

# Money

A commodity under scrutiny

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# Overview

- What is money?
- What is the role of the government?
- Quantitative Easing
- What is Bitcoin?
- What is Blockchain?
- The future of money

**What is Money?**

# Yap Stone Money



# A Brief History of Money

- For thousands of years
  - Gold, silver, corn, sea shells, stones, salt, ...
- Modern events
  - 1918: £, US\$, Franc, ... unlinked with gold
  - 1926: £ tied to gold, but only exchangeable in bars
  - 1931: Floating exchange rates
  - 1944: Bretton Woods: US\$ as exchange standard
  - 1971.08.15: US\$ unlinked with gold
  - 1971.12.18: Smithsonian Agreement: fixed exchange rate
  - 1973: Fluctuating fiat currencies



# Money is just a commodity

- Ultimately, we want a reference to values
  - How much is a loaf of bread?
  - How much is a house?
- That is why we define price index
  - As a reference to living costs
- Gold has relatively limited supply, so it has been used a lot
- Unfit commodities were all replaced

# Money was a Receipt of Gold

- When created, bank notes were just receipts of gold deposits
- 1879-1932, one ounce of gold was worth **US\$20.67**
- 1934-1967, one ounce of gold was around **US\$35-\$40** most of the time
- Today, one ounce of gold is at **US\$1,320**

“What has government done  
with our money?”

Murray Rothbard

Book first published 1963



# Fiat Money

- Government-defined currencies
- They have value because government says so
- No check and balances (unlike commodities)



# Government & Central Banks

- Central bank regulates the economy:
  - Increase/decrease reserve requirement
  - Increase/decrease interest rate
- Government – Quantitative Easing (QE)
  - Issue bonds to fund expenditure
  - Buy bonds with electronic money
- Increase expenditure & cut tax at the same time – perfect for elections!

# How much QE?

- USA
  - Purchase halted on 29<sup>th</sup> October 2014
  - Net asset **US\$4.5 Trillion**
- European Central Bank (ECB)
  - 10<sup>th</sup> March 2016, ECB increased monthly bond purchase to **80 billion Euro**
- Japan
  - 4<sup>th</sup> April 2013, Bank of Japan planned to hold 70 Trillion Yen (**US\$53 billion**) a year



# CHARLEY'S DIARY: WEALTH CREATION



HOW CAN WE CREATE WEALTH?

... MONEY PRINTING?

COUNTERFEITING IS ILLEGAL!

... BESIDES, MONEY PRINTING NEEDS INK AND PAPER

FAT-BOY

ALCHEMY ?

ALCHEMY NEEDS MATERIAL AND KNOWHOW...

CHARLEY

QUANTITATIVE EASING NEEDS NOTHING!

WONG-WONG

... AND ... IT'S EVEN LEGAL!

# Rothbard (1963) Quote

- Hyperinflation is a major threat to fiat money.
- "*Hyper-inflation occurs when the public realizes that the government is bent on inflation, and decides to evade the inflationary tax on its resources by spending money as fast as possible while it still retains some value.*" (page 80)
- Catastrophic economic inflation coming!

# What is BitCoin?

Blockchain

+

Crypto Currency

# Blockchain, What is it?

- A global, distributed ledger
  - Recording who owns what
- Who controls it?
  - None / everyone!
- Encrypted
  - Privacy kept, but traceable if wanted
- Many copies around
  - Thus difficult to fraud

# Blockchain, What can it do?

- One can deposit assets into it
  - Assets could be money
  - They could also be shares, bonds, etc.
- One can transfer assets to others
  - Electronic transfer, convenient
  - Instantaneous!
- These are basic functions of a bank!
  - Banks still have a lot of other activities



# Blockchain, Trust

- How can I trust Blockchain?
  - Someone must keep the assets?
  - Someone must write the programs?
- No, but we need to trust someone
  - No trust, no business
  - Can we trust our banks? (LIBOR?)
  - Can we trust governments? (not Rothbard)
- Banks/governments can build Blockchains

# Impact of Blockchain

Disruptive technology

Impact on the Trust Business

# The Trust Machine

The Economist, October 31st 2015

*“The spread of Blockchains is bad for anyone in the “trust business” — the centralised institutions and bureaucracies, such as banks, clearing houses and government authorities that are deemed sufficiently trustworthy to handle transactions.”*

# Blockchain opportunities

- Peer and Peer deals made easy
- eBay, Uber, AirBnB, crowd-funding
  - Supported by PayPal, WeChat
  - Blockchain could play the same role
- Blockchain could implement:
  - Banking
  - Foreign exchange
  - Stock exchange

# Links to other talks

- Richard Olsen
  - OANDA, Olsen Ltd, Lykke
  - 3<sup>rd</sup> March 2017
  - Lykke: the concept behind it, current activities and the future
- Rhom
  - Deutsche Bank
  - 26 February 2016
  - Technology and Banking

# Conclusion

- Money is nothing more than a commodity
  - Thus its value should be allowed to float
- Governments have manipulated money
  - Fiat money has no creditability
- Bitcoin = Blockchain + Cryptocurrency
  - Blockchain enables peer to peer transactions
  - The trust business will be changed

# References

- Murray Rothbard, *What has government done with our money?*
  - Ludwig von Mises Institute, fifth edition, 2005 (First published, Murray Rothbard 1963)
- Edward Tsang's summary
  - <http://www.bracil.net/edward/personal/opinions/Rothbard-money.html>
- *The Economist Explains: What is quantitative easing*
  - <http://www.economist.com/blogs/economist-explains/2015/03/economist-explains-5>

# Supplementary Information



# GDP by countries (IMF 2016)

Rank	Country	GDP (US\$bn)	% of World
1	USA	18,561	24.7%
2	China	11,392	15.1%
3	Japan	4,730	6.3%
4	Germany	3,494	4.6%
5	UK	2,649	3.5%
6	France	2,488	3.3%
7	India	2,251	3.0%
8	Italy	1,853	2.5
9	Brazil	1,770	2.4
10	Canada	1,532	2.0
	World	75,213	

Source: Wikipedia [https://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_GDP\\_\(nominal\)](https://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal))

