

# Bitcoin: Is virtual the new reality?

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# Introduction to Bitcoin

- 1 Started in 2009: by Satoshi Nakamoto
- 2 Virtual currency
- 3 Decentralised
- 4 No governments involved
- 5 Based on trust networks

# Money and a brief history

- What is money?
- Gold, silver, and copper
- The gold standard
  - free flow of gold
  - market driven
  - market regulated

# Paper money and it's problems

- Distrust for institutions
- Governments and central banks
- Monetary policy
- Inflation

- The technology
- Mining
- Transparency
- Anonymous transactions
- Cryptography
- No issuing authority
- Low/No transaction fees
- Mining is done on computers
- Fraction-able: one part in a hundred million ( $1/100000000$ )
- 24 hours working

- No single party controlling
- No one point of failure
- No corruption by power
- No inflation
- Attacks are difficult
- Double spending is very expensive

- Easy to set up (via service providers)
- Each transaction is verified
- All transactions are mutually consistent
- Transaction logs are public
- Public keys (identity) is protected
- Irreversible transactions

- Ease of use
- No need for bank account
- For low income groups



- How many Bitcoins?
  - 12 million BTC currently in the market
- Market Cap?
  - \$8.5 billion
- How much are left?
  - 9 million
- Bitcoin as an asset class?

# Price performance



# Other instruments

- Gold
- S&P 500
- Hedge funds
- Mutual funds
- Euro

# What contributed to the rise?

- Cyprus
- Interest from the governments

*A Justice Department official said Nov. 18 Bitcoins can be legal means of exchange at a U.S. Senate committee hearing, boosting prospects for wider acceptance of the virtual currency. Fed Chairman Ben S. Bernanke told the Senate committee the U.S. central bank has no plans to regulate the currency. –Bloomberg*

- Germany has recognised it as unit of account
- Silkroad shut down
- Hack attacks on service providers

# Is this a good time to enter this market?

- Increasing liquidity
- Is it bubble?
- Lots of Chinese investors have invested lately
- Speculation
- Computationally very intensive
- Power consuming: 138,063.99 megawatt hours (source: blockchain.info)
- More than supercomputers
- Operating Profit: -16,618,207.76 (source: blockchain.info)
- Security challenges
  - Hacking
  - Price volatility
  - Reliability – Chinese exchange vanished with deposits

# Regulatory issues

- Silk road
- Hacking attacks
  - an Australian wallet service (*inputs.io*)
  - a Danish exchange (*bips.me*)
- Losing money is trivial
- Money laundering
- Security industry needs to think
- Multiple virtual currencies
- KYC issues
- People should know the risks
- The courts can't interfere
- No underlying asset – no claim
- Other issues: money transmission laws

- Chip business
- Venture Capitalists
- India holds around 10% of all the Bitcoins in the world
- Exchanges: MtGox
- Shopkeepers in Germany

- A currency, security, or a payment system?
  - As a payment system, it needs to handle more transactions per second.
- US
- France
- China
- Possible treatment in India



# Open questions

- The next gold standard?
- Legal tender status?
- As another financial instrument?

Thank you  
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