C.
October 21, 2014



Overview

- ❑ European Banking Authority has identified over 70 risks associated with virtual currencies
- ❑ Today my presentation will focus on what I view as the top-10 most significant risks associated with Bitcoin assuming they are used for **legitimate purposes**
- ❑ As of October 2014, there were over 547 virtual currencies in existence. Bitcoin is considered the largest in terms of market value and following. For purposes of this presentation, bitcoin is used as an industry proxy
- ❑ Importantly, sound business and regulatory decisions can only be made when these **identified risks** and **promised benefits** are examined, and weighed against each other in the light of day



Definitions of Virtual Currencies



1. United States Department of the Treasury – Financial Crimes Enforcement Network (March 18, 2013)

“A medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency. In particular, virtual currency does not have legal tender status in any jurisdiction”.

2. European Banking Authority (July 4, 2014)

“Virtual currencies are a digital representation of value that is neither issued by a central bank or a public authority, nor necessarily attached to a fiat currency, but is accepted by natural or legal persons as a means of payment and can be transferred, stored or traded electronically”.

3. Coin Desk Publications (2014)

“Bitcoin is a form of digital currency, created and held electronically. No one controls it. Bitcoins aren’t printed like dollars or Euros – They’re produced by lots of people running computers all around the world, using software that solves mathematical problems. It is the first example of a growing category of money known as cryptocurrency.”

4. Charlie Munger, Vice Chairman of Berkshire Hathaway (May 6, 2013)

Bitcoin is “Rat Poison”

Bitcoin

“Even the purest technology has to live in an impure world”

Wired Magazine 2011



10 Major Bitcoin Risks

1. Bitcoin Is Not Legal Tender

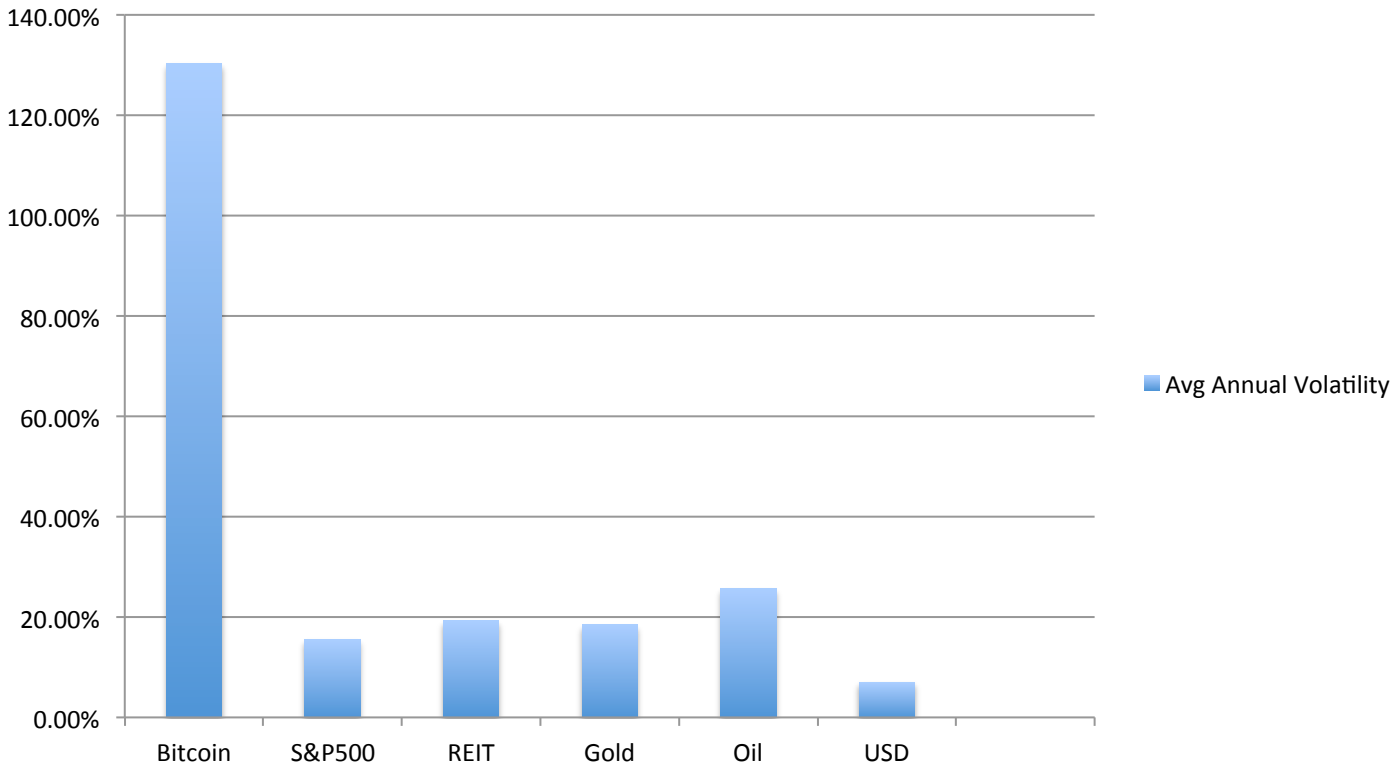
- It is a voluntary currency and its use as a transactional currency is limited to those willing to accept it
- If businesses or individuals suddenly decide no longer to accept it, bitcoin will become worthless

2. Extreme Price Risk

- Since inception, bitcoin's historical price volatility has been over 130 percent
- Annual year-to-year price volatility (2010 – 2014) remains well over 100 percent.
- During 2014, annual price volatility (117%) has increased since 2013 (103%)
- Daily price movement can reach 10 percent
- Extreme price instability undermines its usefulness as a safe and reliable transactional currency
- Bitcoin exhibits price risk 7 times greater than gold (18%), 8 times greater than the S&P 500 (15.5%) and 18 times greater than the U.S. Dollar (7%)
- If the U.S. dollar had similar triple-digit price risk how many consumers would use it?

BITCOIN TRADES LIKE A HIGH-RISK COMMODITY

Average Annual Volatility (10/01/2010 – 9/30/2014)



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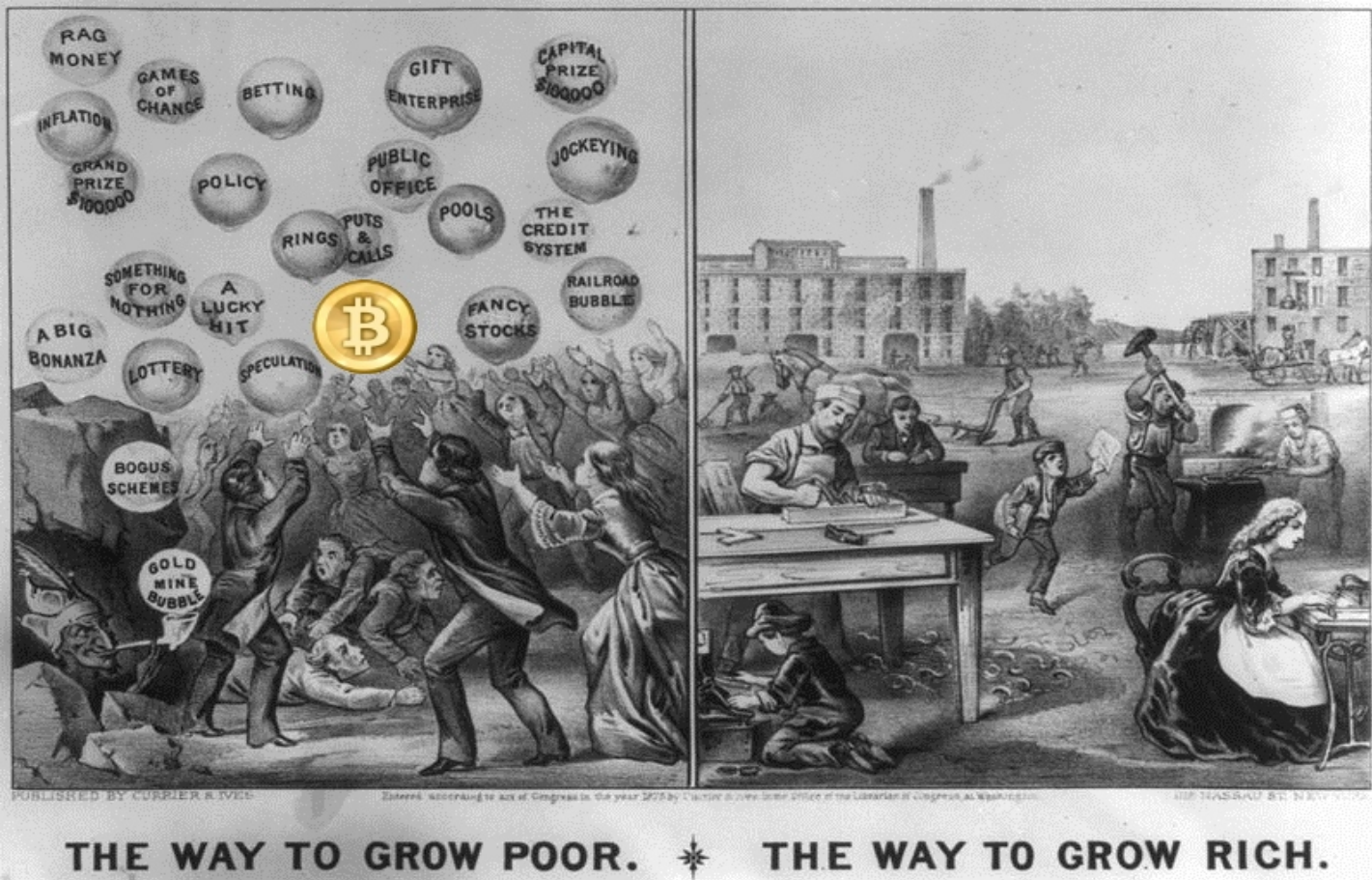
3. **Extreme Price Risk Can Quickly Erase Company Profit Margins**

- Merchant net profit margins are industry specific but generally range from 10 to 20 percent
- Given bitcoin daily price movements can be as high as 10 percent, business owners accepting bitcoin could see profit margins reduced or completely erased in a matter of days
- This triple-digit annual price risk makes bitcoin more suitable for Wall Street type trading companies possessing sophisticated management systems, controls and tools than for merchants

4. **Bitcoin is a Hyper Asset Bubble in the Process of Deflating**

- At the start of January 2013, bitcoin traded at \$13, peaking in November 2013 at \$1,200
- Over 90 percent of bitcoin are also hoarded setting a temporary price floor
- Since this 2013 market peak, bitcoin has dropped by over 70 percent in value
- In October bitcoin traded as low as \$280

BITCOIN – BIG BUBBLE OR BIG INNOVATION?



10 Major Bitcoin Risks

5. Growing Concentration and Bankruptcy Risk to Financial Middleman

- In an effort to avoid bitcoin's extreme price risk, merchants are increasingly using the risk-mitigation services of firms such as Coinbase and BitPay
- These firms do not eliminate system-wide bitcoin price risk but simply warehouse the risk on their books
- Relying on these two thinly capitalized financial middleman to mitigate risk, creates a dangerous level of industry concentration risk should one or both of these firms fail

6. Bitcoin Exchange Bankruptcy Risk

- The industry remains unregulated with little oversight which has opened the door for unscrupulous operators to take advantage of bitcoin buyers and sellers, increasing fraud and bankruptcy risk
- In November 2013, bitcoin exchange, GBL based in Hong Kong, closed its doors, costing investors over \$4 million
- In December 2013, the European Banking Authority also warned of the dangers of other exchanges failing and lack of investor protection
- In February 2014, Mt. Gox, the Japanese based exchange filed bankruptcy costing consumers up to \$400 million
- Since 2009, the majority of bitcoin exchanges that have opened for business have also failed

10 Major Bitcoin Risks

7. Bitcoin Use Can Trigger Significant Tax Risk

- Unlike “legal tender”, bitcoin has been designated by the IRS, for tax purposes, as property
- This designation is significant. Unlike “legal tender”, consumers that use bitcoin can be subject to additional taxes
- This tax ruling provides a further incentive to hoard bitcoin and not utilize it for transactional purposes. Also reducing market liquidity

8. Transactional Fraud Risk – Double Spending

- Under Bitcoin protocol all new transactions are validated through the block chain, a public ledger that is independently verified every 10 minutes
- This 10 minute window poses potential risk should two businesses be paid with the same bitcoin
- If double spending occurred during this time gap, the last merchant to report the transaction would have little recourse to collect on payment

10 Major Bitcoin Risks

9. Significant Consumer Protection Risk

- Although numerous governmental agencies have issued stern consumer warnings (e.g., CFBP, FINRA) there are no laws in place protecting consumers against theft, fraud or human error
- Bitcoin is an anonymous, digital currency that eliminates banks as financial middleman and in doing so also eliminate the legal protections offered by such structures
- Unlike chargeback protection offered through credit cards, once bitcoin transfers are made they are irrevocable leaving consumers with no recourse for dispute resolution
- Bitcoin features also make it an ideal target for cyber criminals. If an e-wallet is hacked and coins stolen or transferred by mistake, they are lost forever
- It is estimated that about 10 percent or 1.3 million bitcoins totaling over \$500 million have been lost and are permanently out of circulation

10 Major Bitcoin Risks

10. Sovereign Attack Risk

- If adopted in its current raw form, bitcoin has the potential to undermine the longstanding bond between sovereign and its currency
- Sovereign power and responsibility is intertwined with currency creation, control and regulation. Governments exercise a monopoly power on currency creation with the understanding that doing so will provide its citizens with a greater level of economic stability
- Citizens are given the ability to use “legal tender” to satisfy public and private debts including paying taxes



10 Major Bitcoin Risks

10. Sovereign Attack Risk (continued)

- Under the Bitcoin model, those who create the algorithm, protocol, manage the transactional ledger and mine virtual currencies would become the new central bankers, controlling a monetary basis **An immense power and responsibility**
- Bitcoin has a fixed growth rate and built-in scarcity capped at 21 million e-coins by 2140. This naïve approach assumes that a currency supply formula derived today can automatically meet the ebbs and flows of economic cycles over 130 years without monetary interventions or input of human judgment.
- Such an approach is also dangerously deflationary
- If bitcoin were allowed to co-exist as “legal tender” it could also create a situation where under Gresham’s Law “Bad money drives out good”. In such a scenario, bad currency (bitcoin) would be used and good currency (US Dollar) would be hoarded, creating greater economic instability

Summary Conclusions

1. While bitcoin is an example of new technology that has clear promise, it also poses a multitude of risks to consumers, companies and sovereigns
2. Bitcoin and its delivery system can not be separated. The strength or weakness of the system is linked to bitcoin the currency (engine) and Bitcoin the delivery platform (rails). No matter how sturdy the rails, if the engine is not sound due to extreme market volatility, or artificial scarcity, the system can not function at reliable and safe levels
3. Bitcoin is not an experiment conducted in a controlled environment. Currency creation and management is the lifeblood of the global economy. The payment system is the financial plumbing.
4. Pumping a pseudo currency into the veins of the economy and adopting a new payment system without rigorous testing would be risky and highly imprudent
5. To counteract the panoply of risks associated with virtual currencies such as bitcoin, there needs to be greater regulation, international oversight, sovereign control and stronger consumer protection rules put firmly in place
6. Bitcoin as a payment platform could be beneficial as long as there is regulation, central banker oversight and ownership is made transparent