

This presentation is dedicated
to the memory of Stephen Zarlenga
(~ April 25, 2017)

On the Liquidation of Government Debt
under A Debt-Free Money System
- Modeling the American Monetary Act-

The 6th Annual AMI
Monetary Reform Conference

At University Center
in Downtown Chicago

Sept. 30 – Oct. 3, 2010



My First Attendance to the Annual AMI Monetary Conf.



This presentation is dedicated
to the memory of Stephen Zarlenga
(~ April 25, 2017)
Director of the AMI

Workings of A Public Money System
of Open Macroeconomies
- Modeling the American Monetary Act Completed-



US Congressional Briefing
July 26, 2011 at Washington D.C.



Public Money, Debt Money and Blockchain-based Money Classified

-- EPM as Money of the Futures --

13th Annual AMI Monetary Reform Conference

University Center, Downtown Chicago, USA

Skype Presentation

by

Dr. Kaoru Yamaguchi, Director
Japan Futures Research Center

1:00 PM (8:00PM Paris Time)

Sept. 16, Saturday 2017

The Year 2008: A Turning Point of History

①

Open Macroeconomies as
A Closed Economic System
– SD Macroeconomic Modeling Completed –

Kaoru Yamaguchi san *
Doshisha Business School
Doshisha University
Kyoto 602-8580, Japan
E-mail: kaoyamag@mail.doshisha.ac.jp

Abstract

This paper completes the series of macroeconomic modeling that tries to model macroeconomic dynamics on the basis of the principle of accounting system dynamics developed by the author. Money supply and creation processes of deposits were modeled in the first paper, while the second paper built dynamic determination processes of GDP, interest rate and price level. In the third paper, these two separate models were integrated to present a complete macroeconomic dynamic model consisting of real and monetary sectors. The fourth paper presented a model of a dynamic determination of foreign exchange rate in an open macroeconomy in which goods and services are freely traded and financial capital flows efficiently for higher returns. This fifth and final paper in the series tries to expand the integrated model in the third paper to the open macroeconomies according to the framework developed in the forth paper. It provides a complete generic model of open macroeconomies as a closed system, consisting of two economies, a foreign economy as an image of domestic economy. As a demonstration of its analytical capability, a case of credit crunch is examined to show how domestic macroeconomic behaviors influence foreign macroeconomy through trade and financial capital flows.

1 Open Macroeconomic System Overview

This is the fifth and final paper of a series of macroeconomic modeling that tries to model macroeconomic dynamics on the basis of the principle of accounting

*This paper is submitted to the 26th International Conference of the System Dynamics Society, Athens, Greece, July 23-27, 2008. It is partly supported by the grant awarded by the Japan Society for the Promotion of Science.

Accounting System Dynamics
=
Accounting System
(Double-Booking Account)
+
System Dynamics
(Differential Equations)



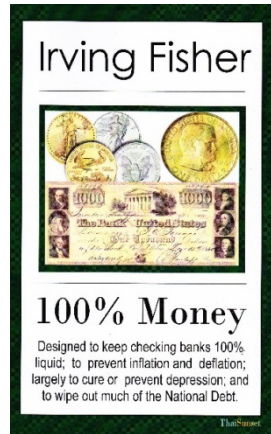
Classical
Theory

Neutral
Money

Market
Liberals

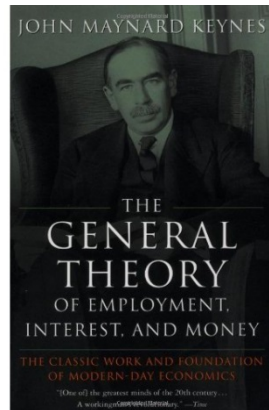
Great Depression, Oct. 29, 1929 (Black Tuesday)

1929

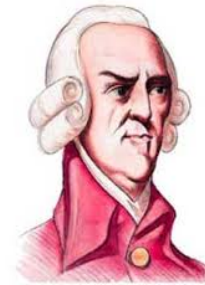


1935

Banking Act of 1933
(Glass–Steagall Act)



1935



Neoclassical
Theory

Market &
Financial
Liberals

Globalization

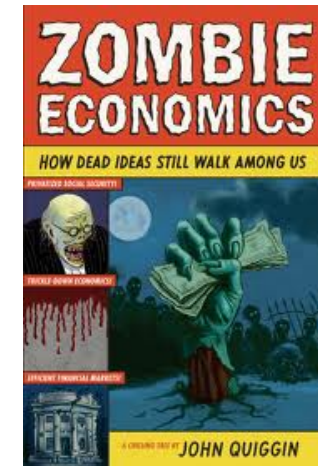
1999

Stagflation
1970s

2nd Great Depression, Sept. 15, 2008 (Lehman Shock)

2008

It is necessary to
provide an alternative
to the zombie
economics of
market liberalism
(2010, p. 240)



Debt
Crisis

Debt

Money

System

Pilot's Failure ?



Debt Money System Works
(Airplane)



System Design
Failure ?



Public Money System
(New System Design: Monetary Reform)

Debt Money: 4 Major System *Design Failures*

1. Instability of Money Stock

Observed in 1930's during the Great Depression by Fisher (1935).

Yamaguchi & Yamaguchi (2016) using ASD model.

2. Government Debt Accumulation

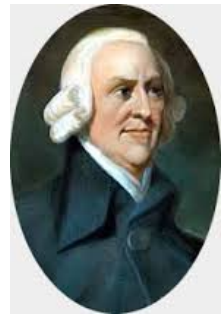
Yamaguchi (2014)

3. Income Inequality

(between Financiers and Non-financiers)

4. Environmental Destruction

Public Money System



Classical Theory

Neutral Money

Market Liberals

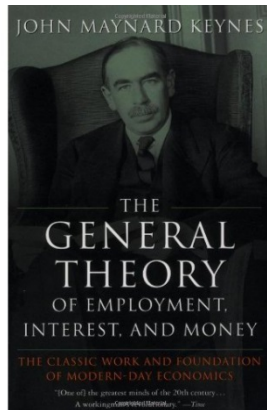
Great Depression, Oct.29, 1929 (Black Tuesday)

1929



1935

Banking Act of 1933 (Glass-Steagall Act)



1935

American Monetary Act



Neoclassical Theory

Market & Financial Liberals

Globalization

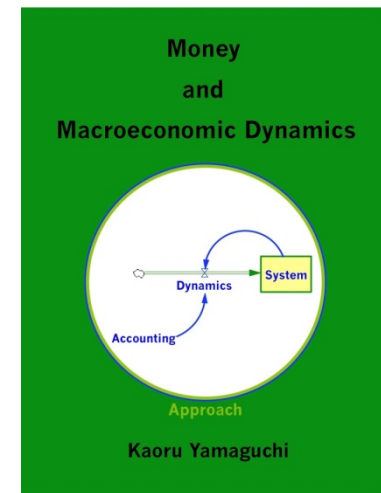
Stagflation 1970s

Disequilibrium Analysis

2nd Great Depression, Sept. 15, 2008 (Lehman Shock)

2008

It is necessary to provide an alternative to the zombie economics of market liberalism (2008, p. 240)



2013

Debt Crisis

Debt

Money

System

What is Public Money System ?

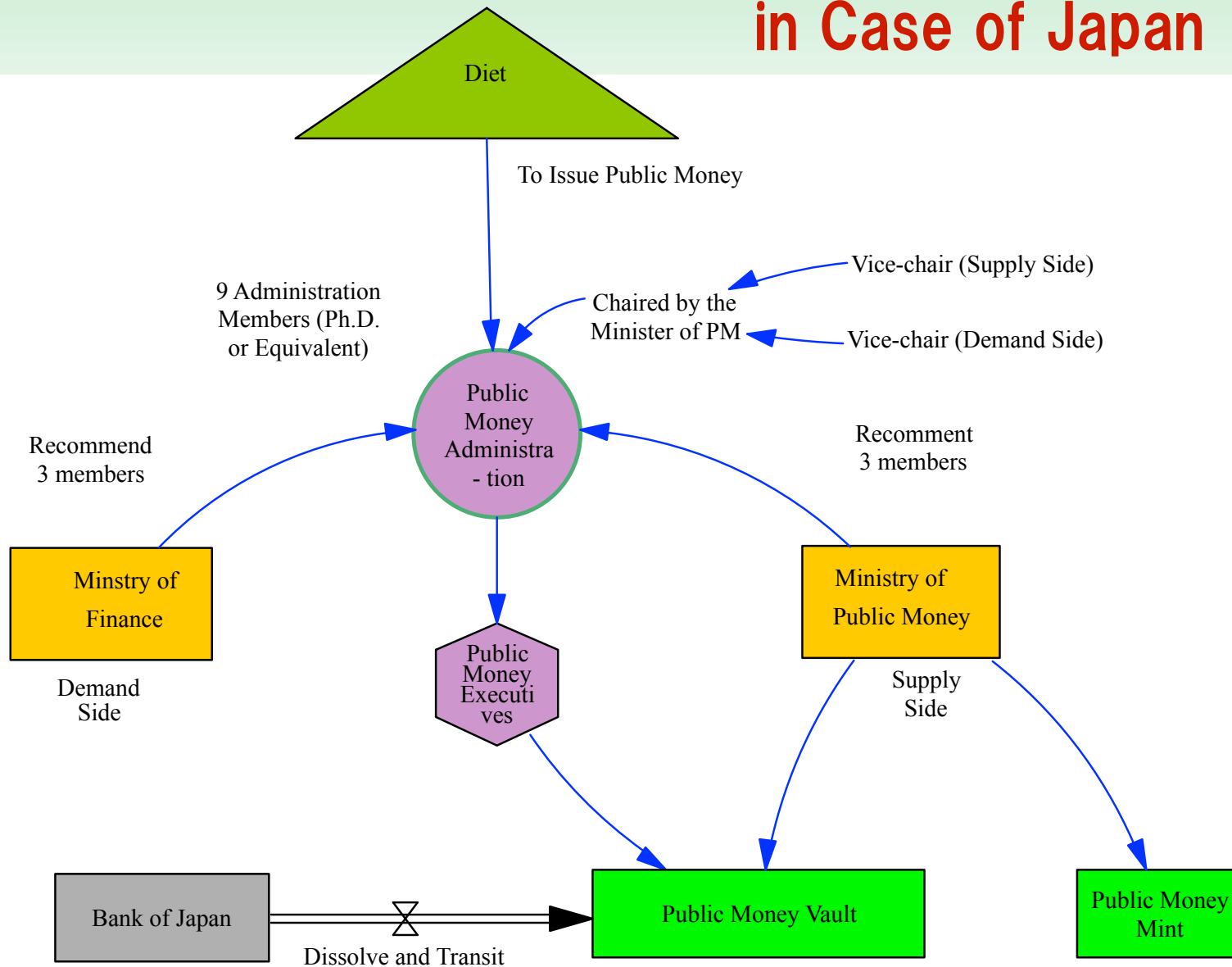
A Debt Money System - Money out of Nothing -

- 1. Privately-Owned Central Bank issues Money (Notes)**
- 2. Credit (Deposits) created by Commercial Banks
(A Fractional Reserve Banking System)**
- 3. Monetary Control
by (and for)
the International Bankers**

A Public Money System - American Monetary Act -

- 1. Public Money Administration
(Government) Issues Money**
- 2. 100% Reserve
(Abolishment of the Credit
Creation)**
- 3. Money as Public Utility
for the Economic Growth and
Public Welfare**

Public Money Administration (PMA) in Case of Japan



Public Money vs Debt Money

System Structures

	Public Money System (New System Design)	Debt Money System (System Design Failure)
Money Issuer Its Owner	Public Money Administration Government	Central Bank Private Banks and Financiers
Bank Reserves	100% Reserve	Fractional Reserves
Money Supply	Public Money directly put into Circulation as Economy Grows Private Banking unaffected	Base Money: by Central Bank Deposits: by Bank Loans Money in Circulation: by Public
Interest	Interest-free	Interest-bearing Debt
Economic Policies	Public Money Policy (Public Money Financing)	Monetary Policy: Central Bank Fiscal Policy: Government

Chapter 15: Table 15.1 (available at www.muratopia.org)

Public Money vs Debt Money

System Behaviors

	Public Money System (New System Design)	Debt Money System (System Design Failure)
Monetary Stability	Stable Money Supply Stable Price Level	Bubbles and Credit Crunches Inflation & Deflation
Financial Stability	No Bank-runs	Business Cycles (Booms and Busts)
Employment	Full Employment is Possible	Involuntary Unemployment
Government Debt	No Government Debt	Built-in Debt Accumulation → Recession & Unemployment
Inequality	Income Inequality between Workers and Capitalists	Income Inequality between Financiers and Non-financiers
Sustainability	Sustainability is Possible	Accumulated Debt → Forced Growth → Environmental Destruction

Chapter 15: Table 15.2 (available at www.muratopia.org)

Classification of Money

-- Public vs Debt Money before Year 2008 --

	Public Money	Debt Money	
Media	Money as Legal Tender		Functional-Money
Non-metal Commodities	Shell, Cloth (Silk) Woods, Stones, etc		
Metal Coinage	Non-precious Metal Coins Gold, Silver & Copper Coins		Metal Ingots (such as Gold)
Paper Notes	Public Money Notes by PM Admin.	Goldsmith Certificates Central Bank Notes	
Digital Cards & Accounts	Digital Public Money (PM)	Digital Cash Central Bank Digital Currency (CBDC)	Deposits (Credits by Loans)
(After 2008)			
Blockchain & Distributed Ledgers			

The Year 2008: A Turning Point of History

①

Bitcoin: A Peer-to-Peer Electronic Cash System

②

Satoshi Nakamoto
satoshin@gmx.com
www.bitcoin.org

Abstract. A purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double-spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions by hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as a majority of CPU power is controlled by nodes that are not cooperating to attack the network, they'll generate the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.



al institutions serving as
works well enough for
the trust based model.
ncial institutions cannot
ion costs, limiting the
small casual transactions,
ible payments for non-
preads. Merchants must
y would otherwise need.
d payment uncertainties
exists to make payments

ic proof instead of trust,
but the need for a trusted
se would protect sellers
ed to protect buyers. In
peer-to-peer distributed
der of transactions. The
CPU power than any

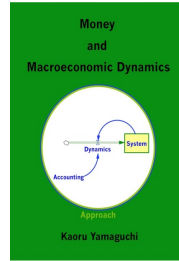
Great Depression, Oct.29, 1929 (Black Tuesday)

2nd Great Depression, Sept. 15, 2008 (Lehman Shock)

Chicago Plan: Monetary Reform

Accounting
System Dynamics
Macroeconomic Model

(August, 2008)



2013



2015
(Public Money)

Public Money System

- Peer-to-Peer Network
- Public Transaction Ledger
- Decentralized Verification (Blockchains)
- Highly Stable and Secure



Blockchain Revolution

Bitcoin: A Peer-to-Peer Electronic Cash System
by Satoshi Nakamoto, 2008;
(started on 2009-01-03 18:15:05)

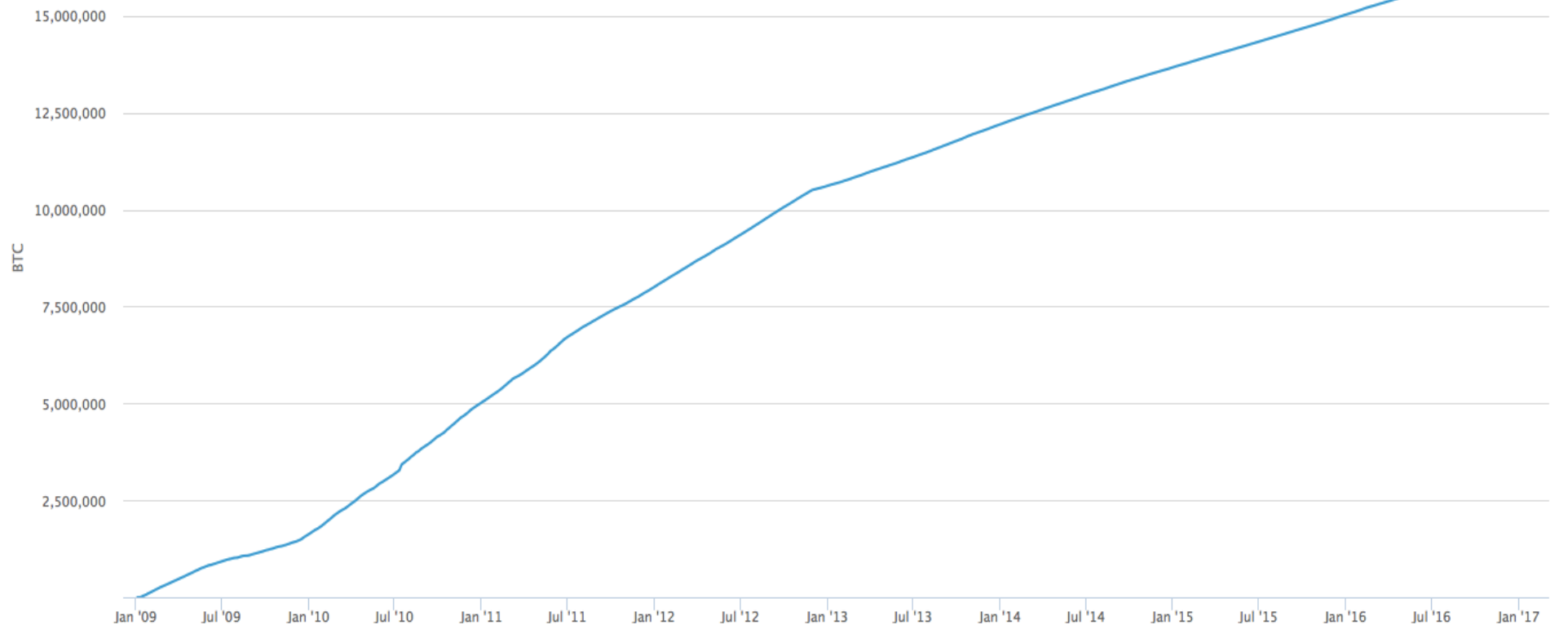
Bank Patchworks

Debt Money System

- Peer-to-Peer Network
- Public Transaction Ledger
- Decentralized Verification (Blockchains)
- Highly Stable and Secure

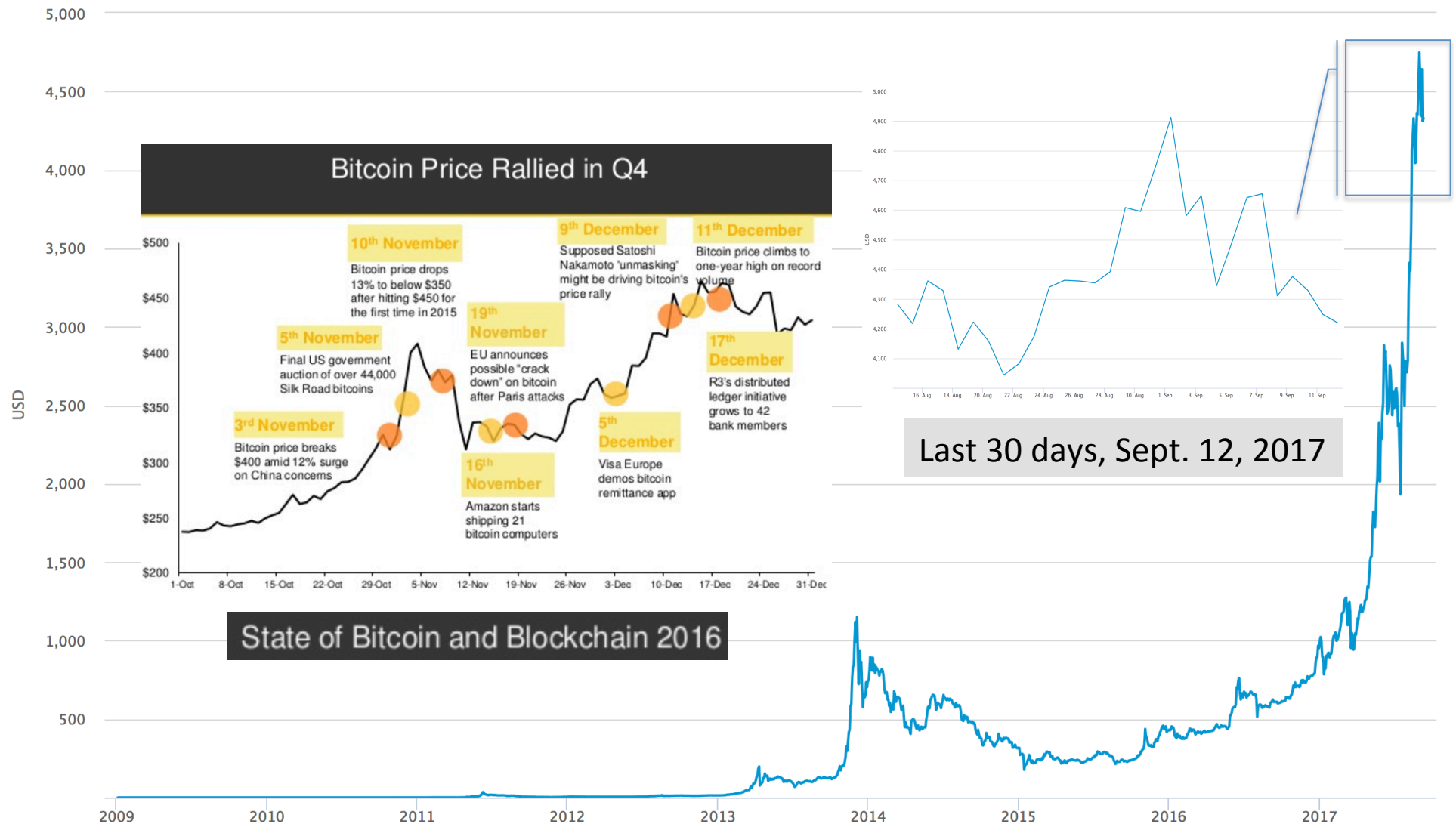
Failures of Bitcoin Design

(1) Fixed Supply of Bitcoin at 21 Million BTC (by the year 2140)

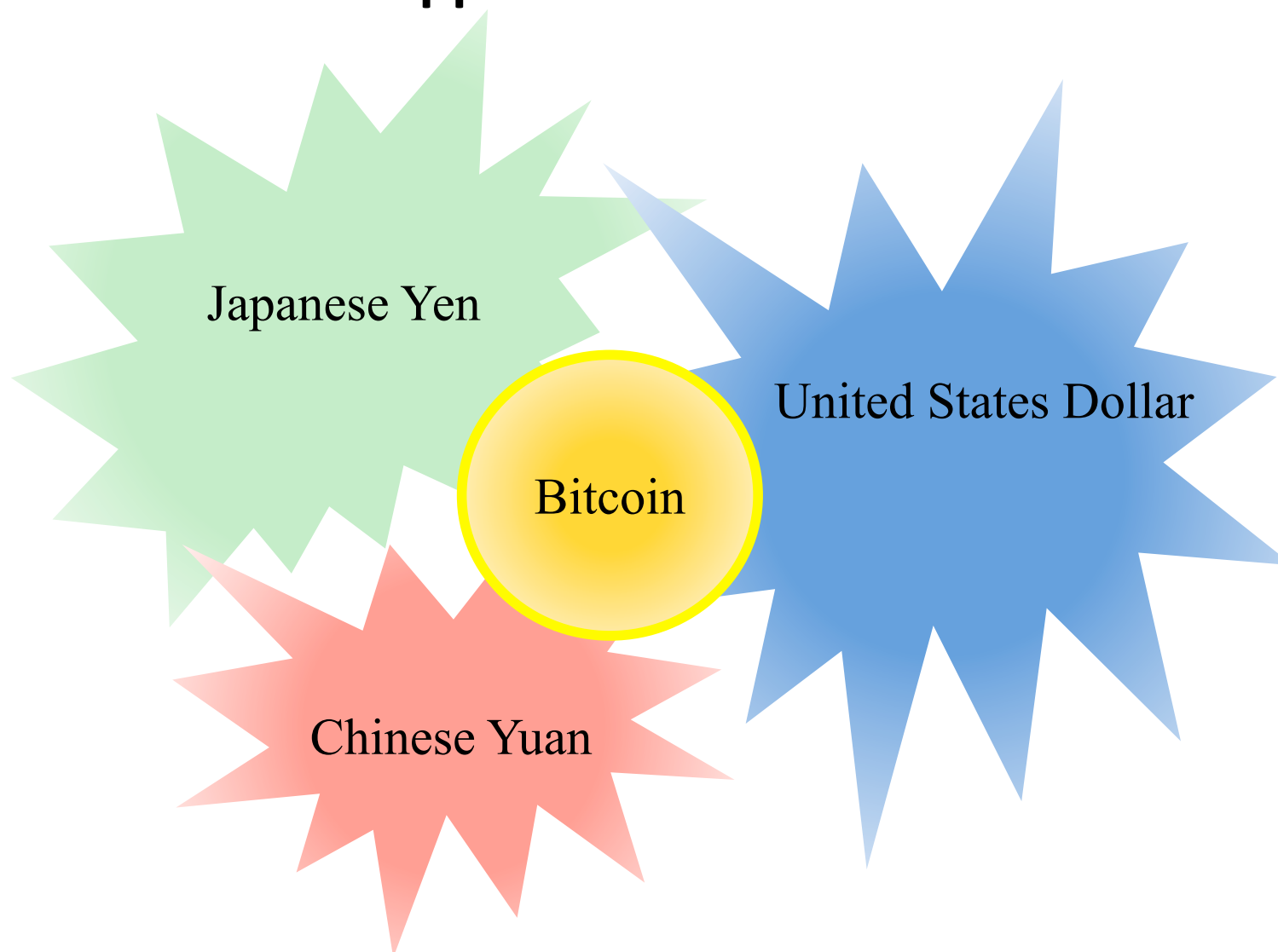


Failures of Bitcoin Design

(2) Volatility of Bitcoin Value



Blockchain Applications as Patchworks



Collapsing Debt Money Systems

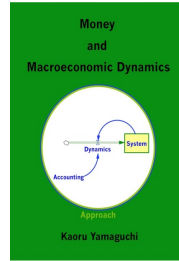
Great Depression, Oct.29, 1929 (Black Tuesday)

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Chicago Plan: Monetary Reform

Accounting
System Dynamics
Macroeconomic Model

(August, 2008)



2013



2015
(Public Money)

Public Money System

The Ultimate Design of
Monetary Reform

EPM: Our Savior P2P Public Money System

(The End of Bank
Intermediaries)



Blockchain Revolution

Bitcoin: A Peer-to-Peer Electronic Cash System
by Satoshi Nakamoto, 2008;
(started on 2009-01-03 18:15:05)

Bank Patchworks

Debt Money System

- Peer-to-Peer Network
- Public Transaction Ledger
- Decentralized Verification (Blockchains)
- Highly Stable and Secure

Electronic Public Money (EPM) System

Public Money System

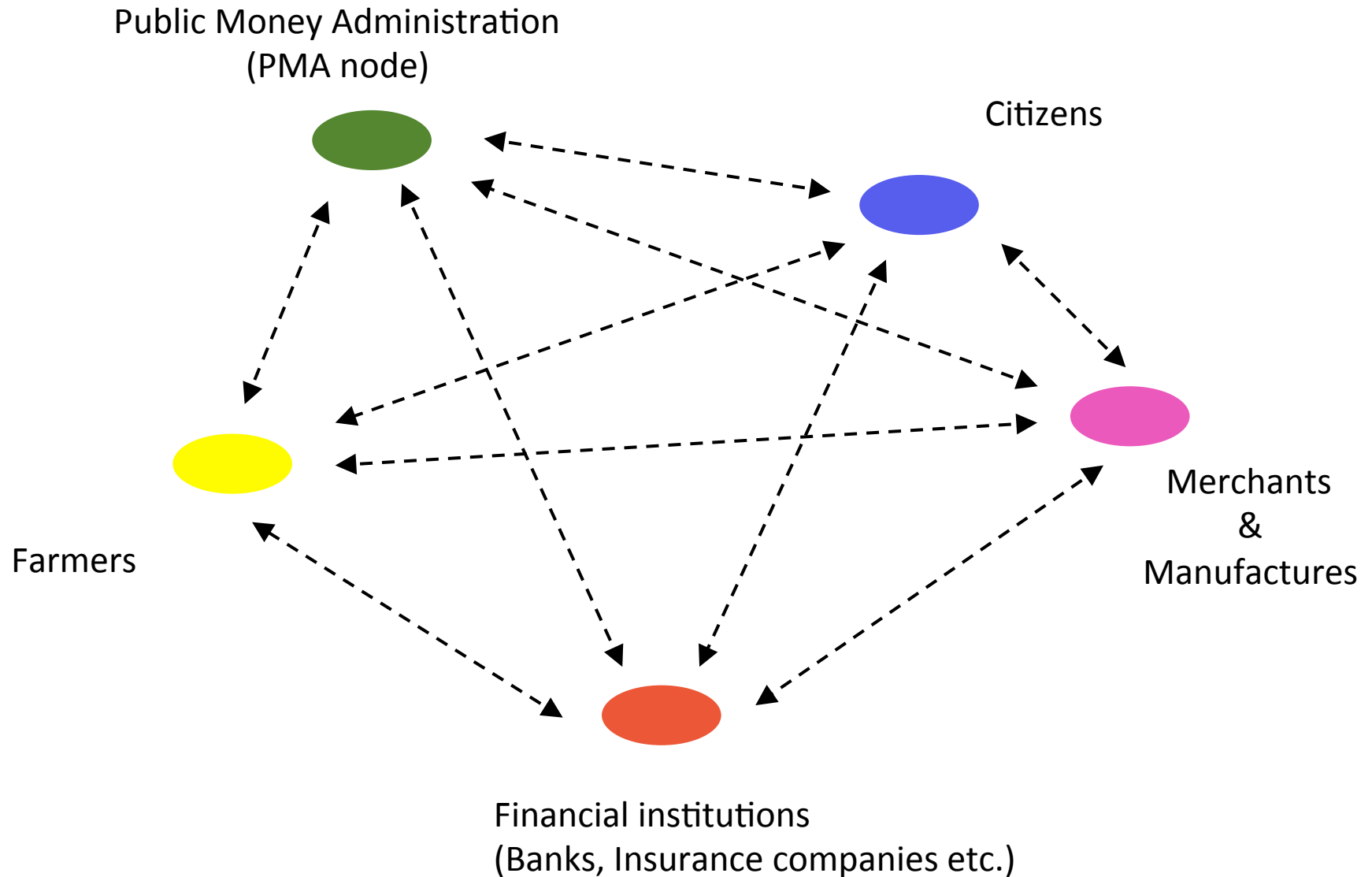
+

Peer-to-Peer Payment

- ✓ Stable Money stock
- ✓ Resilient Financial System
(No bank runs)
- ✓ Liquidation of Public Debt

- ✓ Transactions through
Distributed Public Ledger
Technology

Peer-to-Peer Transaction System



Blockchain-based Money

-- Classification after the Year 2008 --

	Public Money	Debt Money	
Media	Money as Legal Tender		Functional-Money
Non-metal Commodities	Shell, Cloth (Silk) Woods, Stones, etc		
Metal Coinage	Non-precious Metal Coins Gold, Silver & Copper Coins		Metal Ingots (such as Gold)
Paper Notes	Public Money Notes by PM Admin.	Goldsmith Certificates Central Bank Notes	
Digital Cards & Accounts	Digital Public Money (PM)	Digital Cash Central Bank Digital Currency (CBDC)	Deposits (Credits by Loans)
(After 2008)	④ < EPM >	② < CBCC >	① < Crypto-coin >
Blockchain & Distributed Ledgers	Electronic Public Money issued by PM Admin. (Peer-to-Peer PM)	Central Bank Cryptocurrency (issued as Base Money)	Bitcoin and about 800 Altcoins
		③ < Crypto-token (as Notes)	(as Deposits) >
		· M_1 -backed Bank token: MUFG coin (Japan)	
		· M_1 -backed Non-Bank token: Zen token (Japan)	
		· M_0 -backed EPM token (cash)	

Cryptocurrencies (since 2009)

Blockchain-based Money

-- Classification after the Year 2008 --

- Debt Money System -



- ① Crypto-coin: Bitcoin, Altcoins (about 800 coins)
non-legal tender, unstable values
- ② CBCC (Central Bank Cryptocurrency)
- ③ Crypto-token (Examples in Japan)
 - (M1-backed) Bank token: MUFG coin
 - (M1-backed) Non-bank token: Zen token
 - (M0-backed) EPM token (1 Yen = 1 EYen)

- Public Money System -


- ④ EPM (Electronic Public Money)

(1) Crypto-coin

Top Altcoins Prove Consistency, but...

Q4 Rank	Name	Market Cap	Q3 Rank Δ
1	 Bitcoin	\$6,757,260,784	Same
2	 Ripple	\$203,373,383	Same
3	 Litecoin	\$154,072,197	Same
4	 Ethereum	\$72,555,828	Same
5	 Dash	\$20,865,697	+1
6	 Dogecoin	\$14,462,829	+2
7	 Peercoin	\$9,946,601	+3
8	 Stellar	\$8,321,801	+1
9	 MaidSafeCoin	\$6,946,499	+2
10	 Bitshare	\$6,632,485	-5

Crypto-Coin

Dropped from Top 10	Q4 Rank	Q3 Rank
 BanxShares	588	7

...There Are Now Over 400 'Dead' Altcoins

2chcoin	AphroditeCoin	Binarycoin	Bountycoin	Citizencoin
66coin	Appcoin	Birdcoin	Boxxycoin	ClockCoin
8coin	AppleByte	Bitcoin2	Boycoin	Clockwisecoin
99cents	Arkhash	Bitcoin2.0	Brokebackmountaincoin	CloudCoin
Acros	Armoredcoin	Bitcoin3.0	BTCTalkCoin	Cnote
AeroCoin	AstroCoin	BiteCoin	Bumbacoin	Cococoin
Aircoin	AustraliaCoin	Bitinium	Burbucoin	Coffecoin
Alcoholin	Babycoin	Bitland	ButterflyCoin	Coiledcoin
Alicoin	BaconBitsCoin	Bitleu	Californiacoin	Coin
Aliencoin	Badcoin	Bitpeso	Cancercurecoin	Coin2.0
AllAgesCoin	Basecoin	Bitpug	Capitalcoin	Coincoin
Allahcoin	BatCoin	Bitraam	CataloniaCoin	CoinyeCoin
AlphaCoin	BeaoCoin	Blazecoin	Catedoge	ColbertCoin
AlphaOmegaCoin	Beatlecoin	BlobbyCoin	Championcoin	CollegeCoin
Altrocoin	BeeCoin	Bluechip	Charitycoin	Cometcoin
AmericanCoin	BeerCoin	Bones	Chichicoin	Compasscoin
AmeriCoin	BeliCoin	BonusCoins	ChicoIn	Cooperationcoin
AminaCoin	Bells	Boomcoin	Chococoin	CopperBars
AmKoin	BestCoin	Boringcoin	ChoomCoin	CopyCoin
Apecoin	Billaume	Bosscoin	ChuckCoin	...

Crypto-Coin

(2) CBDC & CBCC



BANK OF ENGLAND



BANK OF CANADA
BANQUE DU CANADA



DEUTSCHE
BUNDESBANK
EUROSYSTEM



FEDERAL RESERVE BANK of ST. LOUIS
CENTRAL to AMERICA'S ECONOMY®



UCL RESEARCH CENTRE
FOR BLOCKCHAIN TECHNOLOGIES

Debt
Money

8-9 September 2016, London, United Kingdom

ECONOMIST

Digital Currency Revolution



BoE explores implications of
blockchain and central bank-issued
digital currency

Friday, September 9, 2016 4:15 AM UTC



Fedcoin as Gov. Cryptocurrency?

0 comment

Santander Vies to Become First Bank to Issue Cash on Blockchain

(3) Crypto-token

Pete Rizzo (@pete_rizzo_) | Published on September 20, 2016 at 04:43 BST

FEATURE

Crypto-Token
(Spain)

"These tokens are backed by real money in Santander. At any moment you can get them back and get the dollars."

Future Society

Santander Just Announced Plans to Launch a Blockchain Token Digital Currency

"So it's not a gold reserve but it's a dollar reserve. So you are going to upload these tokens into the Blockchain and you are going to have the stability of real dollars or euros, and you are going to have the agility of Ethereum Blockchain."

MUFG to launch virtual currency service

KYODO

(3) Crypto-token

Mitsubishi UFJ Financial Group Inc. will issue its own virtual currency by March 2018 to provide a money transfer service at lower fees, becoming the first major Japanese banking group to launch such a business, according to sources.

MUFG, Japan's biggest lender, will first issue "MUFG coins" to employees of its group companies for domestic remittances, eventually extending the service to attract younger tech-savvy customers, the sources said Tuesday.



Crypto-Token
(Japan)



Altcoin News / Bitcoin Technology / FinTech News

Report: Japan's Largest Bank to Launch Digital Currency in 2017

Samburaj Das / 13/06/2016

R3 CEV's Consortium: 42 Banks with Combined \$600bn+ Market Cap; 60% Are Global SIFIs

(3) Bank-token




SIFIs = Systemic Important Financial Institutions (“too big to fail”)



(3) EPM-token

Public Money Climb Route

- EPM Route -

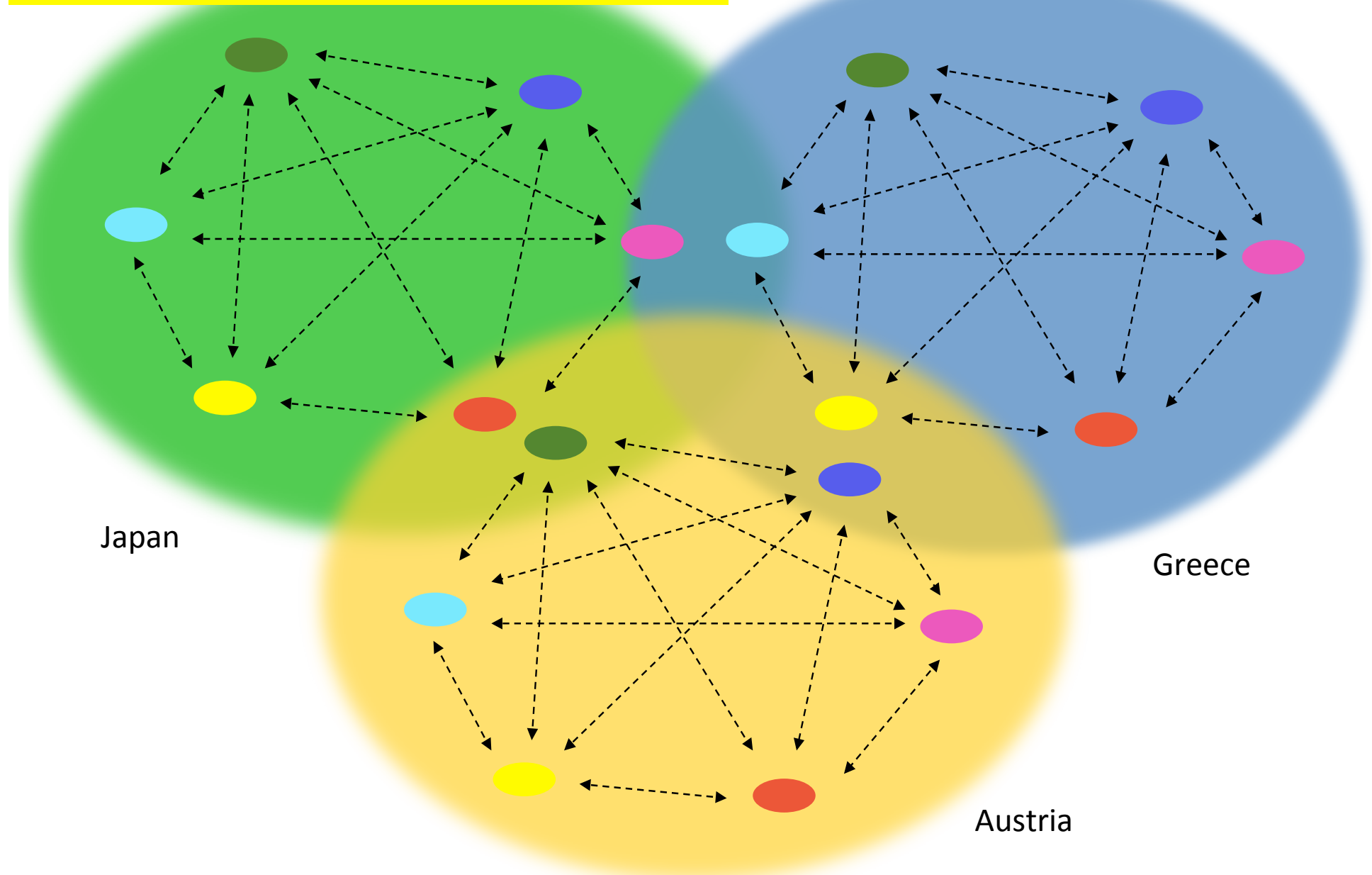
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Step ②
(= Original PM Route)

Step ①
(Regional EPM Experiments)

Electronic Public Money System Regions

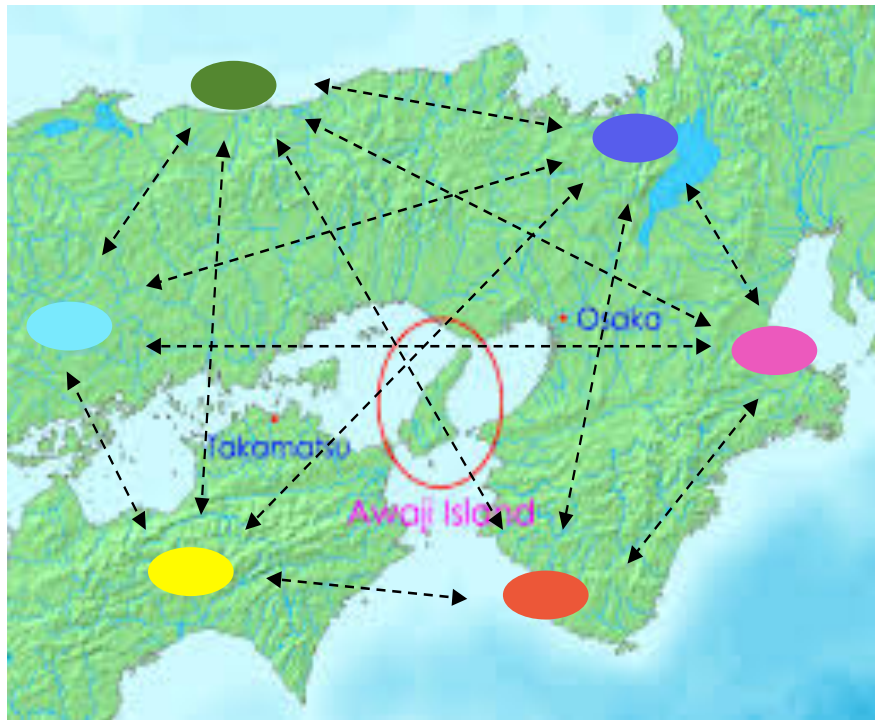
(4) **EPM:** Money of the Futures



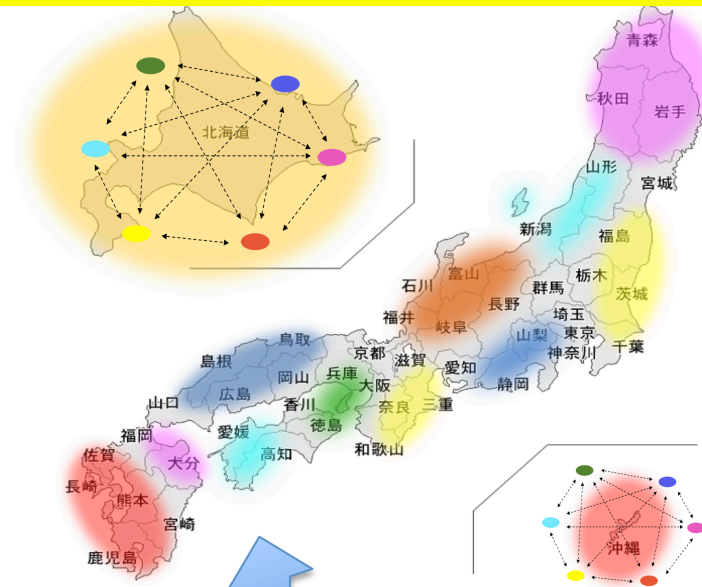
Experimenting EPM-token in Japan

100% Money

- (1) EPM-token by EPM Users
Association with Cooperative Banks
- (2) “Experimental Zone” of EPM Yen



電子公共貨幣EPMトークンによる
地域活性化の実証実験 (日本リージョン)



Ice-9 Freeze of all Financial Assets
(Cash withdrawals, Deposits, Bail-ins,
Stocks and Bonds, etc.)



Next Coming Financial Crisis!

(All Pictures are from Google Images)

Emergent Savior: **EPM-token** Regions
(Jumping on **Noah's Ark**)

100% Money



Eternal Savior: **EPM** Regions
(Safe Navigation of **Noah's Ark**)

EPM as Money of the Futures

Our Futures are full of Hopes !



Thank you for your Attention