

Greece, Out of The Crisis: Debt-End or Dead-End

Symposium at Webster University, Vienna

May 17, 2017

Electronic Public Money (EPM)
is a Savior for Debt-Economies
- On-going Experiment in Japan -

Kaoru Yamaguchi, Ph.D

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Peer-to-Peer Public Money System - Focusing on Payments-

Yokei Yamaguchi
Kaoru Yamaguchi, Ph.D

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The 2nd Asia-Pacific Region System Dynamics Conference
at National University of Singapore

Feb. 20, 2017

<http://www.muratopia.org>

Current State of Economics



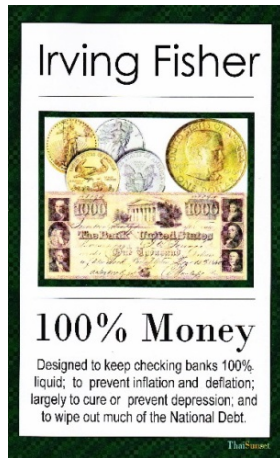
Classical
Theory

Neutral
Money

Market
Liberals

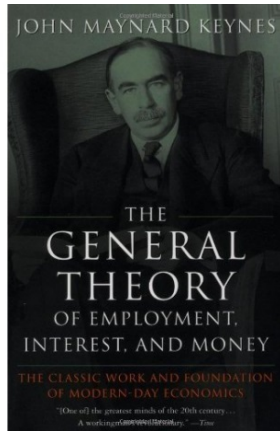
Great Depression, Oct. 29, 1929 (Black Tuesday)

1929

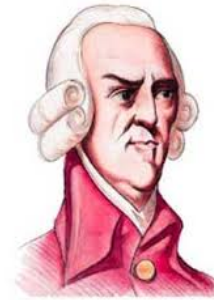


1935

Banking Act of 1933
(Glass–Steagall Act)



1935



Neoclassical
Theory

Market &
Financial
Liberals

Globalization

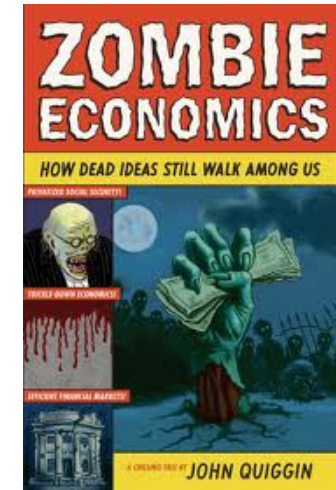
1999

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

The Year 2008: A Turning Point of History

①

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

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Abstract

This paper completes the series of macroeconomic modeling on the basis of the principle of accounting system dynamics developed in the previous four papers. The first paper presented the creation processes of deposits and loans, the second paper built dynamic models of the interest rate and price level, the third paper integrated to the open macroeconomic model consisting of real and financial sectors, and the fourth paper presented a model of a dynamic exchange rate in an open macroeconomy with freely traded and financial capital flows. This fifth and final paper in the series tries to integrate the model in the third paper to the open macroeconomic model according to the framework developed in the fourth paper. It presents 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.

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 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 majority of the network. As long as a majority of CPU power is controlled by honest nodes, the network is secure: even if all other nodes were to attack the network, they'll generate a proof-of-work chain at a slower rate than honest nodes. The network itself requires minimal system requirements: a PC with a reasonably fast CPU and a network connection. Nodes can be run on a wide variety of operating systems, and nodes can be run on a wide variety of hardware configurations.



...of trust, ... for a trusted ... would protect sellers ... to protect buyers. In ... using a peer-to-peer distributed ... chronological order of transactions. The ... system ... cooperatively control more CPU power than any

Pilot's Failure ?

(Fiscal & Monetary
Policy Failures)



Airplane is OK, Train Pilots

Debt Money System Works Well

Make F&M Policies Workable



System Design
Failure



Need for New System Design!

Public Money System

What is Debt Money System ?

- ❖ Banks create deposits at interest by loans, and deposits are destroyed when repaid.
- ❖ Fractional Reserve Banking.
(Japan 0 ~ 1.3%, U.S 0~10%, EU 0~1%)
- ❖ Deposits are not Currency (Legal Tender), but merely *Functional-Money*

Debt Money System has 3 built-in
System Design Failures

System Design Failure 1

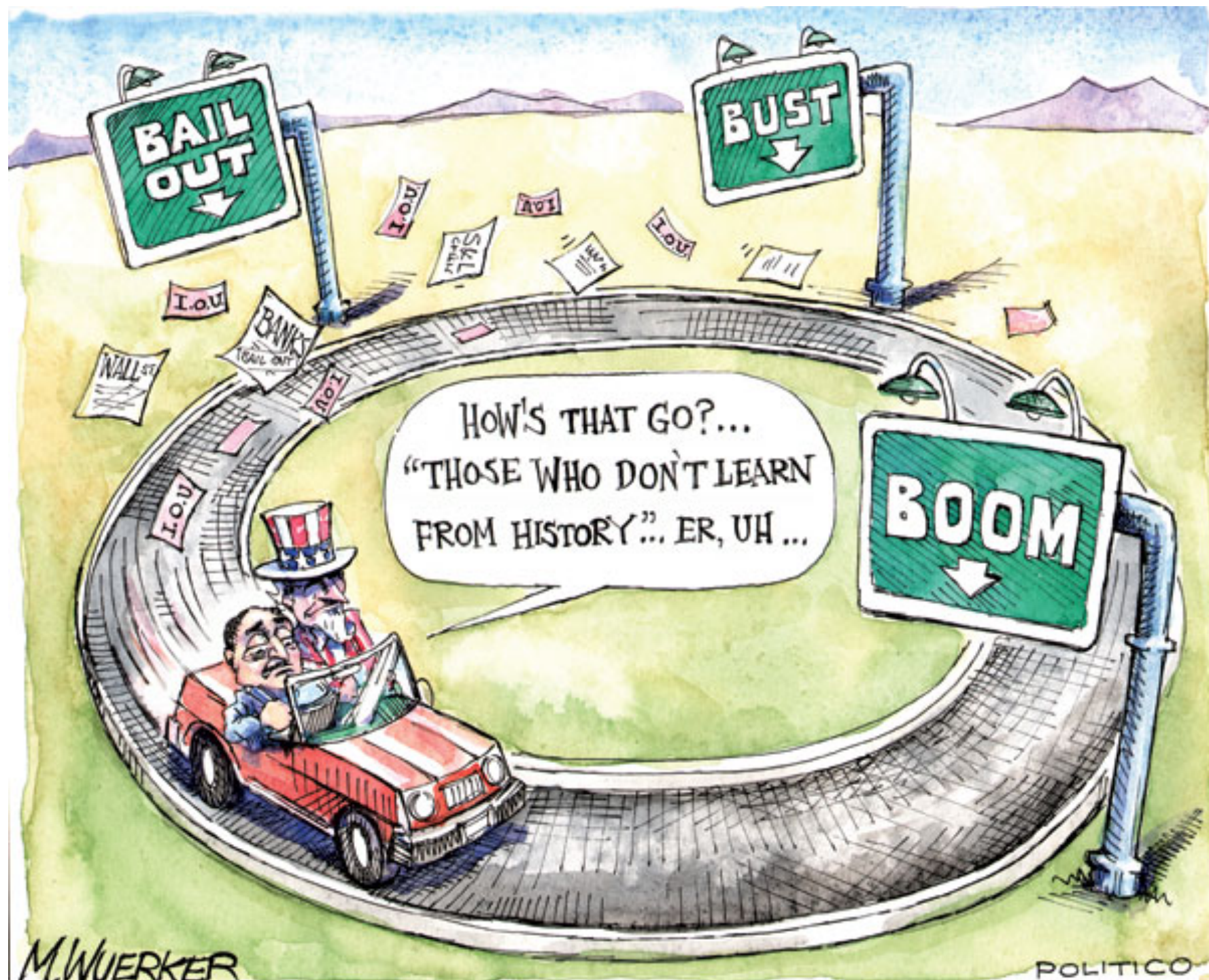
1. Instability of Money Stock

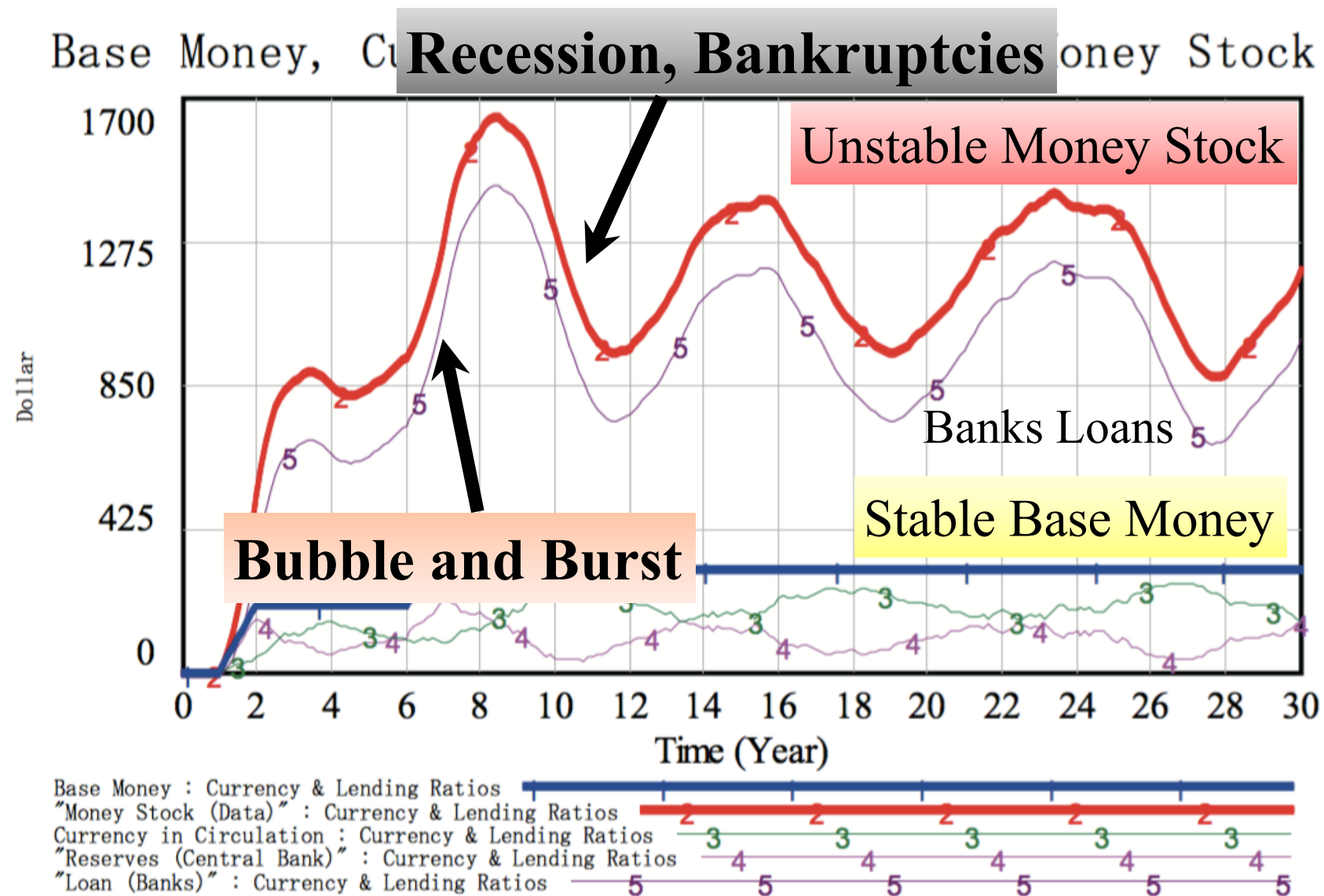
Observed in 1930's during the Great Depression
by Irving Fisher (1935).

Modeled by Yamaguchi & Yamaguchi (2016)
using ASD model:

The Heads and Tails of Money Creation and its
System Design Failures – Toward the Alternative
System Design.

<http://www.muratopia.org/Yamaguchi/doc/Head-and-Tail-2016.pdf>





Classification of Money

-- Debt Money System --

	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 (PM) by PM Admin.	Goldsmith Certificates Central Bank Notes	
Digital Accounts Electronic Cards	Electronic (Digital) Cash (CBDC) (Intangible Digits)	Central Bank Digital Currency	Deposits (Credits by Loans)

**Base Money M0 386.7 trillion yen
(June 2016)**

Gov't Coins	4.7	1.2%
B o J Notes	95.2	24.6%
Reserves	286.8	74.2%

**Money Stock M1 666.3 trillion yen
(Aug. 2016)**

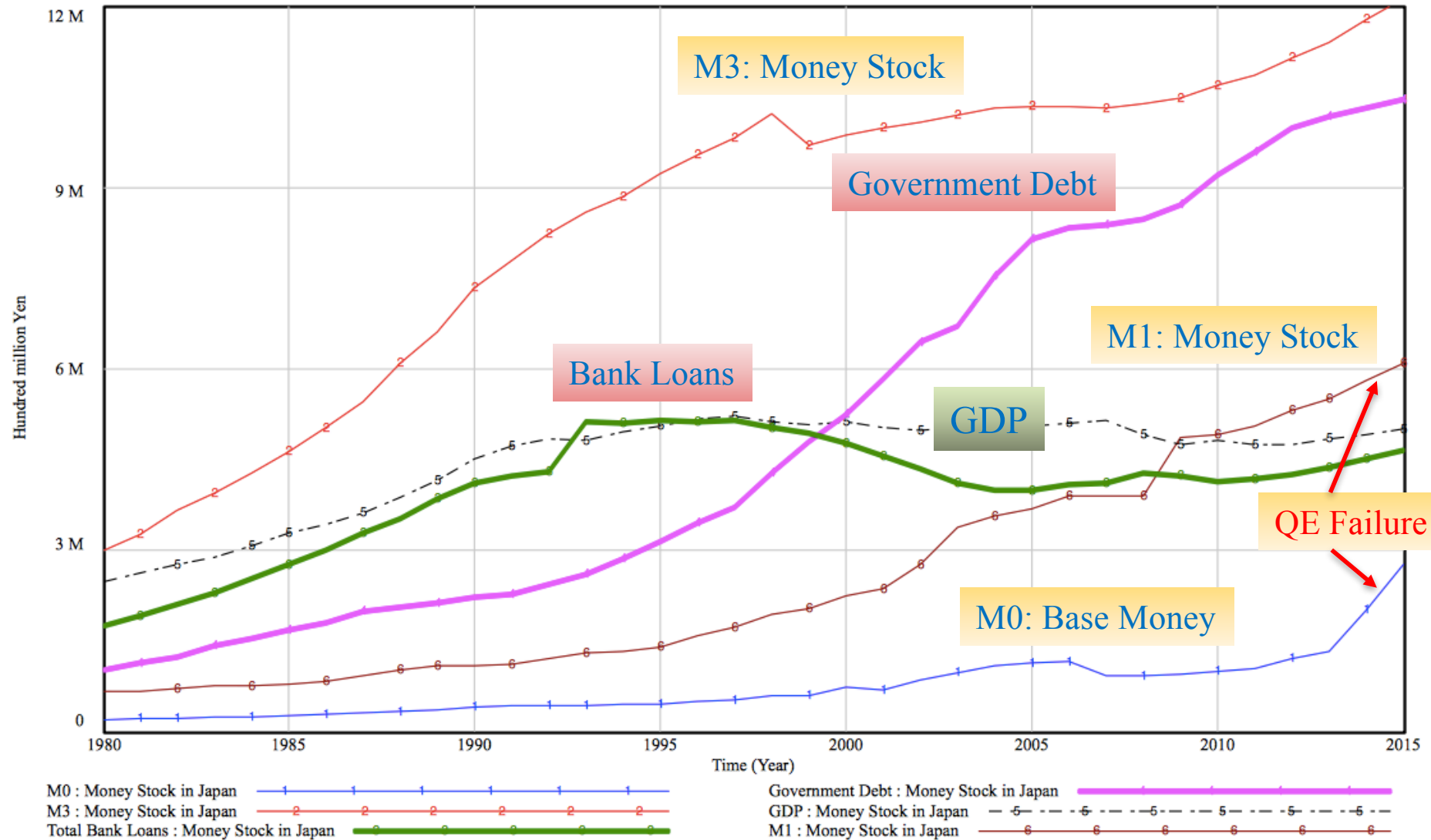
Gov't Coins	4.7	1.2%
B o J Notes	95.2	14.3%
Demand Deposits	566.4	85.0%

Stable Base Money

Credit (Deposits) Creation by
Fractional Reserve Banking System

Unstable Money Stock

Bubbles-Bursts and QE Policies in Japan



Exponential Growth of Government Debt
and QE Failures in Japan

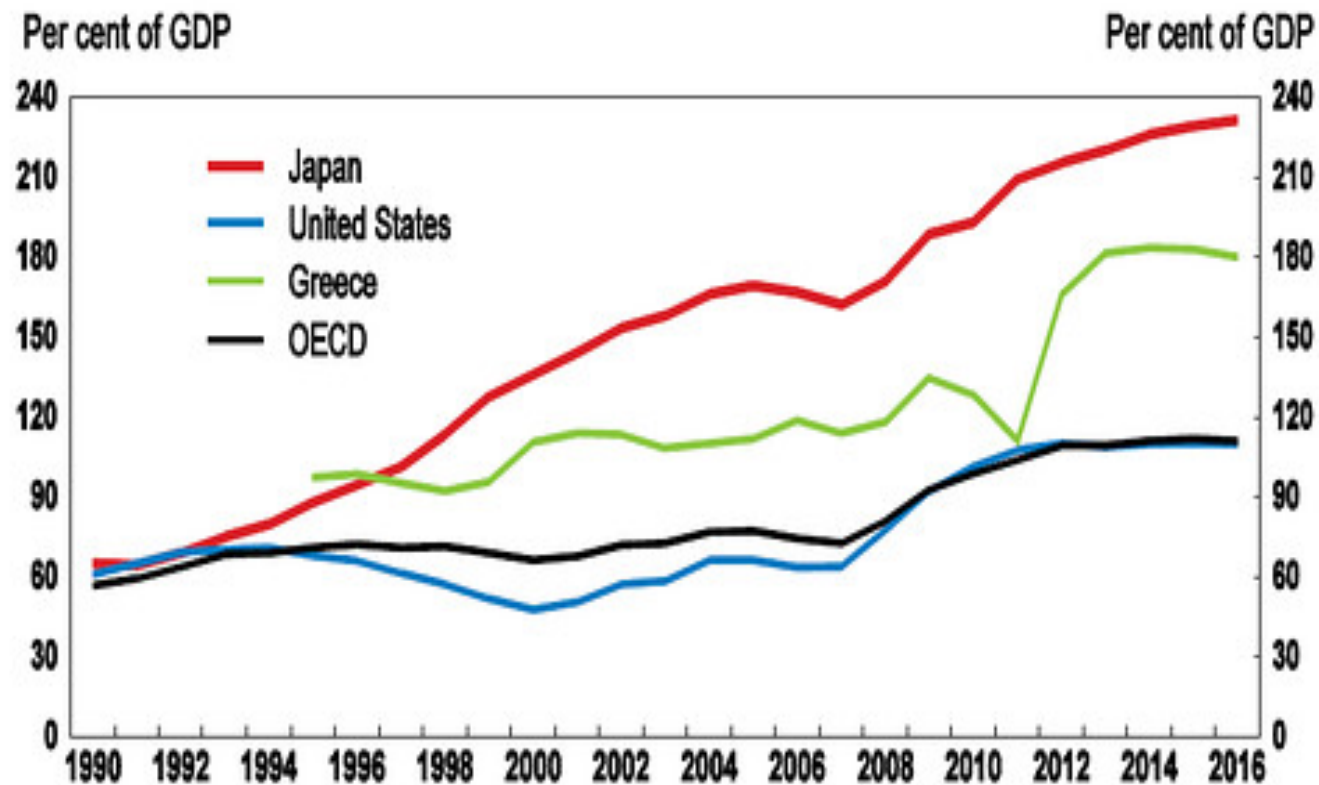
System Design Failure 2

2. Government Debt Accumulation

“From Debt Money to Public Money System –Modeling
A Transition Process Simplified, Yamaguchi (2014)”
<http://www.muratopia.org/Yamaguchi/doc/Transition.pdf>



2. Government debt is the highest ever recorded in the OECD area¹



1. OECD estimates for 2014 and projections for 2015-16.

Source: OECD Economic Outlook Database.

**NATIONAL
DEBT**

Debt-End Money System



System Design Failure 3

3. Income Inequality

(between Financiers and Non-financiers)

“Peer-to-Peer Public Money System

– Focusing on Payment,

Y. & K. Yamaguchi, Feb. 2017”

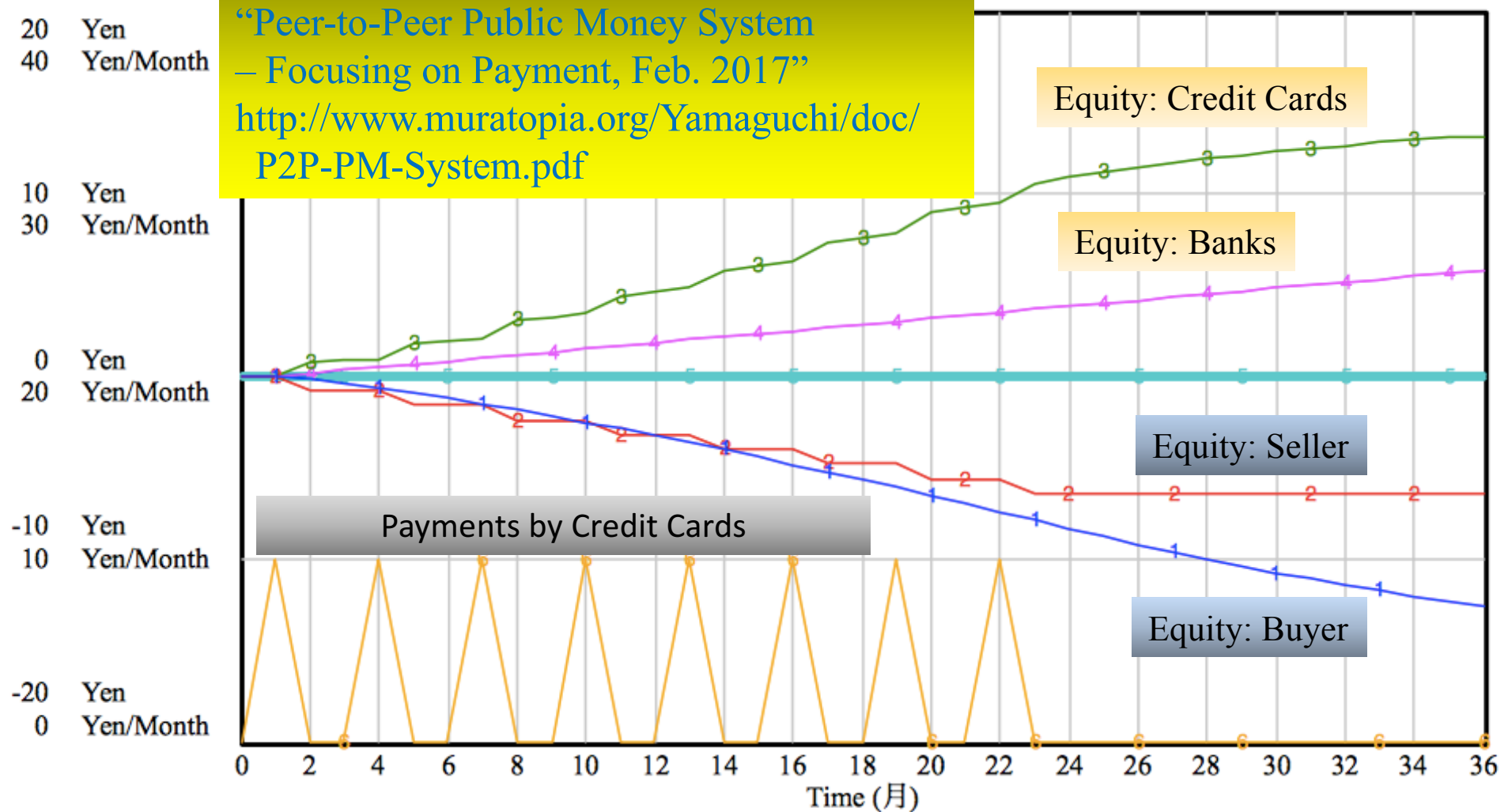
<http://www.muratopia.org/Yamaguchi/doc/P2P-PM-System.pdf>

Equity Distribution

“Peer-to-Peer Public Money System

– Focusing on Payment, Feb. 2017”

<http://www.muratopia.org/Yamaguchi/doc/P2P-PM-System.pdf>



"Equity (Buyer)" : Current — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — Yen

"Equity (Seller)" : Current — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — 2 — Yen

"Equity (Credit Cards)" : Current — 3 — 3 — 3 — 3 — 3 — 3 — 3 — 3 — 3 — 3 — Yen

"Equity (Bank A)" : Current — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — 4 — Yen

Total Equity : Current — 5 — 5 — 5 — 5 — 5 — 5 — 5 — 5 — 5 — 5 — Yen

"Payments (Credits Cards)" : Current — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — Yen/Month

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

Classification of Money

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Public Money: M0 = M1

Credit (Deposits) Creation by
Fractional Reserve Banking System

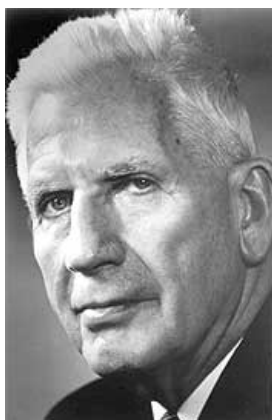
Monetary Stability

(A) The Chicago Plan for Banking Reform, 1933 by 8 professors at the Univ. of Chicago

Origins

(B) A PROGRAM FOR MONETARY REFORM, July, 1939

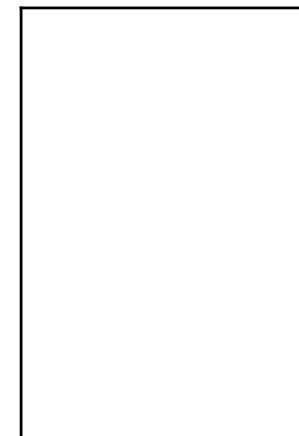
Chicago
Plan Prof.



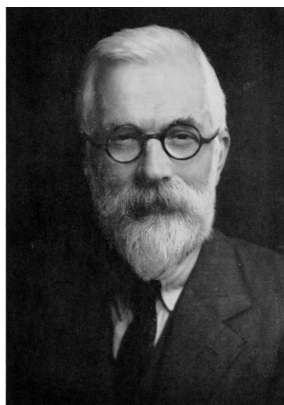
Paul H. Douglas
(1892-1976)



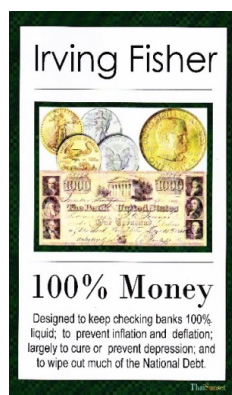
Frank D. Graham
(1875-1965)



Willford I. King
(1880-1962)



Irving Fisher **1935**
(1867-1947)



Earl J. Hamilton
(1899-1989)



Charles R. Whittlesey
(1900-????)



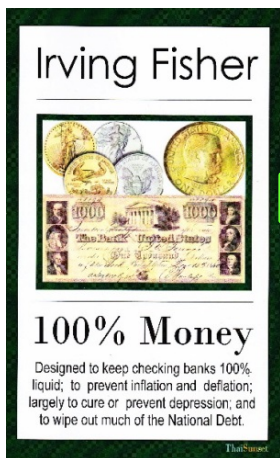
Classical
Theory

Neutral
Money

Market
Liberals

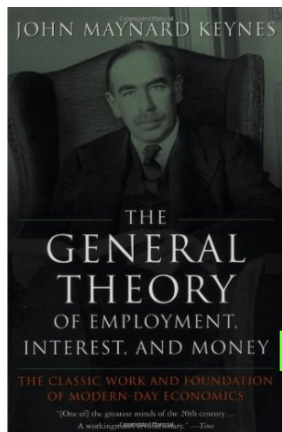
Great Depression, Oct.29, 1929 (Black Tuesday)

1929



1935

Banking Act of 1933
(Glass–Steagall Act)



1935

American Monetary Act



Neoclassical
Theory

Market &
Financial
Liberals

Globalization

Stagflation
1970s

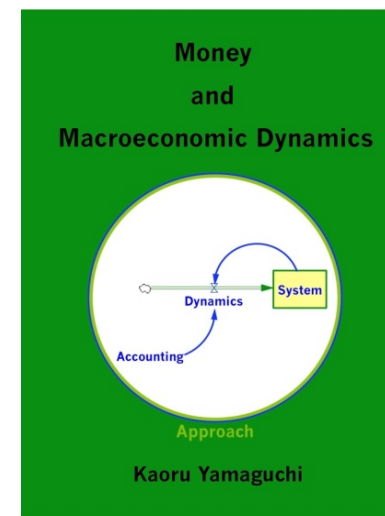
Disequilibrium Analysis

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

2008

Public Money System

It is necessary to
provide an alternative
to the zombie
economics of
market liberalism
(2009, p. 240)



2013

Debt
Crisis

Debt

Money

System

Contents



520 pages

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Center, Japan

E-mail: director@muratopia.net

(available: www.muratopia.org)

I. Accounting System Dynamics

II. Macroeconomic Systems of **Debt Money**

III. Open Macroeconomic Systems of **Debt Money**

(Athens, 2008)

IV. Macroeconomic Systems of **Public Money**

Chap. 12 Designing A Public Money System

(AMI Conf. 2010)

Chap. 13 Workings of A Public Money System

(AMI Conf. 2011)

Chap. 14 Monetary and Financial Stability

(AMI Conf. 2012)

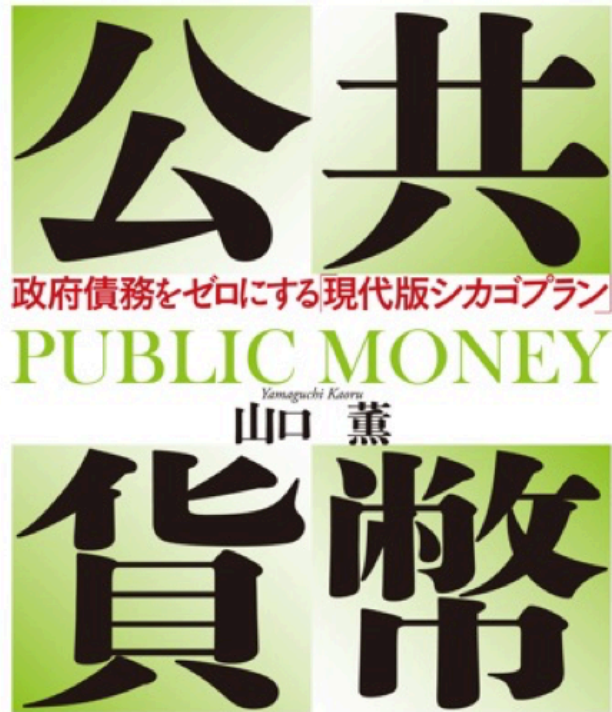
Chap. 15 Public Money and Sustainability

(AMI Conf. 2013)

Chap. 16 A Transition to the Public Money System

(AMI Conf. 2014)

PUBLIC MONEY



IMF論文「シカゴプラン再考」で
注目される公共貨幣の考え方から
新システムの実践方法まで
【初の本格的解説書】

東洋経済新報社

Published on [Sept. 10, 2015](#)

by

Toyo Keizai, Tokyo, 352 pp.

Part 1: Debt Money system

- 1 What is economics ?
- 2 What is money ?
- 3 Do we need the Bank of Japan ?
- 4 Why is money created out of nothing ?
- 5 Why does money become means of control ?
- 6 Why do national debts continue to increase ?
- 7 Our debt money system is Debt-end!

Part II: Public Money System

- 8 What is the Chicago Plan?
- 9 Birth of the Public Money System
- 10 We can liquidate national debts
- 11 Public money system creates happy futures to All

Part III: A Transition

- 12 Modeling a transition to the Public Money System
- 13 **The Public Money Act of Japan**

Global Monetary Reform in Action

- USA: NEED Act (National Emergency Employment Defense Act) HR2990, Sept. 21, 2011.
- UK: House of Commons Debate, Nov. 20, 2014
“Money Creation and Society” since 1844 (170 years ago)
- Netherlands: Dutch Parliament Monetary Reform Debate
- Switzerland: Monetary Modernization (MoMo) Initiative
- Iceland: Commissioned by the Prime Minister of Iceland March 2015
“Monetary Reform – A better Monetary System for Iceland”
- Canada: Committee on Monetary and Economic Reform (COMER)
The Case against the Bank of Canada by Rocco Galati
Bank of Canada Act (1934), Nationalized 1938 ~ 1974 (National Money)
- Japan: Public Money Act of Japan (proposed by Yamaguchi
in his book on Public Money, Sept. 2015)

The Year 2008: A Turning Point of History

①

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

Kaoru Yamaguchi san *
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Great Depression, Oct.29, 1929 (Black Tuesday)

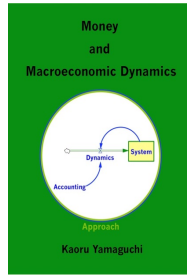
1929

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

2008

Chicago Plan: Monetary Reform

Accounting
System Dynamics
Macroeconomic Model
(August, 2008)



2013



2015
(Public Money)

Public Money System



Blockchain Revolution

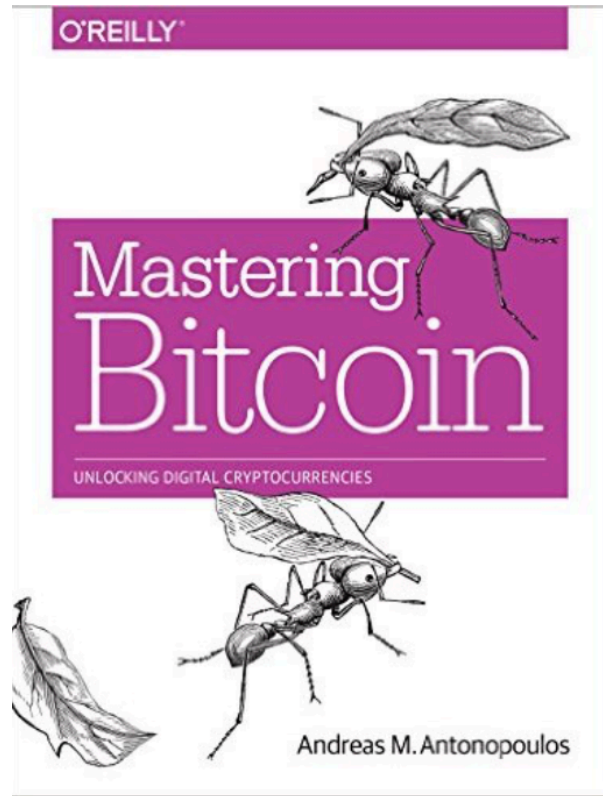
Bitcoin: A Peer-to-Peer Electronic Cash System
by Satoshi Nakamoto, 2008;
(started on 2009-01-03 18:15:05)

Bank Patchworks

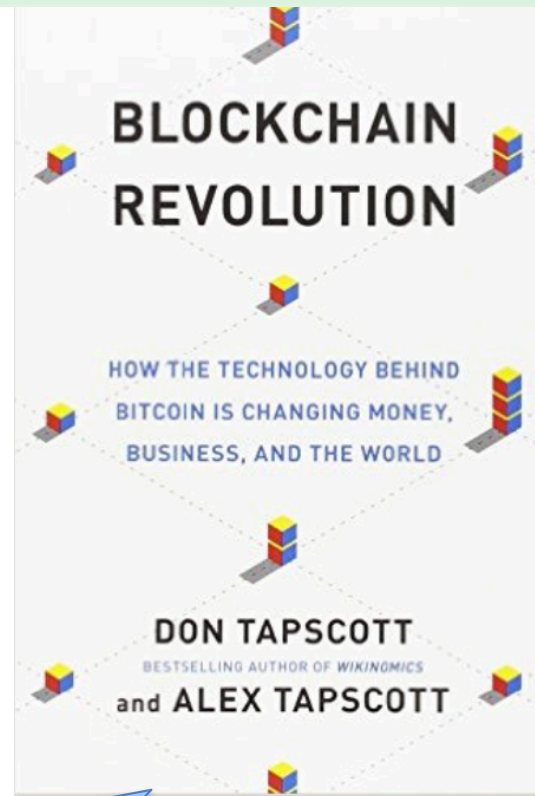
Debt Money System

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

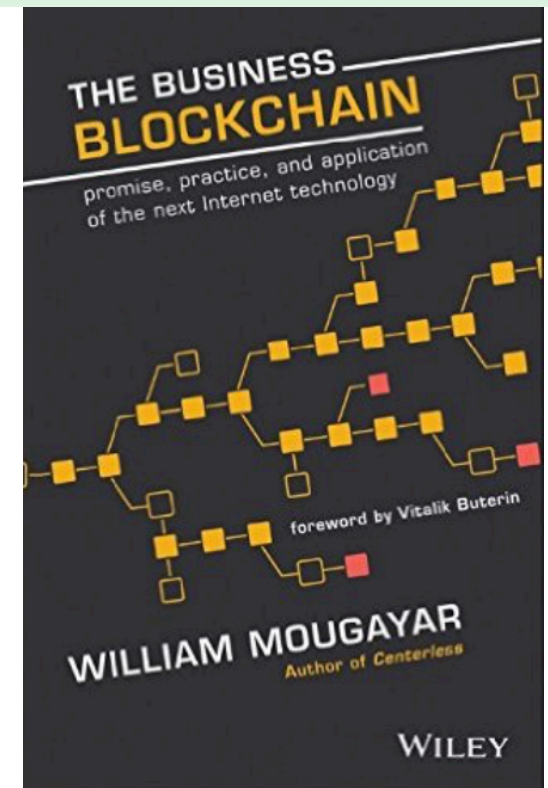
Bitcoin and Blockchain Revolution (Since 2009)



2014



2016

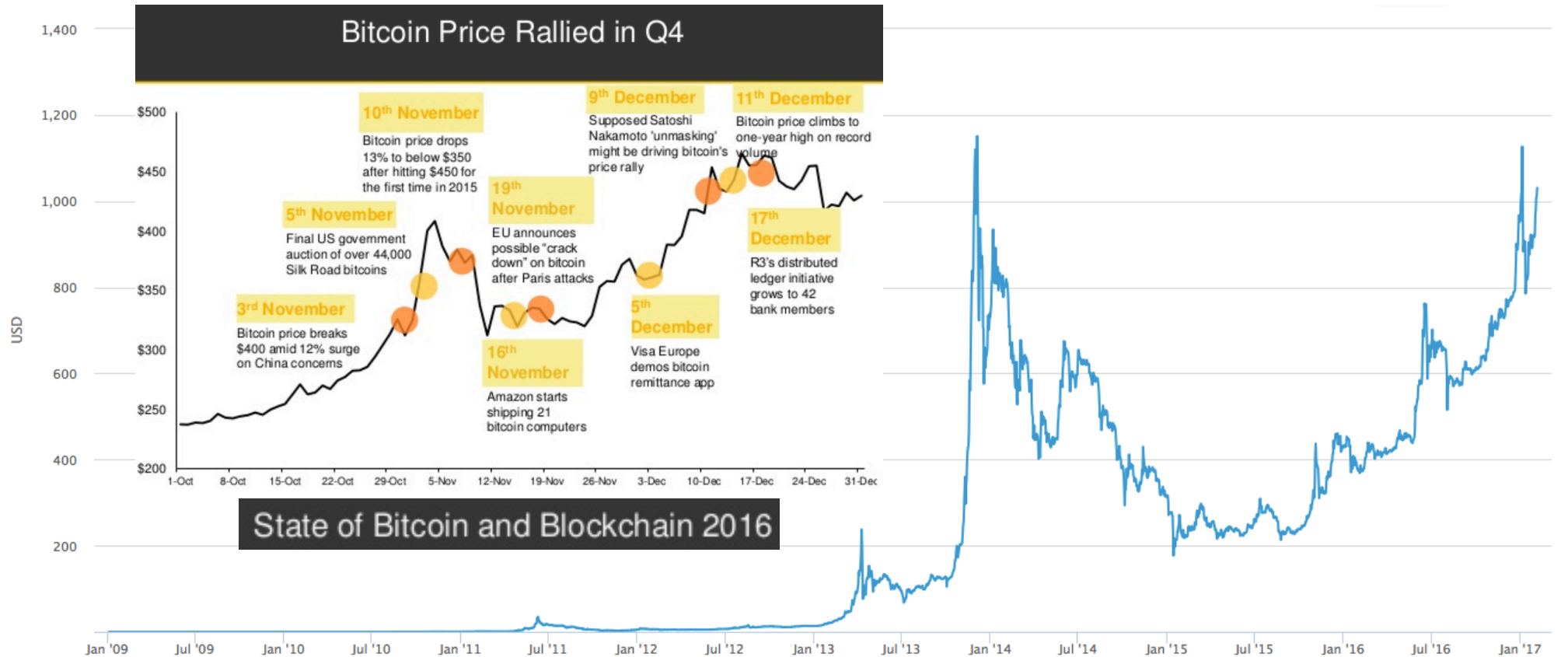


2016

Some scholars have argued that the invention of double-entry bookkeeping enabled the rise of capitalism and the nation-state. This new digital ledger of economic transactions can be programmed to record virtually everything of value and importance to humankind: birth and death certificates, marriage licenses, deeds and titles of ownership, educational degrees, financial accounts, medical procedures, insurance claims, votes, provenance of food, and anything else that can be expressed in code (p.7).

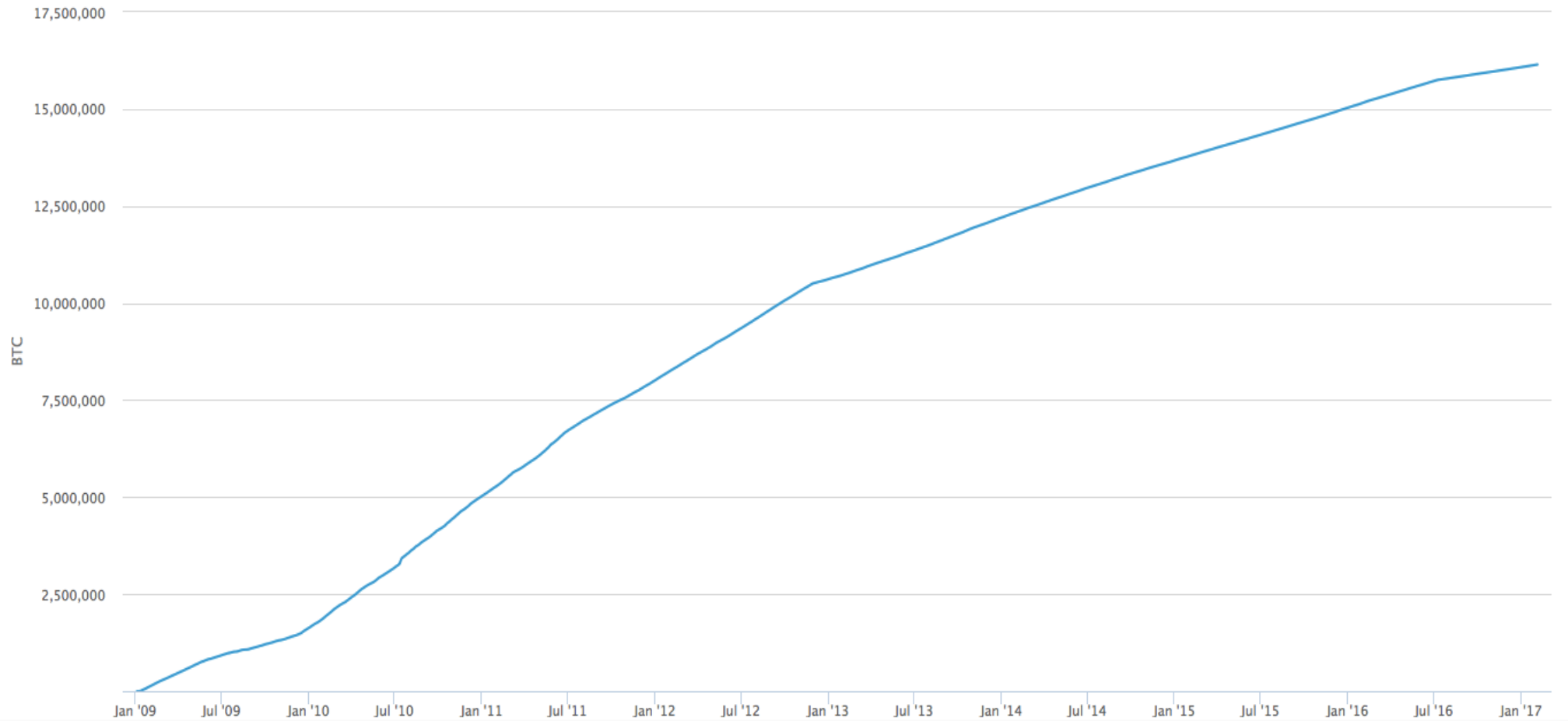
Impediments of Bitcoin due to Functional-Money

Volatility of Bitcoin Value



Impediments of Bitcoin due to Functional-Money

Fixed Supply of Bitcoin at 21 Million BTC



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

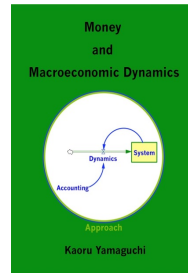
1929

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

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Accounting
System Dynamics
Macroeconomic Model
(August, 2008)

Chicago Plan: Monetary Reform



2013



2015
(Public Money)



Blockchain Revolution

2020

Public Money System

The Ultimate Design of
Monetary Reform

P2P Public Money System

(The End of Bank
Intermediaries)

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

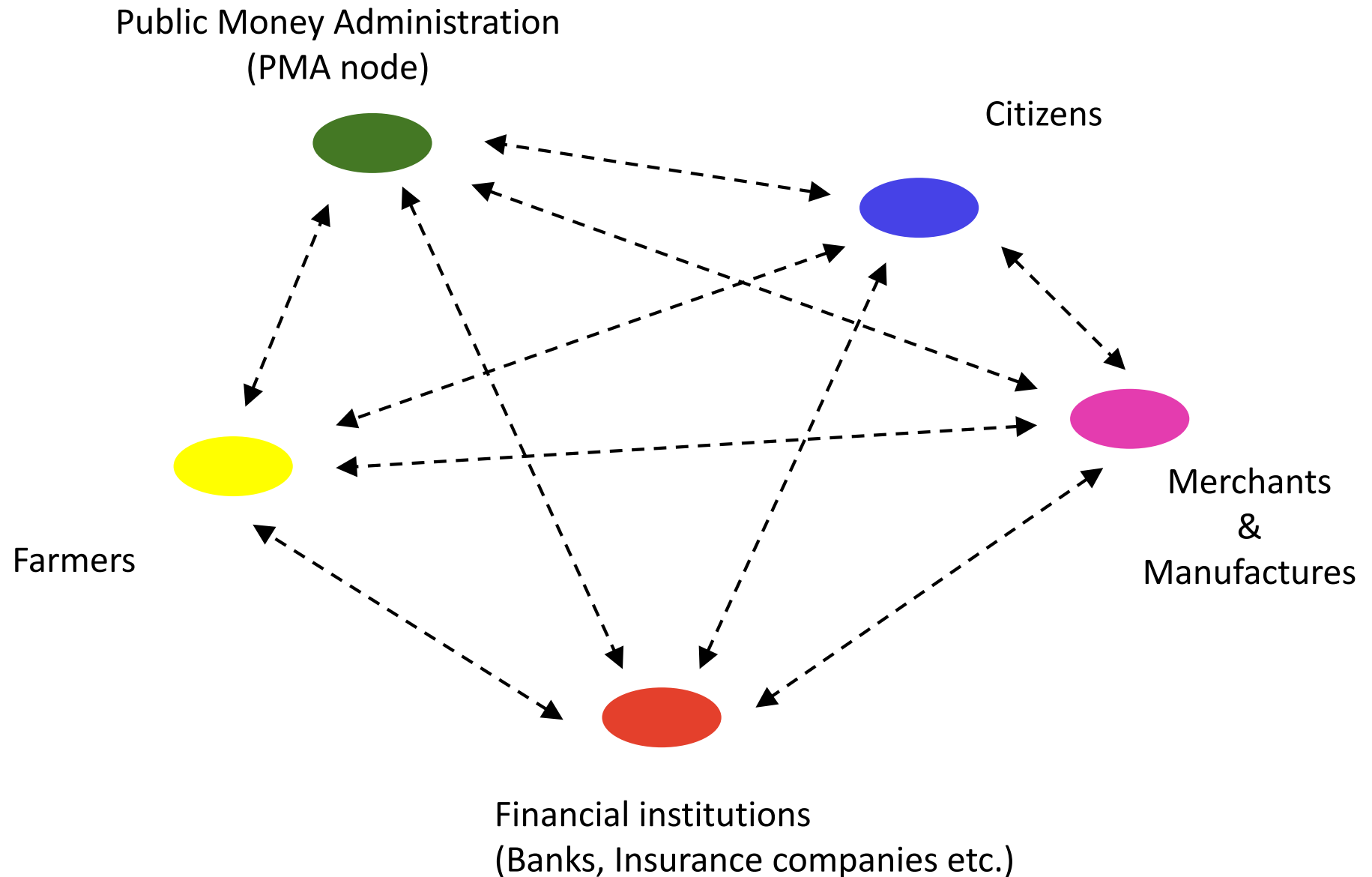
- Peer-to-Peer Network
- Public Transaction Ledger
- Decentralized Verification (Blockchains)
- Highly Stable and Secure

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



Cryptocurrencies

-- Distributed Ledgers --

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Digital Accounts Electronic Cards	Electronic (Digital) Cash (CBDC) (Intangible Digits)	Central Bank Digital Currency	Deposits (Credits by Loans)
Distributed Ledgers (Blockchain)	④ < EPM > Electronic Public Money by PM Admin. (Peer-to-Peer Settlements)	③ < CBCC > Central Bank Cryptocurrency (issued as Base Money)	① < Crypto-Coin > Bitcoin, etc (about 800 coins)
		② < Crypto-Token (for Notes)	(for Deposits) >
		· Bank-issued tokens: MUFG coin (Japan)	
		· Non-Bank-issued tokens: Zen token (Japan)	
		· EPM token	

Cryptocurrencies (since 2009)

Cryptocurrencies

P2P Blockchain

- Debt Money System -

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


- Public Money System -

- ④ EPM (Electronic Public Money)

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	Coffeecoin
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	Chichicoi	Compasscoin
AmeriCoin	BeliCoin	BonusCoins	Chicoi	Cooperationcoin
AminaCoin	Bells	Boomcoin	Chococoin	CopperBars
AmKoin	BestCoin	Boringcoin	ChoomCoin	CopyCoin
Apecoin	Billaume	Bosscoin	ChuckCoin	...

Crypto-Coin

Santander Vies to Become First Bank to Issue Cash on Blockchain

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

CoinDesk

"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

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

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



**Crypto-Token
(Globally)**



2nd International Workshop P2P Financial Systems 2016

Opportunities · Risks · Market Dynamics · Regulation

[SPEAKERS](#)

[FULL PROGRAMME](#)

[PRACTICAL INFORMATION](#)

[CONFERENCE MATERIAL](#)

[CONTACT](#)



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

8-9 September 2016, London, United Kingdom

ECONOTIMES

Digital Currency Revolution

**CBDC
&
CBCC**



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



Friday, September 9, 2016 4:15 AM UTC

Cryptocurrencies

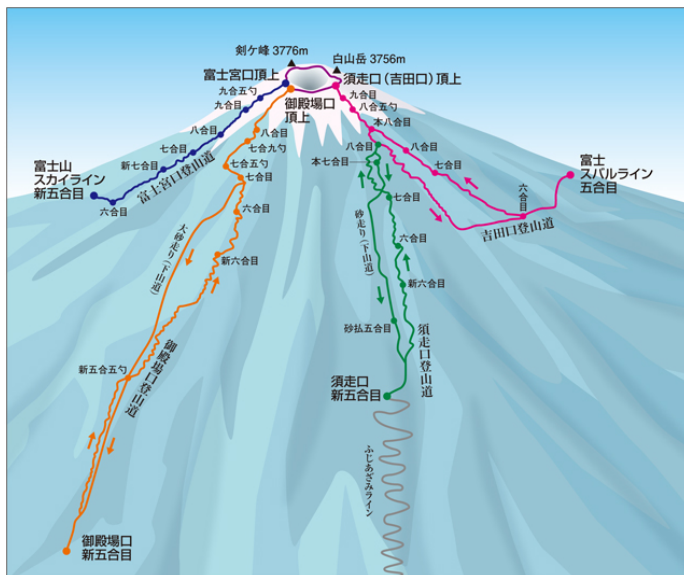
P2P Blockchain

- Debt Money System -

- ① Crypto-coin: Bitcoin, Altcoins (about 800 coins)
non-legal tender, unstable values
- ② Crypto-token (Examples in Japan)
 - Bank token: MUFG coin
 - Non-bank token: Zen token
 - EPM token (1 Yen = 1 EYen)
- ③ CBCC (Central Bank Cryptocurrency)
 - Public Money System -
- ④ EPM (Electronic Public Money)



Money
of
Futures



Public Money Climb Route

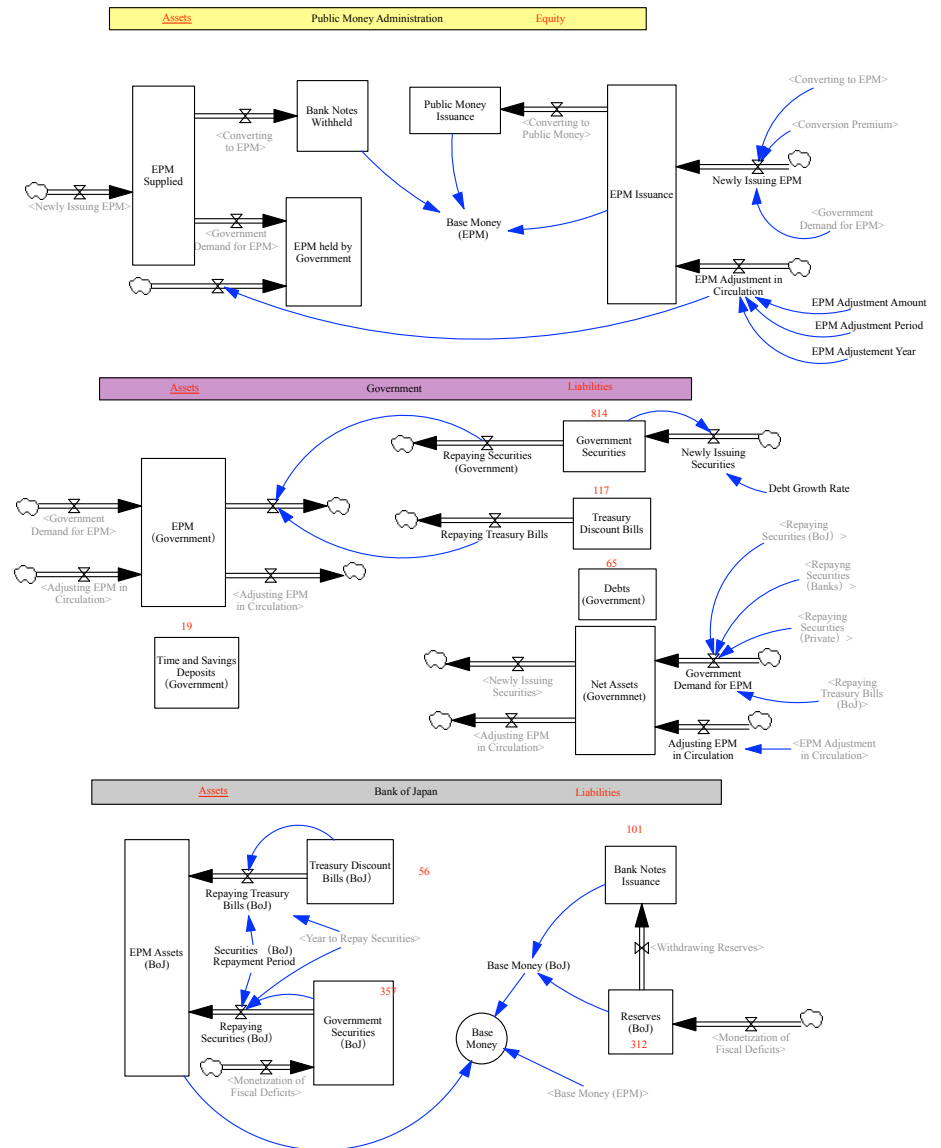
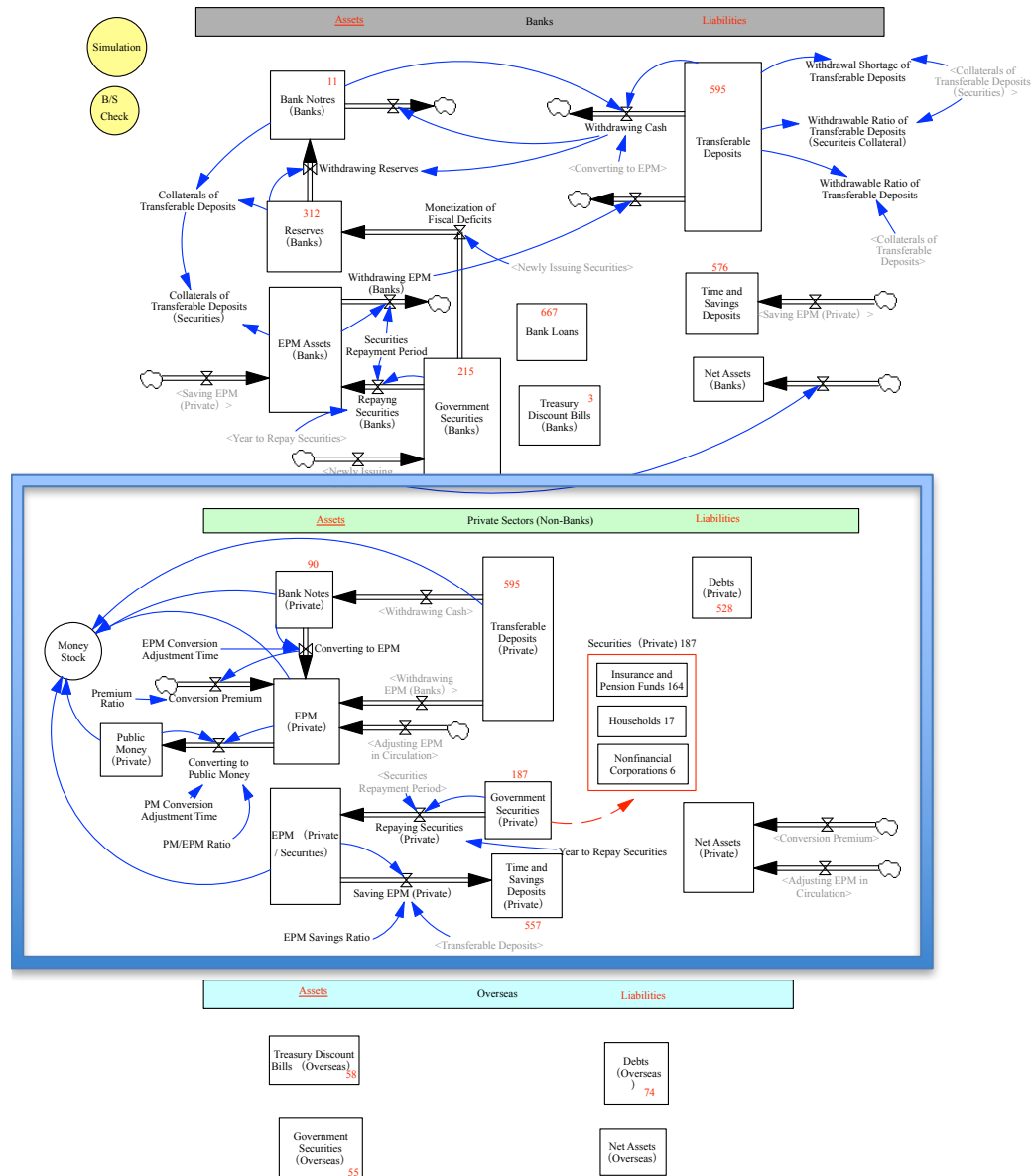
- EPM Route -

	Shen, Cloth (Silk)	
	Woods, Stones, etc	
	Non-precious Metal Coins	Metal Ingots (such as Gold)
	Gold, Silver & Copper Coins	
Coinage		
Paper	Public Money (PM) by PM Admin.	Goldsmith Certificates
Notes		Central Bank Notes
Digital Accounts	Electronic (Digital) Cash (CBDC)	
Electronic Cards	(Intangible Digits)	Central Bank Digital Currency
		Deposits (Credits by Loans)
	< EPM >	< CBCC >
Distributed Ledgers	Electronic Public Money by PM Admin. (Peer-to-Peer Settlements)	Central Bank Cryptocurrency (issued as Base Money)
		< Crypto-Token (for Notes) >
		< Crypto-Token (for Deposits) >
		· Bank-issued tokens: MUFG coin (Japan)
		· Non-Bank-issued tokens: Zen token (Japan)
		· EPM token

Step ②
(= Original PM Route)

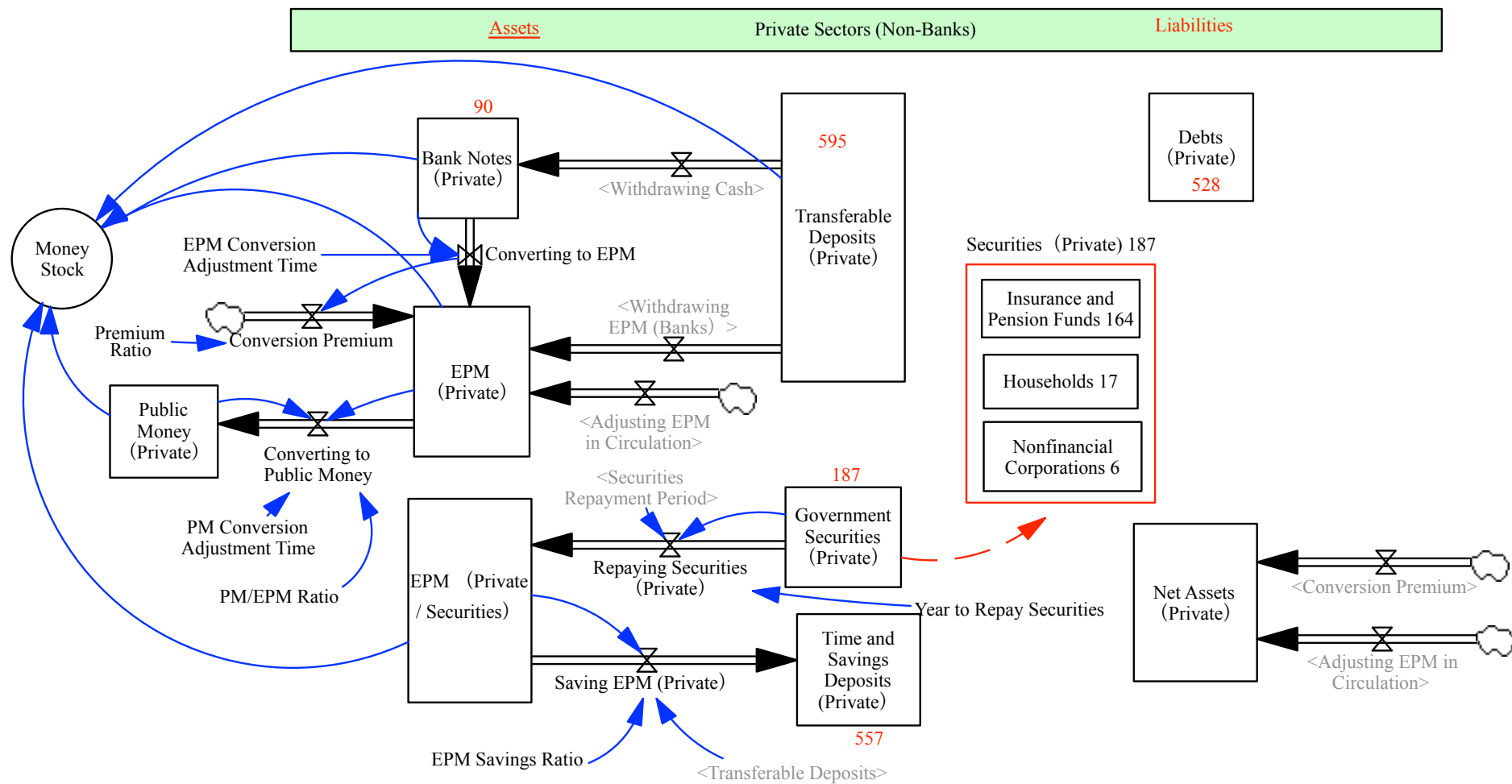
Step ①
(Regional EPM Experiments)

EPM as a Savior of Debt-End Economies



EPM as a Savior of Debt-end Economies

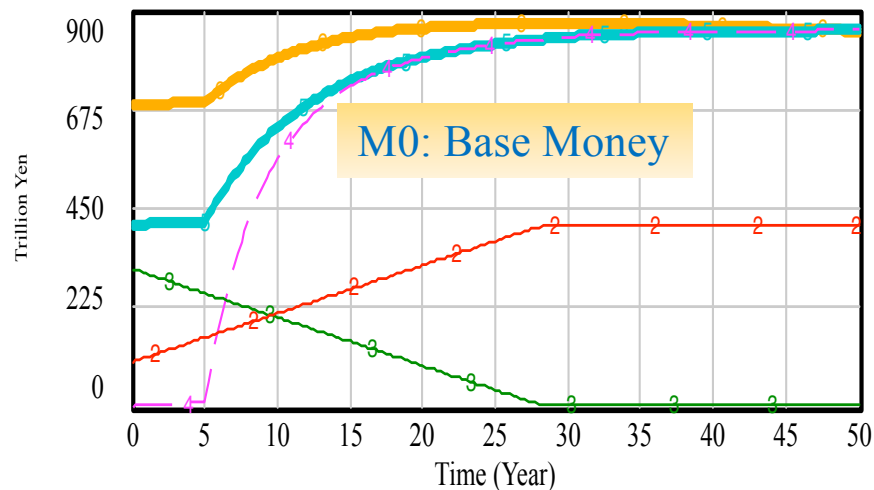
- Conversion from Yen to EYen -



EPM as a Savior of Debt-end Economies

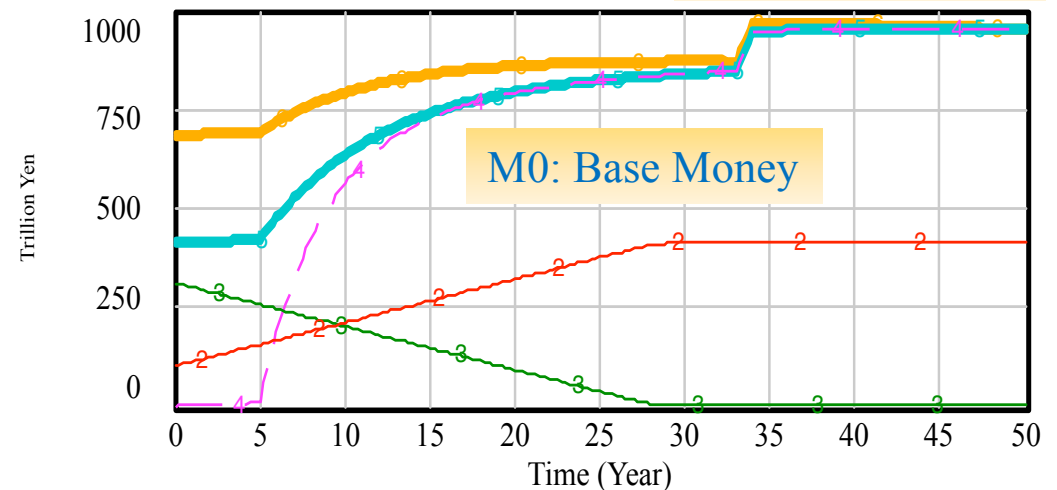
- Conversion from Yen to EYen -

Base Money Composition M1: Money Stock



"Base Money (BoA)" : Securities Repayment (EPM Savings 1%) 1 1 1 1
 Bank Notes Issuance : Securities Repayment (EPM Savings 1%) 2 2 2 2
 "Reserves (BoJ)" : Securities Repayment (EPM Savings 1%) 3 3 3 3
 "Base Money (EPM)" : Securities Repayment (EPM Savings 1%) 4 4 4 4
 Base Money : Securities Repayment (EPM Savings 1%) 5 5 5 5
 Money Stock : Securities Repayment (EPM Savings 1%) 6 6 6 6

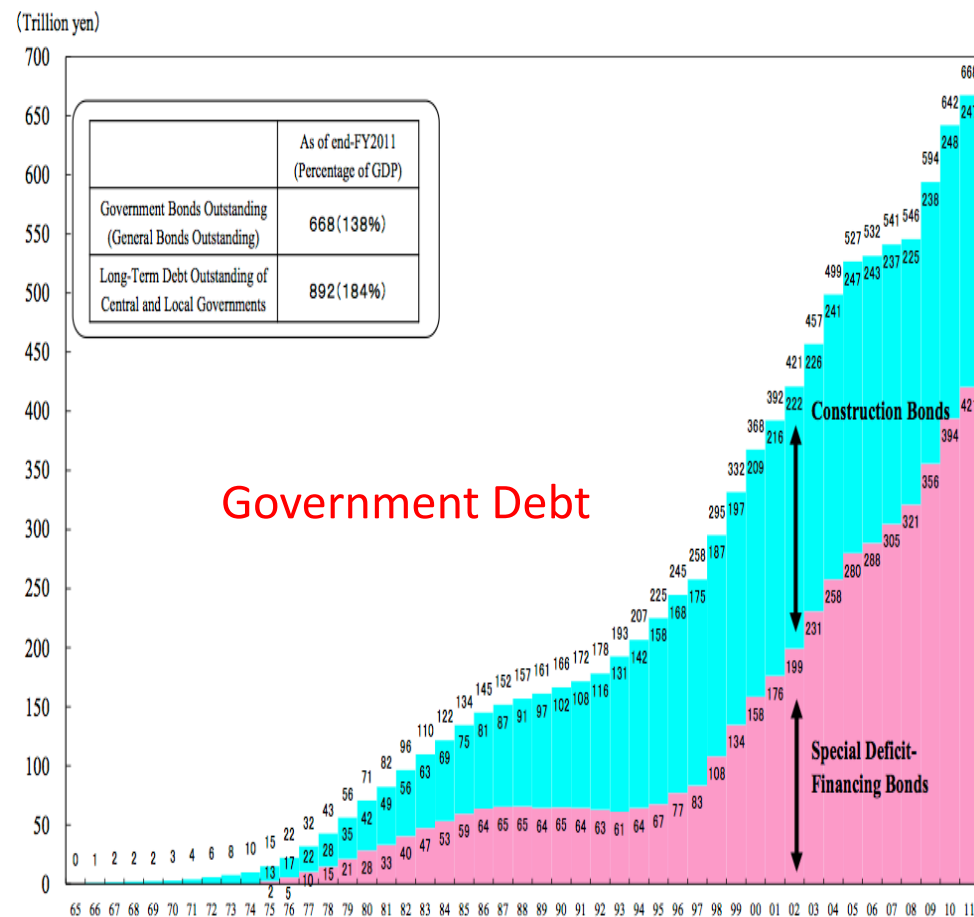
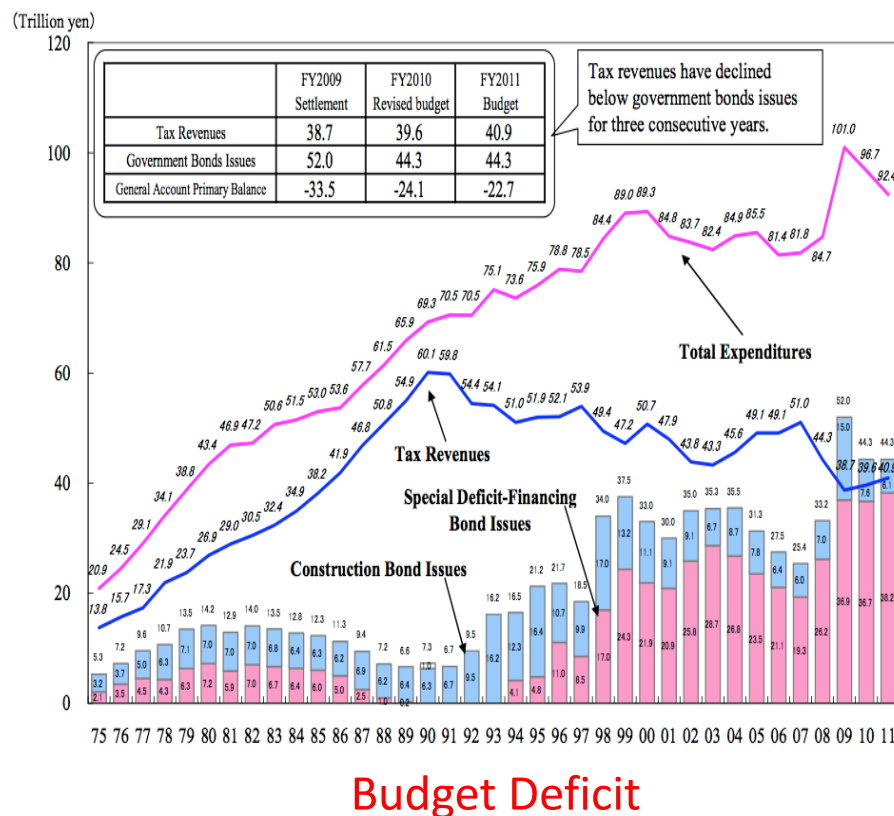
Base Money Compo M1: Money Stock



"Base Money (BoA)" : Money Stock (+100 at 2050) 1 1 1 1
 Bank Notes Issuance : Money Stock (+100 at 2050) 2 2 2 2
 "Reserves (BoJ)" : Money Stock (+100 at 2050) 3 3 3 3
 "Base Money (EPM)" : Money Stock (+100 at 2050) 4 4 4 4
 Base Money : Money Stock (+100 at 2050) 5 5 5 5
 Money Stock : Money Stock (+100 at 2050) 6 6 6 6

EPM as a Savior of Debt-End Economies

– Government Debt in Japan –



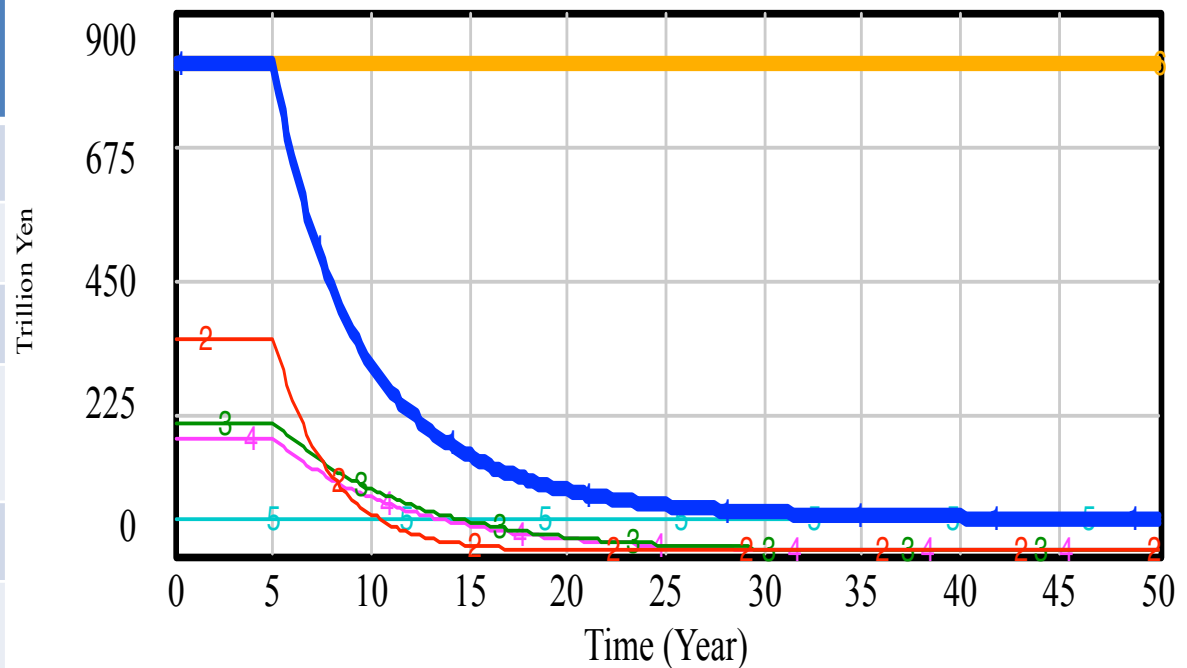
EPM as a Savior of Debt-End Economies

– Debt Liquidation–

	GDP = 537
1 Government Securities held by	814 (trillion yen)
2 Bank of Japan	357
3 Banks	215
4 Private	187
Insurance and Pension Funds	164
Households	17
Nonfinancial Corporations	6
5 Overseas	55

as of 2016

Securities Repayment



Government Securities : Securities Repayment from 2022 ■

Government Securities (BoJ) : Securities Repayment from 2022 ■

Government Securities (Banks) : Securities Repayment from 2022 ■

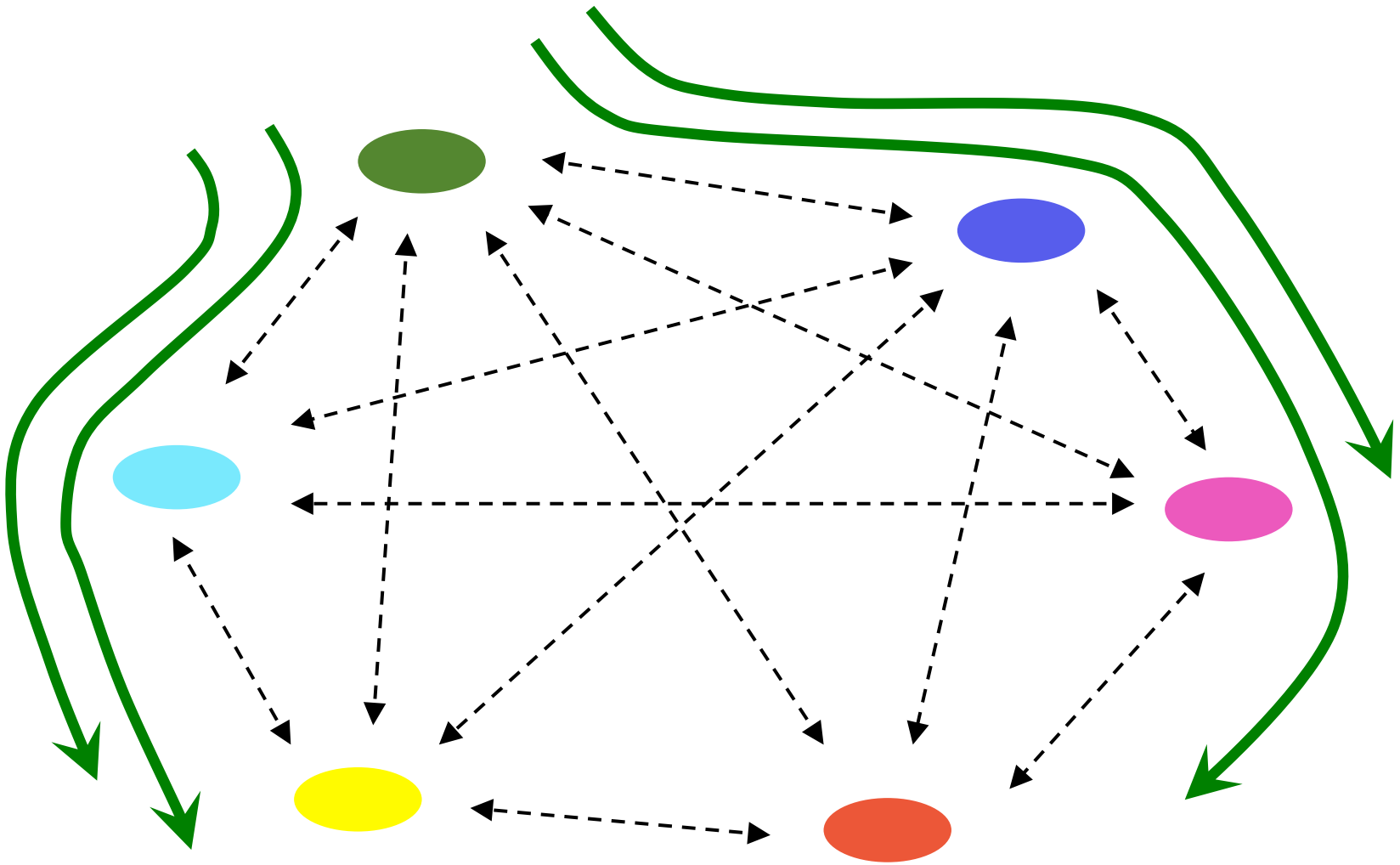
Government Securities (Private) : Securities Repayment from 2022 ■

Government Securities (Overseas) : Securities Repayment from 2022 ■

"Initial Government Securities (2016.9)" : Securities Repayment from 2022 ■

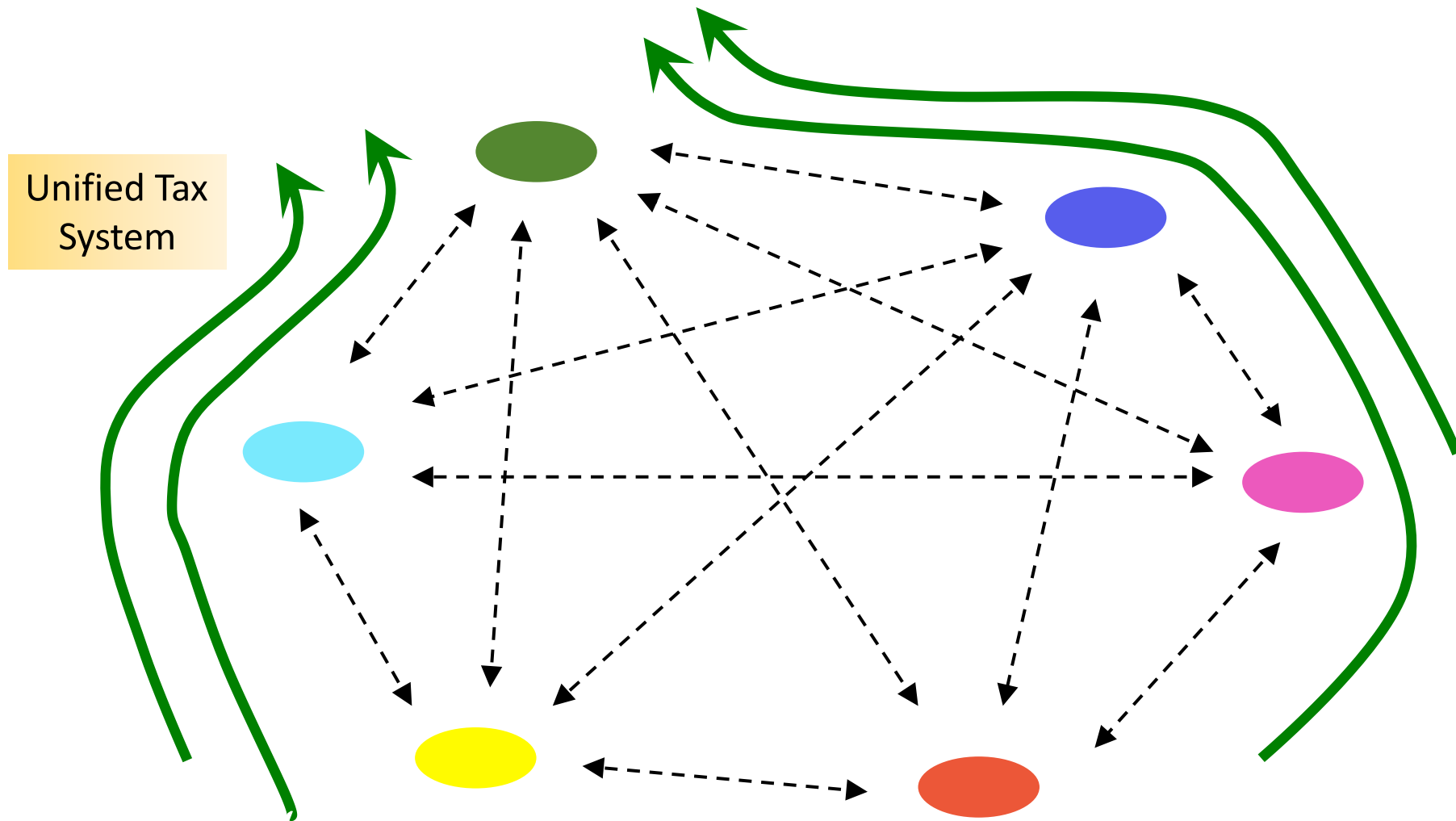
Management of Public Money Stock

1. Injection of Public Money

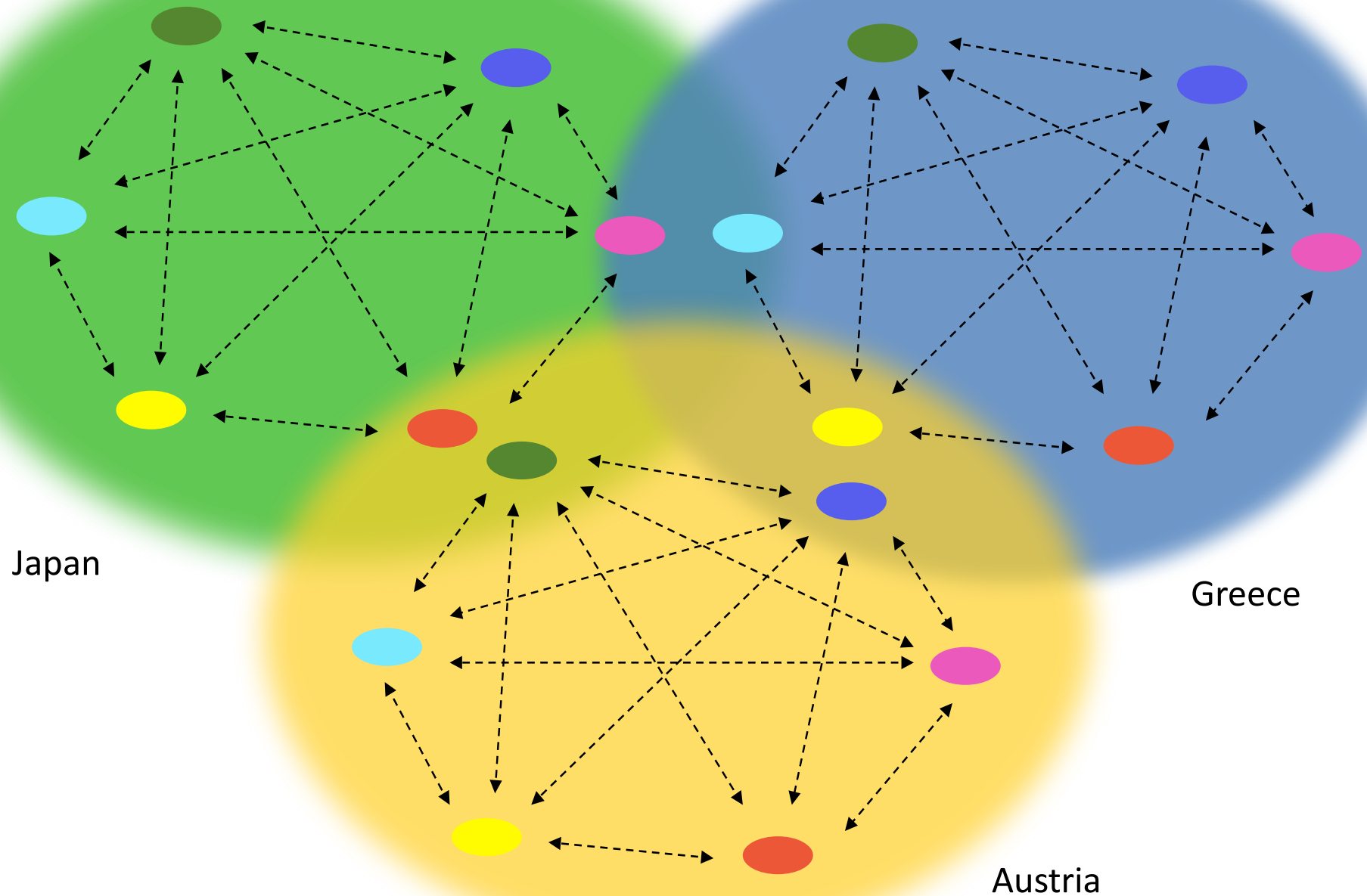


Management of Public Money Stock

2. Withdrawal of Public Money



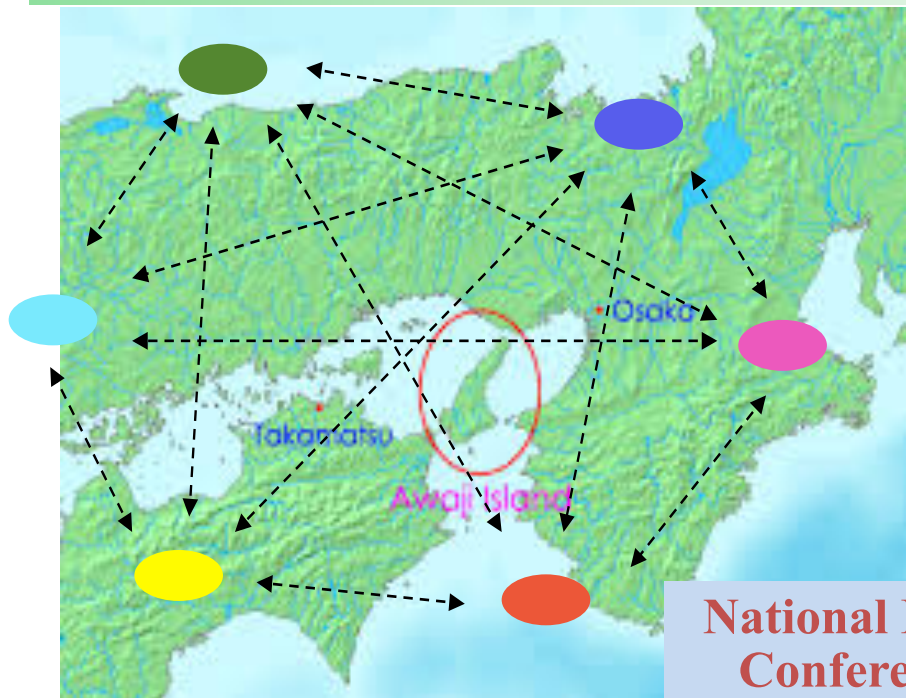
Electronic Public Money System Regions



Electronic Public Money (EPM) Initiative in Japan and Taiwan

(1) EPM-token by Cooperative Banks

(2) “Experimental Zone” of EPM Yen



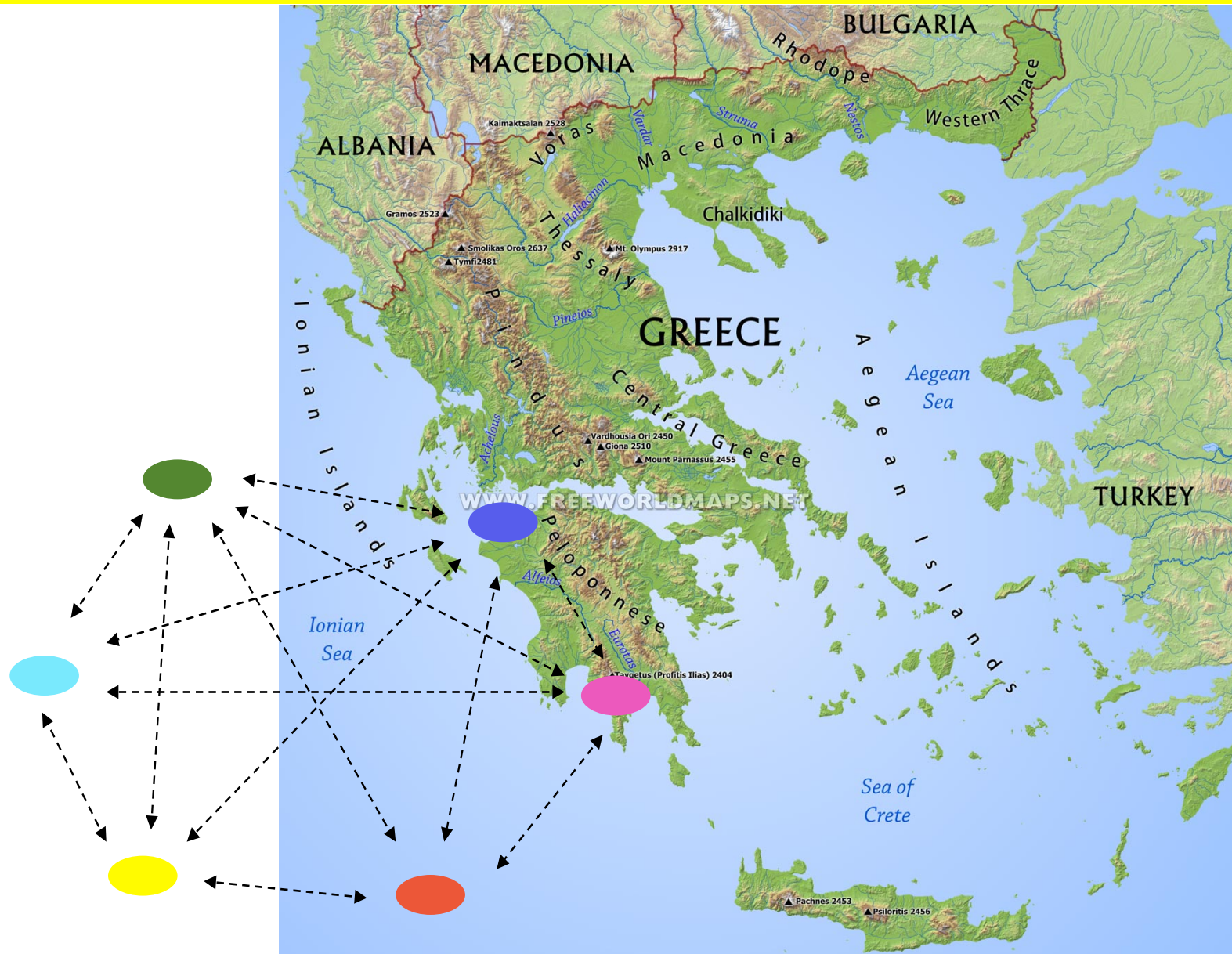
**National Development Council
Conference, Taipei, Taiwan
16:00- 17:30, March 2, 2017**

Electronic Public Money
in Taiwan (suggested)



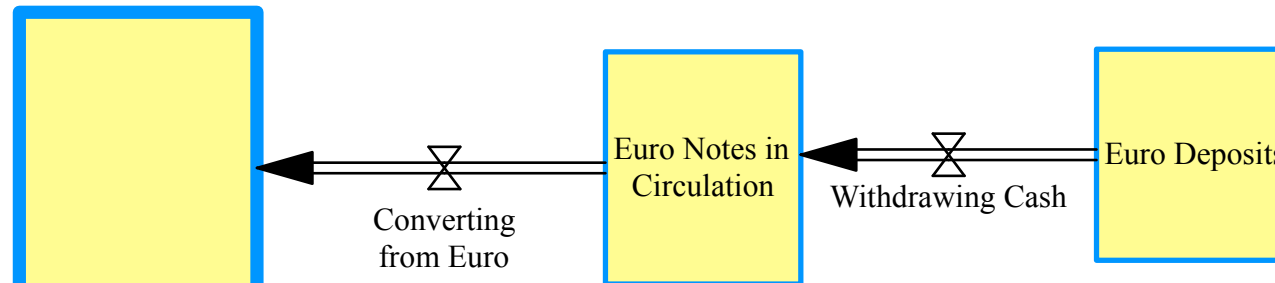
**Japan and Taiwan are more independent than EU countries
because they have the Power to Print Money!**

Electronic Public Money (EPM) Initiative in Greece

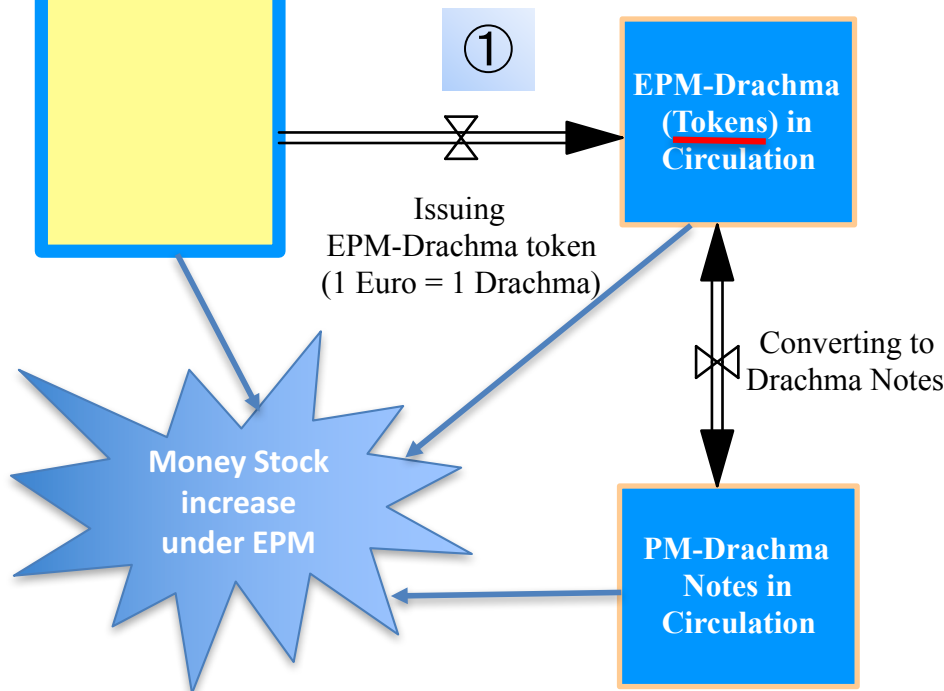


EPM as a Savior for Debt-End Greek Economies (EPM token → EPM)

EPM Exchangers
(Banks)



Currency in Circulation



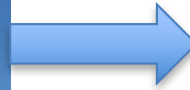
Issue EPM token:
1 Euro = 1 Drachma

$$\overset{\uparrow}{M} \overset{\uparrow}{V} = P T \overset{\uparrow}{\uparrow}$$

M is fixed by Euro
V can be increased
by EPM token

Next Coming Financial Crisis!

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



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



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



(All Pictures are from Google Images)

World-wide Electronic Public Money System

USA

UK

EU

Japan

China

Greece

Austria



EPM Futures are full of Hopes !

**Greece will be driven
Out of Crisis by EPM!**



Thank you for your Attention

Appendix Slides
to be presented
whenever necessary

Debt Money: 3 Major System *Design Failures*

1. Instability of Money Stock

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

Yamaguchi & Yamaguchi (2016) using ASD model.

2. Government Debt Accumulation

Yamaguchi (2014)

3. Income Inequality

(between Financiers and Non-financiers)



COUNTRY COMPARISON :: PUBLIC DEBT

Public debt compares the cumulative total of all government borrowings less repayments that are denominated in a country's home currency. Public debt should not be confused with external debt.



DOWNLOAD DATA

RANK	COUNTRY	(% OF GDP)	DATE OF INFORMATION
1	<u>JAPAN</u>	234.70	2016 EST.
2	<u>GREECE</u>	181.60	2016 EST.
3	<u>LEBANON</u>	161.50	2016 EST.
4	<u>ITALY</u>	132.50	2016 EST.
5	<u>JAMAICA</u>	130.10	2016 EST.
6	<u>PORTUGAL</u>	126.20	2016 EST.
7	<u>ERITREA</u>	119.80	2016 EST.
8	<u>CABO VERDE</u>	116.80	2016 EST.
9	<u>SINGAPORE</u>	110.50	2016 EST.
10	<u>GRENADA</u>	110.00	2012 EST.
11	<u>BARBADOS</u>	108.90	2016 EST.
12	<u>BELGIUM</u>	106.70	2016 EST.
13	<u>CYPRUS</u>	104.60	2016 EST.
14	<u>MOZAMBIQUE</u>	100.30	2016 EST.
15	<u>SPAIN</u>	99.60	2016 EST.

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)

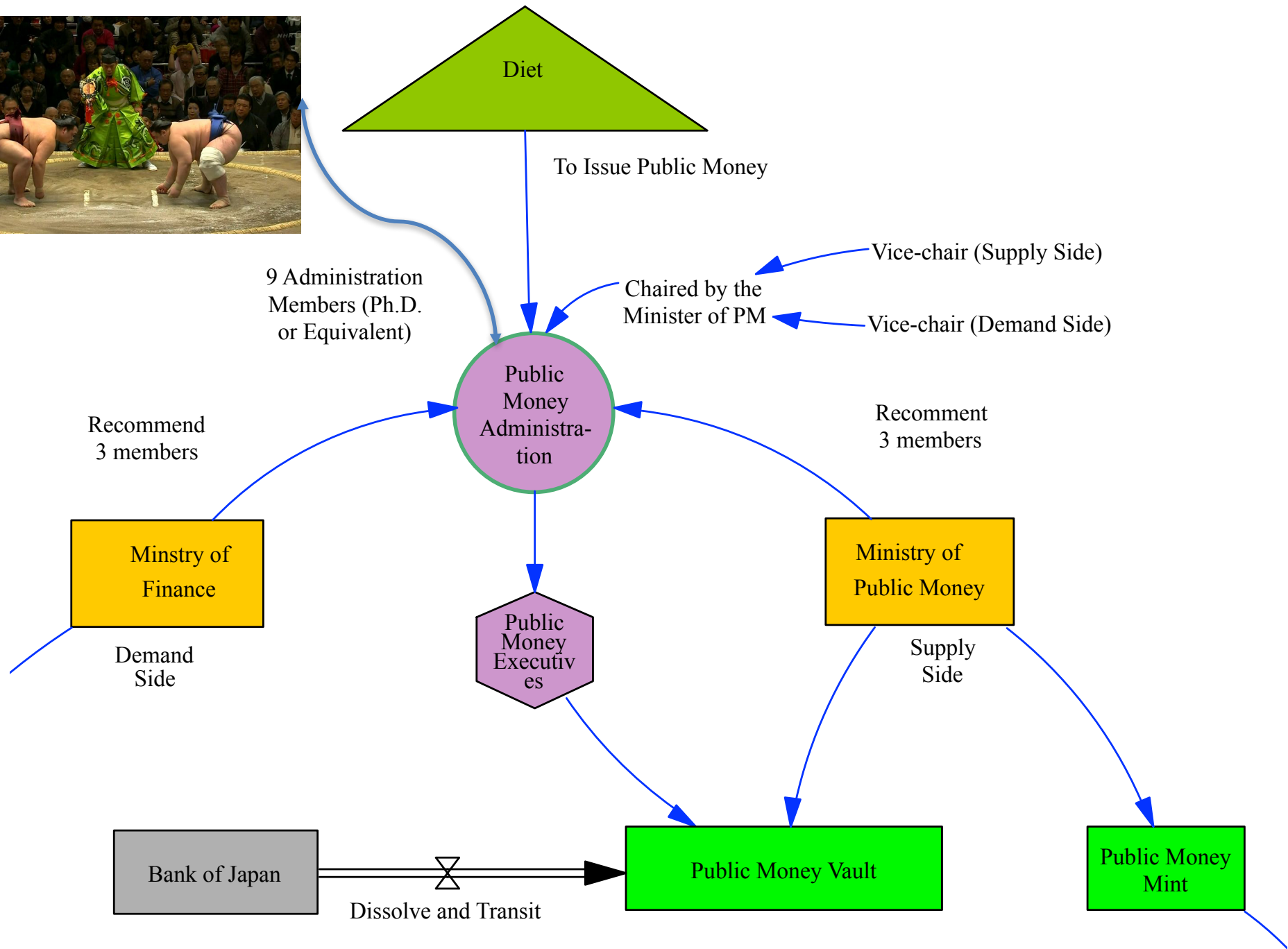
Public Money vs Debt Money

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)

Public Money Act of Japan (Ch. 13)

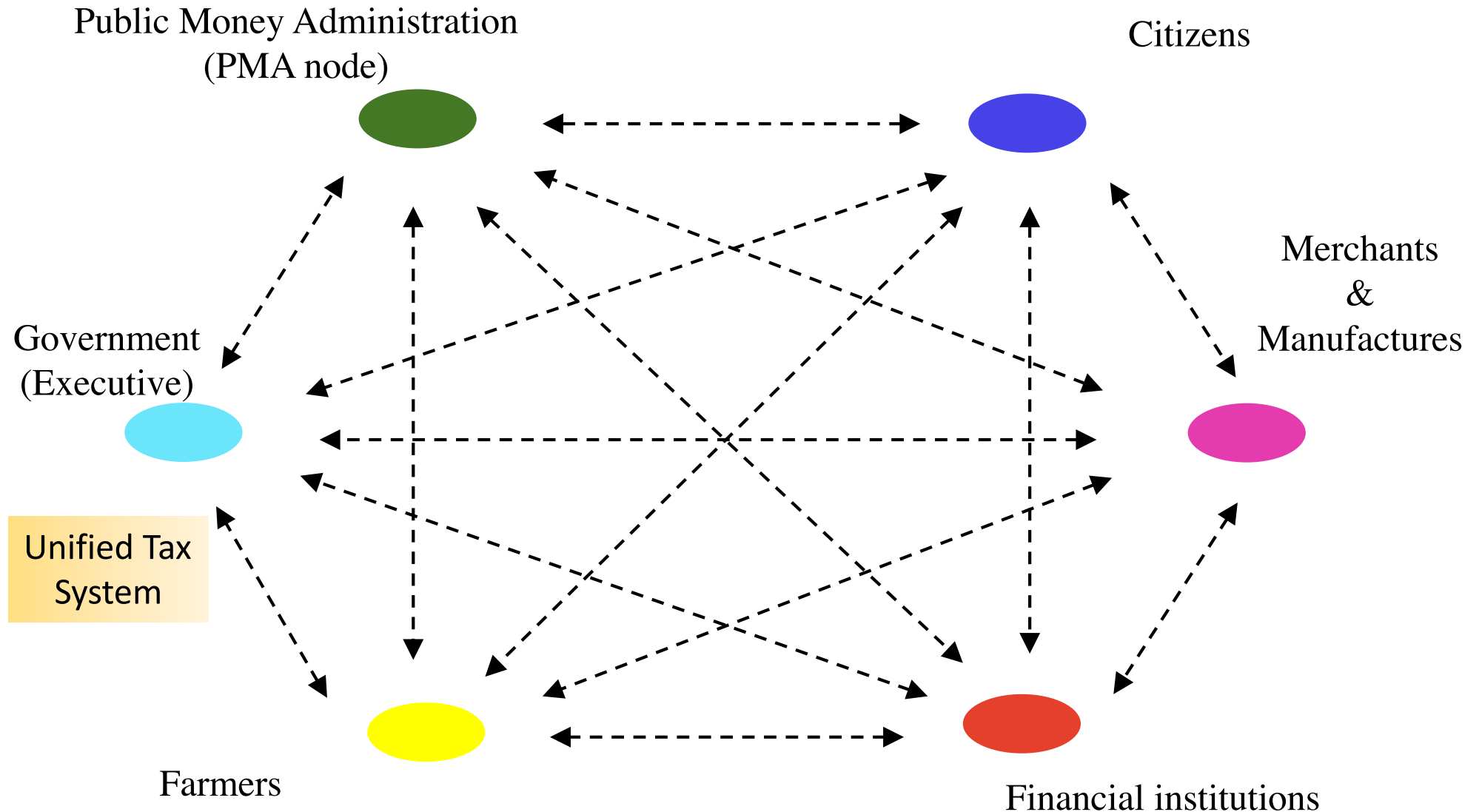


Public Money Spending Policy

- Public investment in **education** and **research** (tuition-free higher education etc.) as human and future investment.
- Investment for constructing 21st century **infrastructures** such as IT network, green energies, and green transportation.
- Universal **medical** and **healthcare program** (& other social welfare programs).

Peer-to-Peer Public Money System

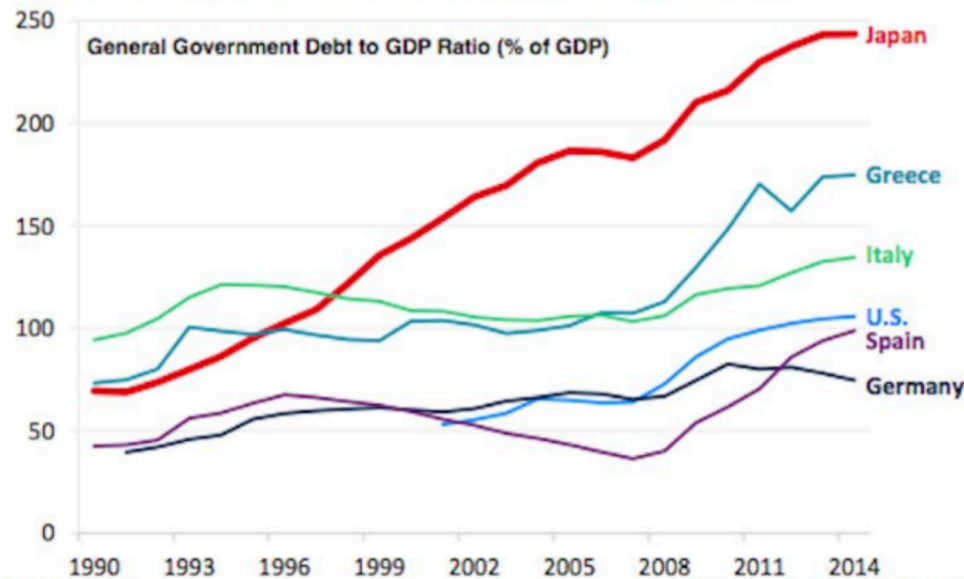
Independence of PMA from Government (Unified Tax System)



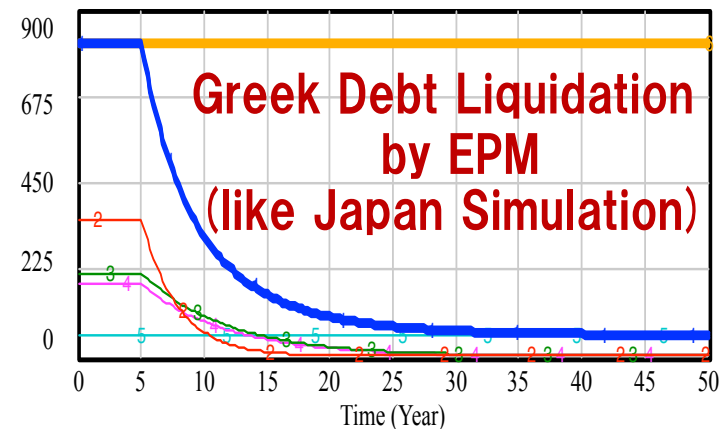
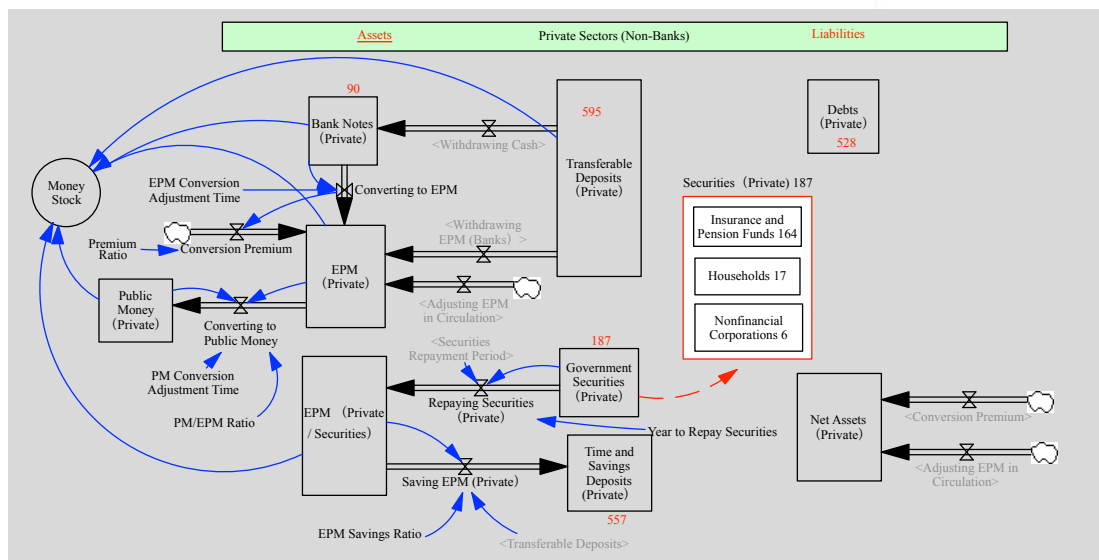
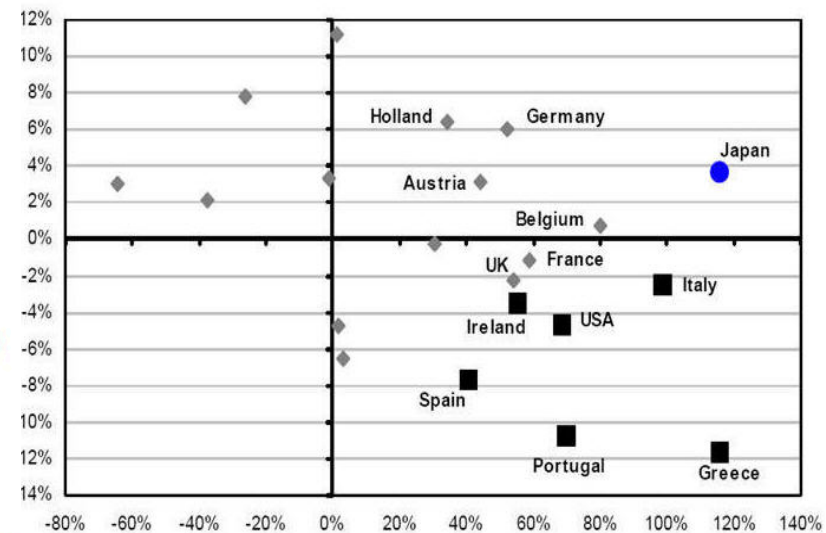
EPM as a Savior for Debt-End Greek Economies

- Debt Liquidation by EPM-

Japan's Public Debt the Highest in World



Why Japan Is Not Greece



Government Securities : Securities Repayment from 2022

Government Securities (BoJ) : Securities Repayment from 2022

Government Securities (Banks) : Securities Repayment from 2022

Government Securities (Private) : Securities Repayment from 2022

Government Securities (Government) : Securities Repayment from 2022