

Public Money vs Debt Money

-Accounting System Dynamics Approach-

**Invited Talk at the Statistical, Economic
and Social Research and Training Center
for Islamic Countries (SESERIC)**

**Ankara, Turkey
Oct. 5, 2015 (14:00 – 16:00)**

Kaoru Yamaguchi, Ph.D.

Director

Japan Futures Research Center, Japan

E-mail: director@muratopia.net



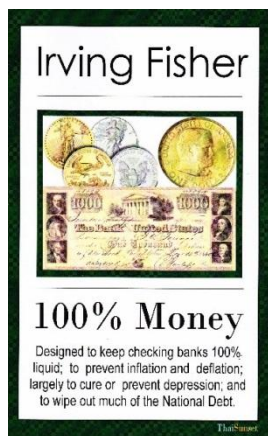
Classical
Theory

Neutral
Money

Market
Liberals

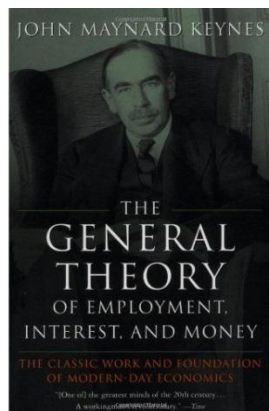
Great Depression, Oct. 29, 1929 (Black Tuesday)

1929

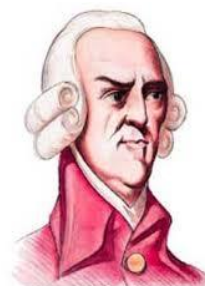


1935

Banking Act of 1933
(Glass–Steagall Act)



1935



Neoclassical
Theory

Market &
Financial
Liberals

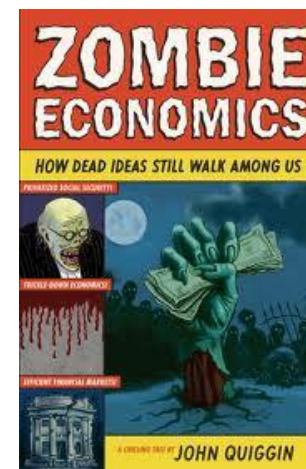
Globalization

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

Public Debt-GDP Ratio(%) of OECD Countries in 2012 (Wikipedia: CIA's World Factbook)

Country		Ratio(%)	Country		Ratio(%)
Japan		214.3	Canada		84.1
Greece		158.3	Germany		81.7
Italy		126.1	Hungary		78.6
Portugal		123.6	Austria		74.6
Iceland		118.9	Israel		74.4
Ireland		118.0	United States		73.6
Belgium		99.6	Netherlands		68.7
France		89.9	Poland		53.8
United Kingdom		88.7	OECD (18)		100.7 (92.7)
Spain		85.3	World		64 (58.3)

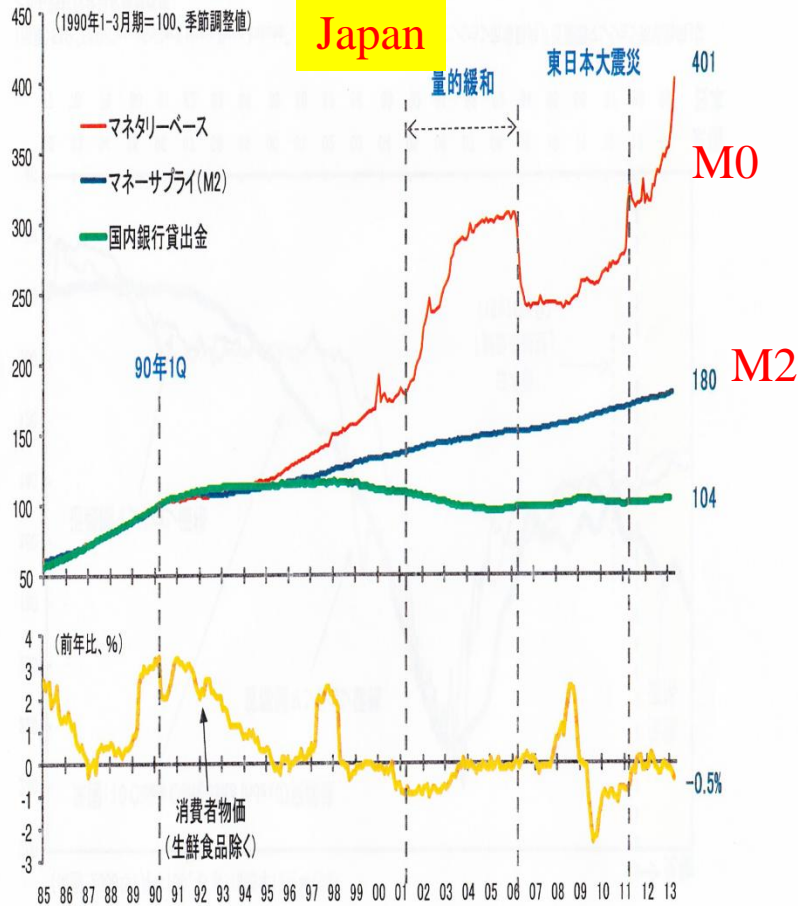
(Figures
in 2010)

18 Countries out of 33 OECD countries > 50% !

Monetary and Financial Stability

- Systemic Failures of QE -

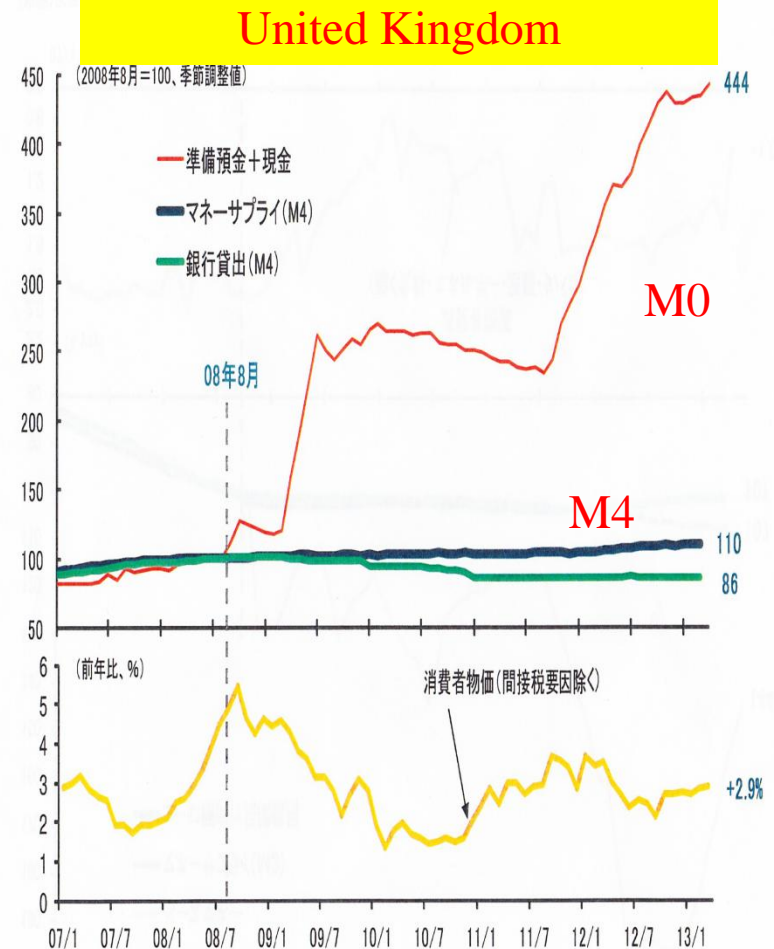
バブル崩壊で崩れたマネー関連指標の関係(4):日本



(注) 国内銀行貸出金の季節調整と、2003年以前のマネーサプライ統計との接続は野村総合研究所が行った。

(出所) 日本銀行「マネーストック」「マネタリーベース」「国内銀行の資産・負債等(銀行勘定)」

バブル崩壊で崩れたマネー関連指標の関係(3):イギリス



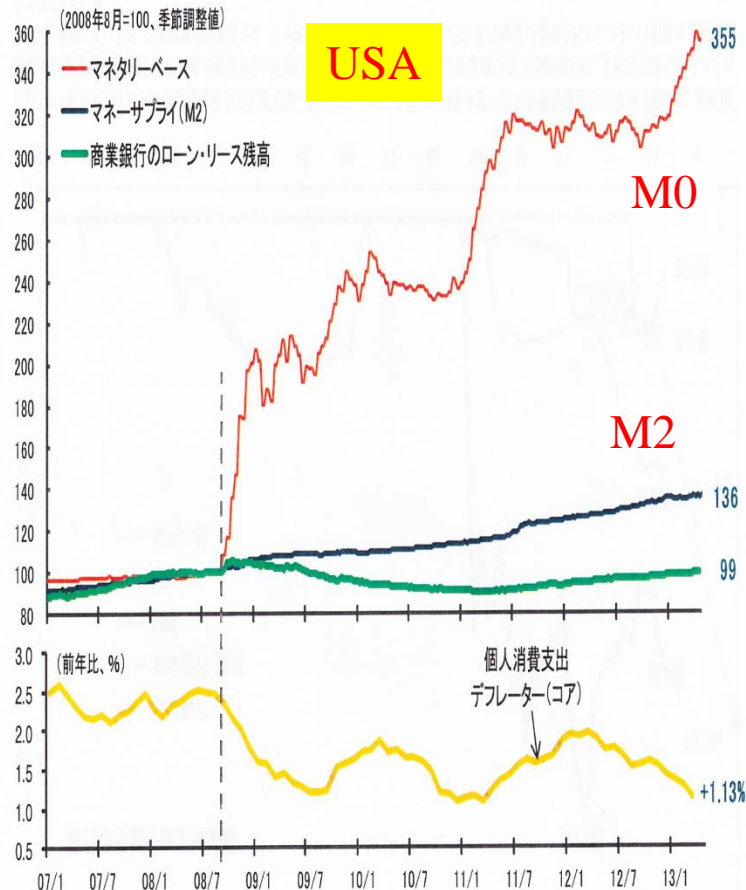
(出所) Bank of England, Office for National Statistics, UKより野村総合研究所作成

(注) 準備預金のみ原数値。また、マネーサプライ・銀行貸出の値は銀行間取引を除いている。

Monetary and Financial Stability

- Systemic Failures of QE -

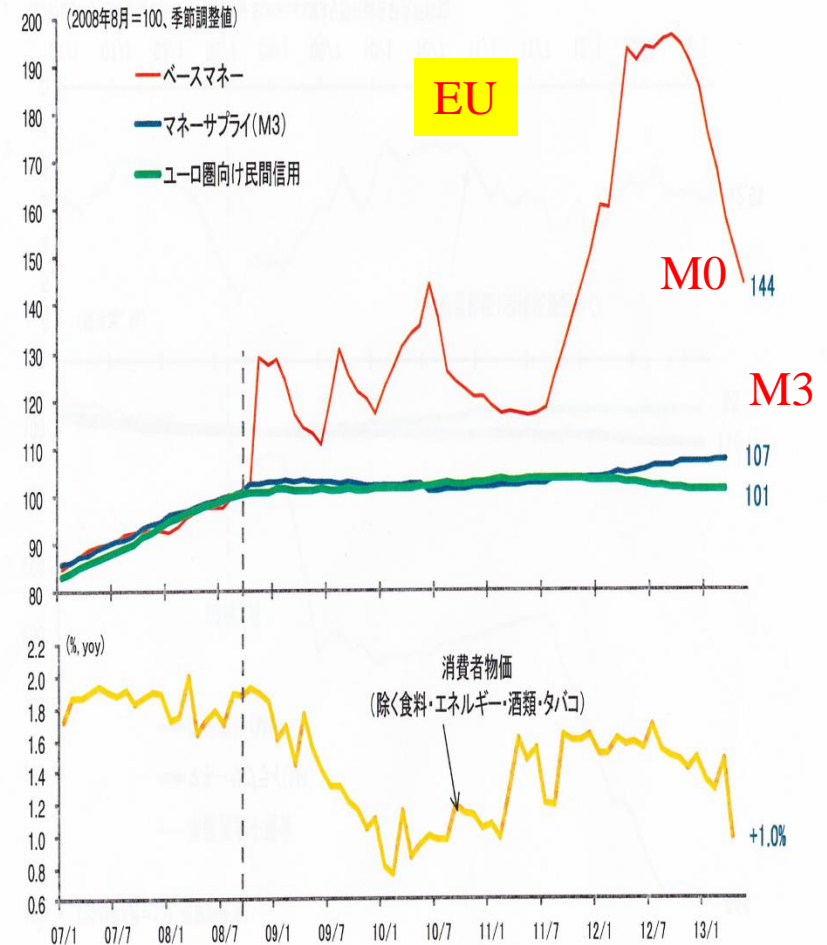
バブル崩壊で崩れたマネー関連指標の関係(1):米国



(出所)FRB、米商務省のデータより野村総合研究所作成

(注)商業銀行のローン・リース残高統計の不連続は野村総合研究所で調整している。

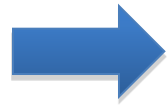
バブル崩壊で崩れたマネー関連指標の関係(2):EU



(出所)ECB, Eurostat

(注)ベースマネーの値は野村総合研究所が季節調整を行った。

Pilot's Failures ?



Debt Money System Works
(Airplane)



System Design
Failures ?



Public Money System
(New System Design: Monetary Reform)

Limitation of Neoclassical DSGE and Keynesian Econometric Analyses

- Money is Exogenously created,
not Endogenously

Hand-on Introduction to System Dynamics
(Fixprice, Monetary and Fiscal Policies)

Debt Money : Fractional Reserve Banking System

- Money out of Nothing (Thin Air) -

What is Debt Money ?

Money Stock (Supply)

1. Currency in Circulation
(Bank Notes and Coins)
- +
2. Bank Deposits (Credits)

Money Supply M1 (585.0) (Japan, 2014/08, trillion yen)		
Coins	4.6	0.78%
Bank Notes	86.8	14.8%
Deposits	493.6	84.4%
(Reserves	152.1)	

Who create Debt Money?

1. Government

2. Bank Notes by Privately-Owned Central Bank

3. Credits Created by Commercial Banks (A Fractional Reserve System)

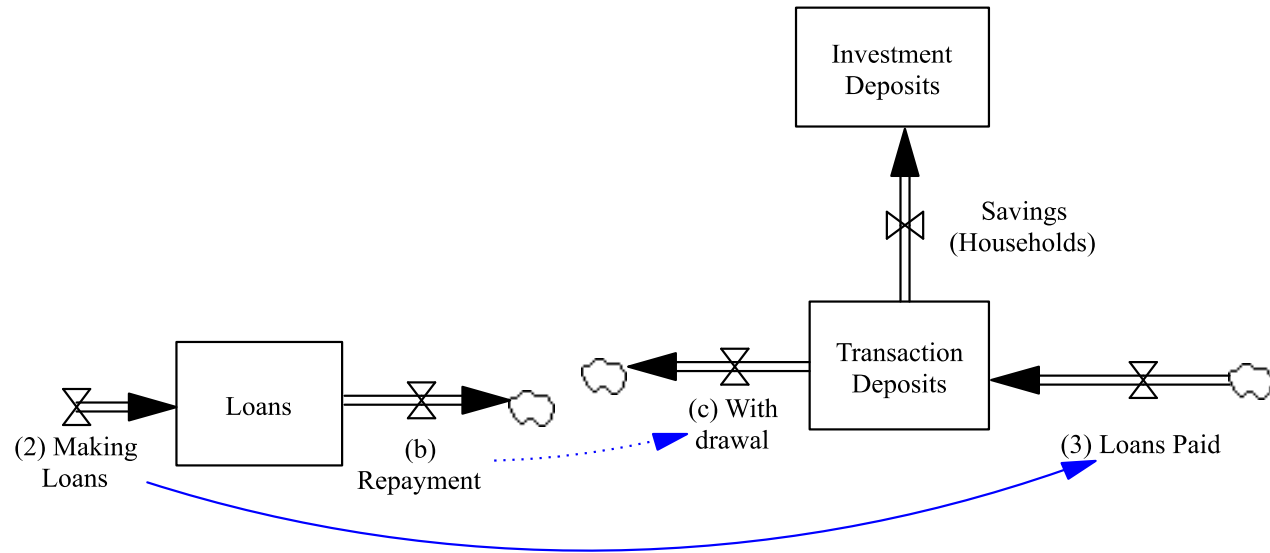
Fractional Reserve Banking System

Assets

Balance Sheet of Banks

Liabilities

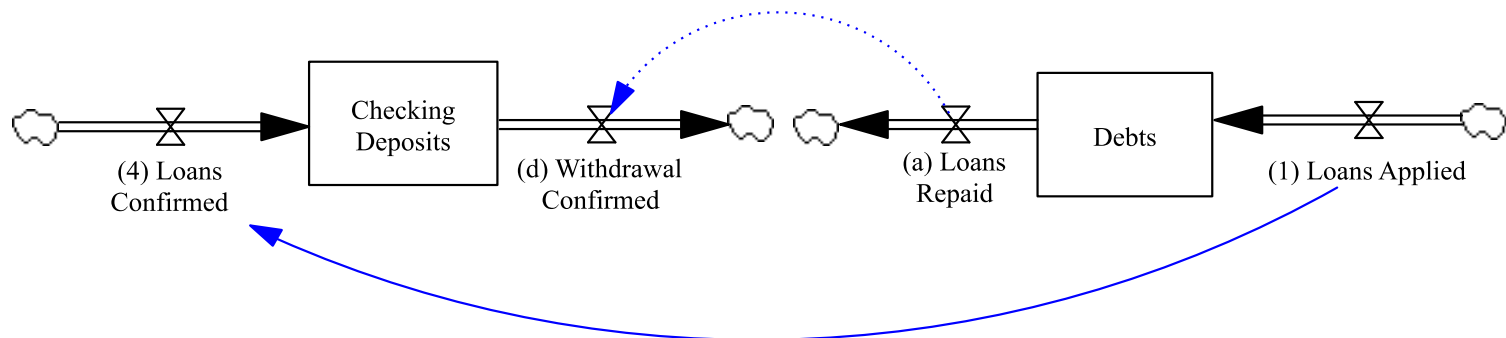
Fractional Reserves



Assets

Balance Sheet of Producers

Liabilities

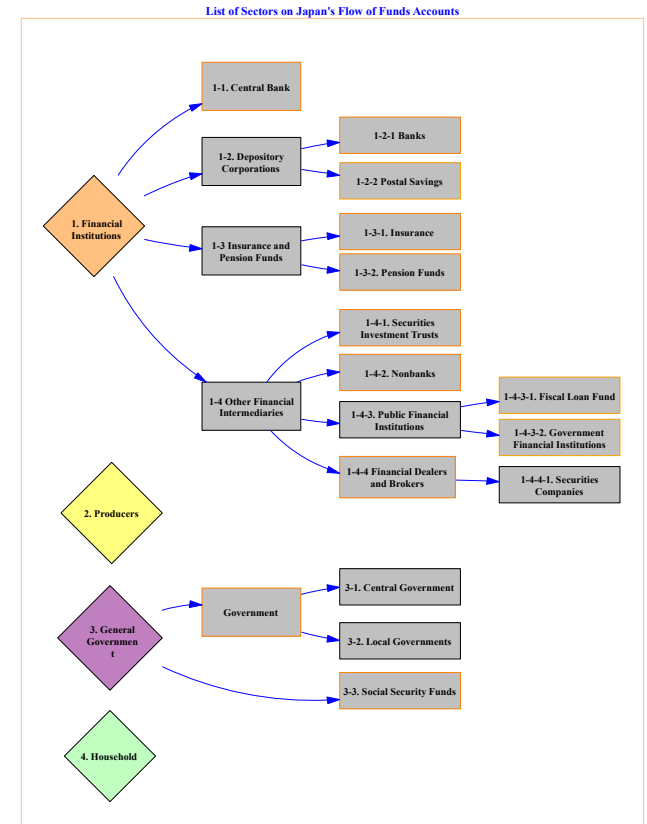
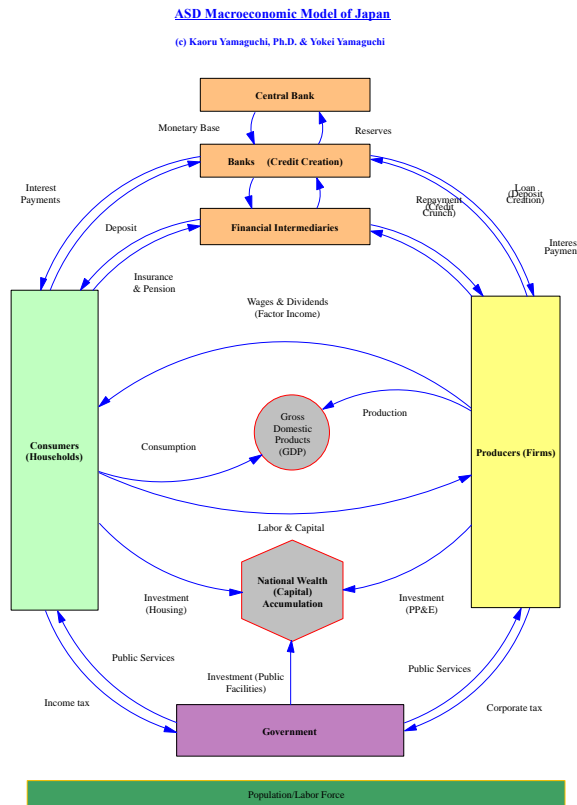
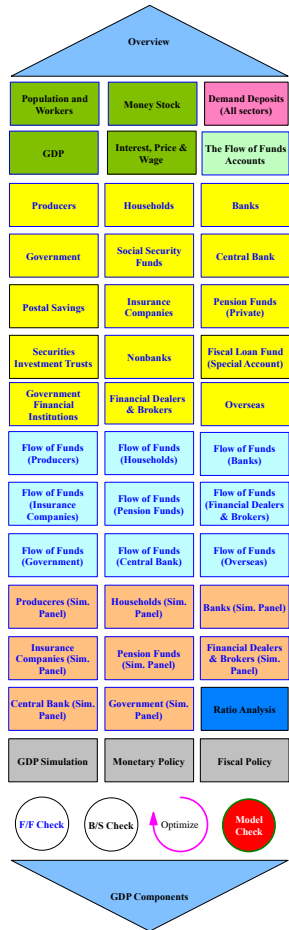


Accounting System Dynamics

- How to construct a model
in which money endogenously created
- Accounting System + System Dynamics

ASD Macroeconomic Model of Japan

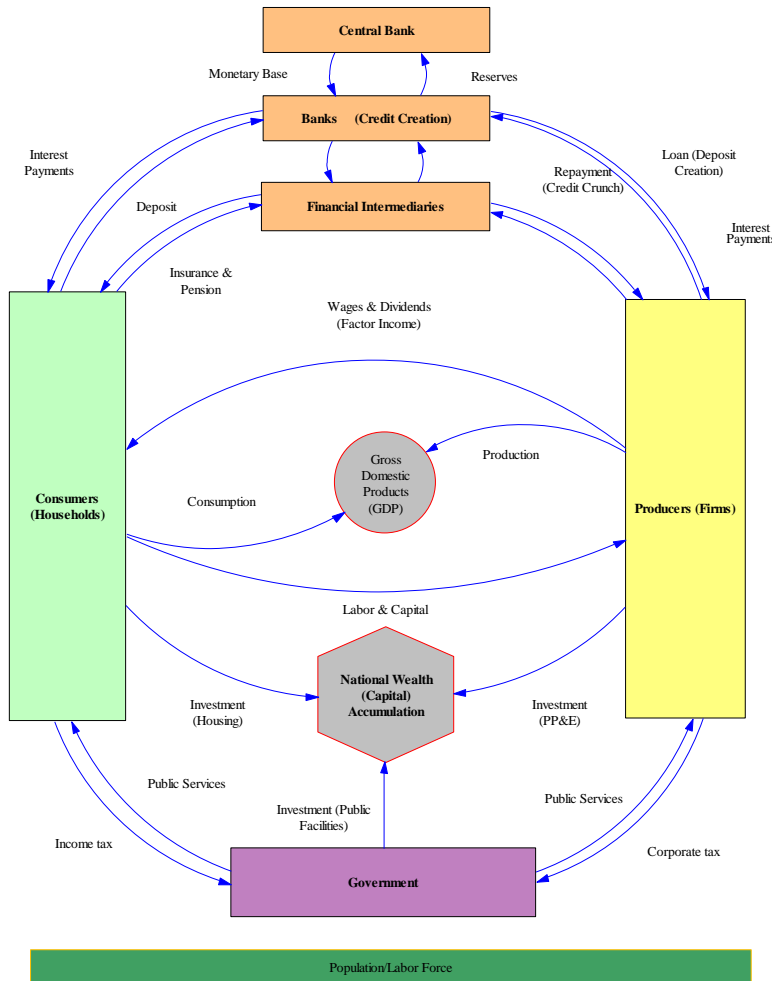
(ASD = Accounting System Dynamics)



ASD Macroeconomic Model of Japan

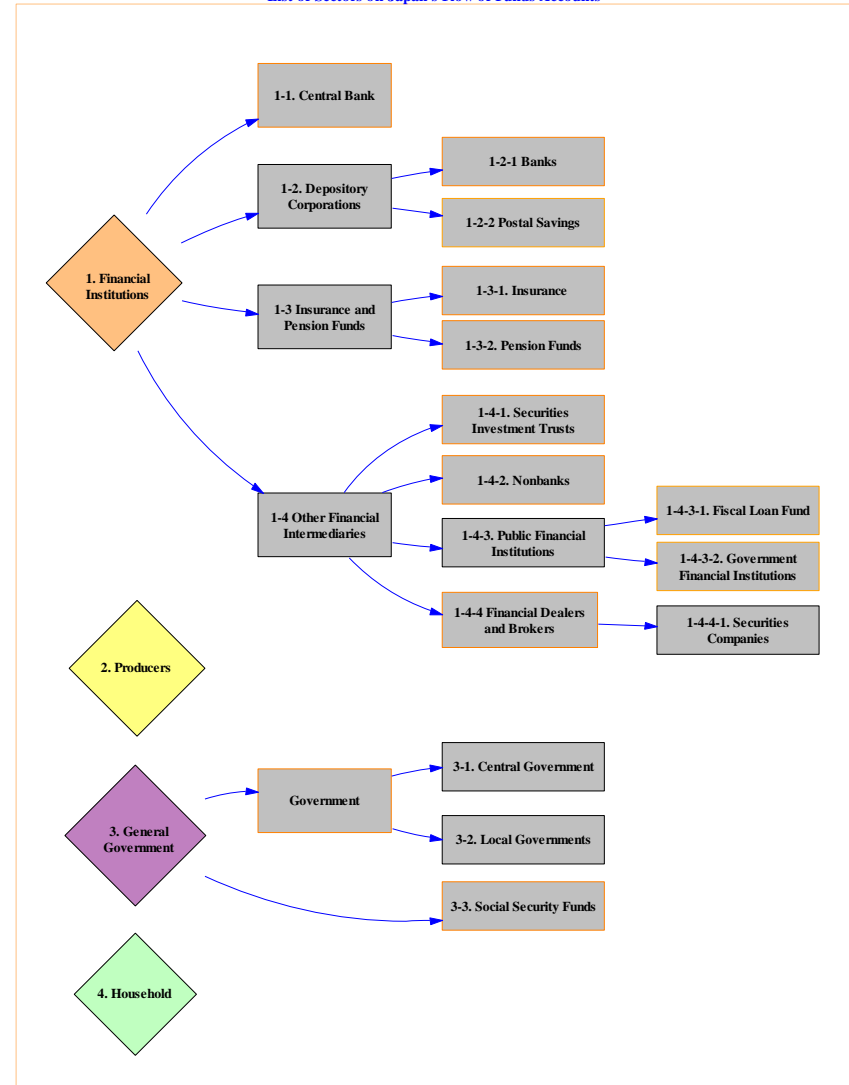
ASD Macroeconomic Model of Japan

(c) Kaoru Yamaguchi, Ph.D. & Yokei Yamaguchi



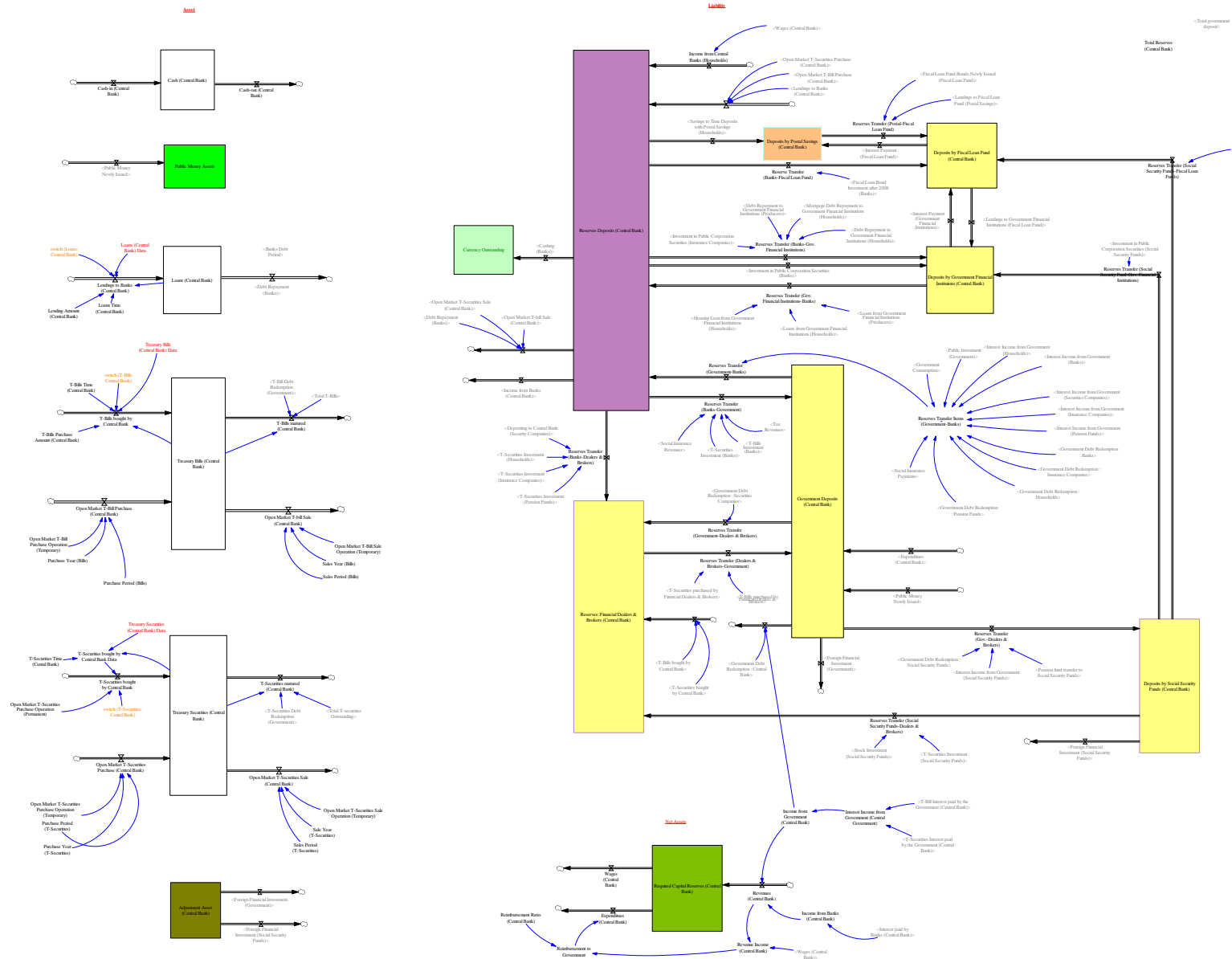
Original 5 Sectors

List of Sectors on Japan's Flow of Funds Accounts



10 More Sectors are added

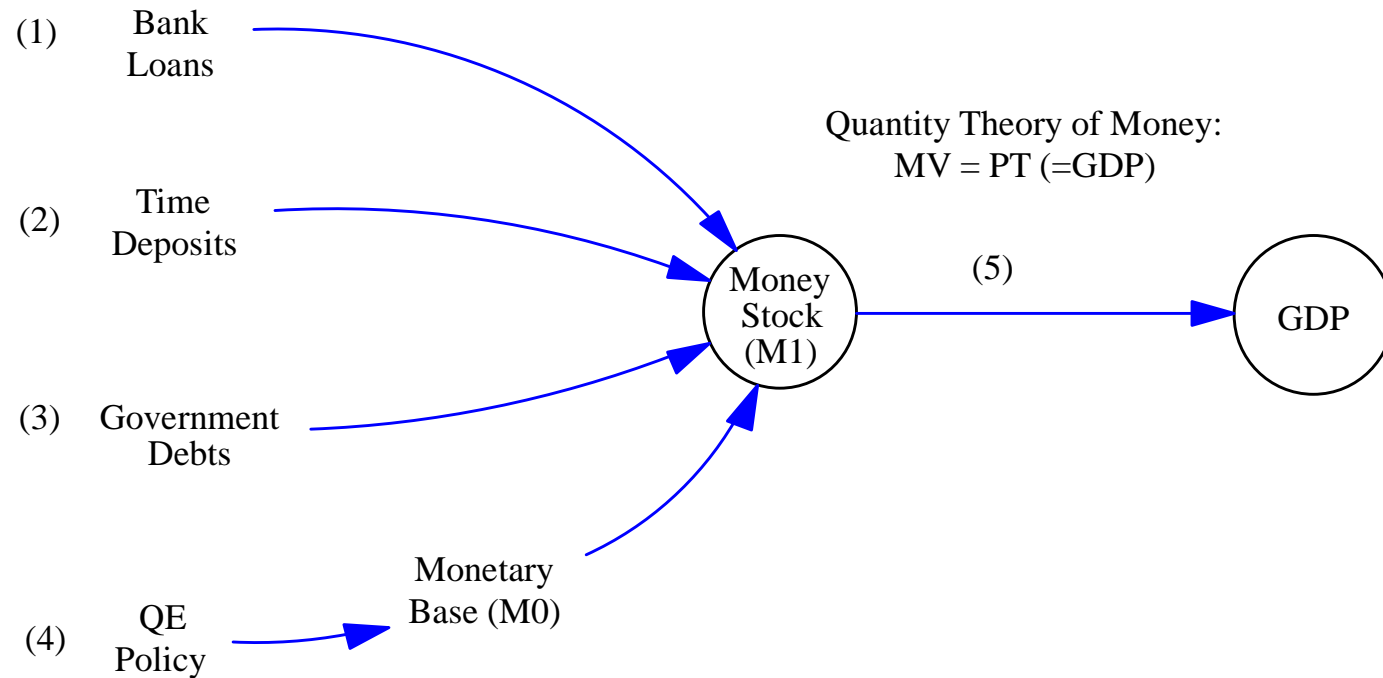
ASD Macroeconomic Model of Japan : Bank of Japan



ASD macro model has 1455 symbols

- 179 Levels (Stocks)
- 587 Auxiliaries (Flows and Variables)
- 44 Lookups (Table Functions)
- 244 Data (Variables and References)
- 376 Constants

Five System Design Failures



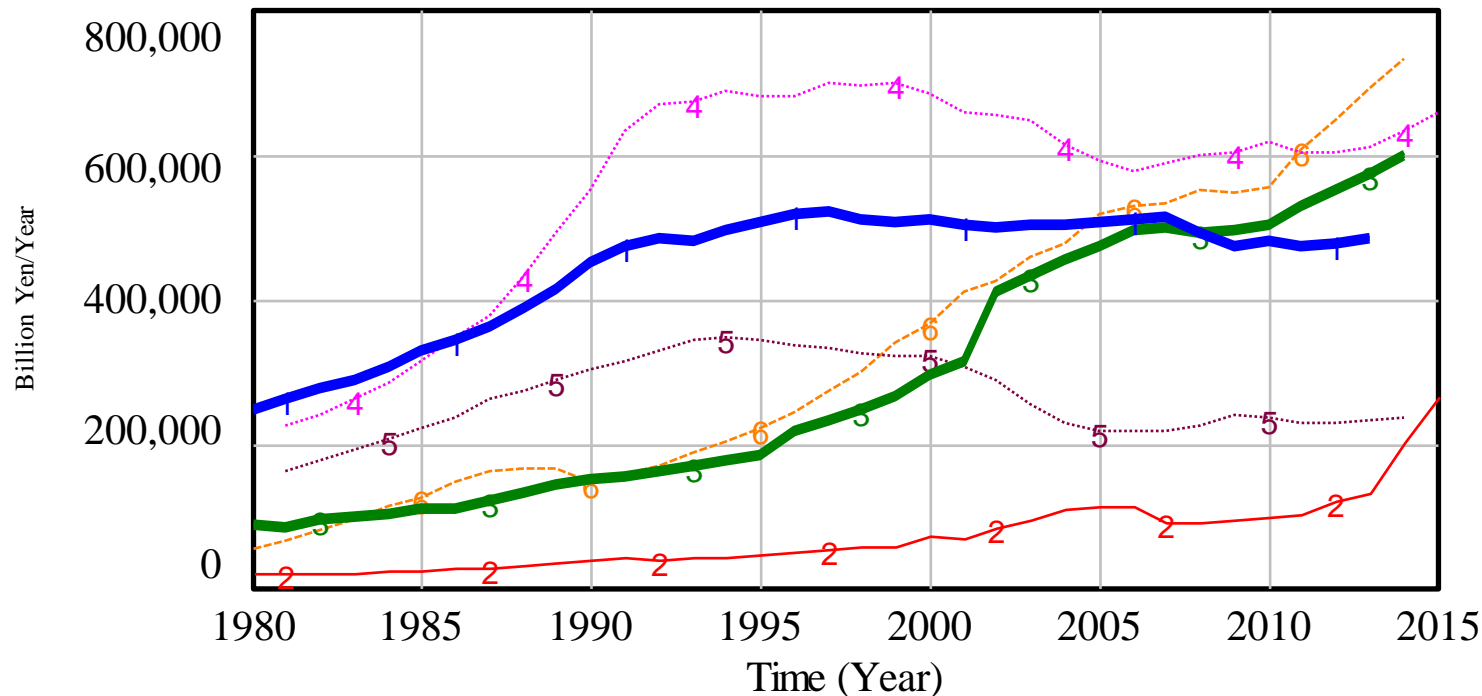
Design Failures of the Debt Money System

(1) M1 needs be supplied by Bank Loans

→ Booms and Depressions (Fisher)

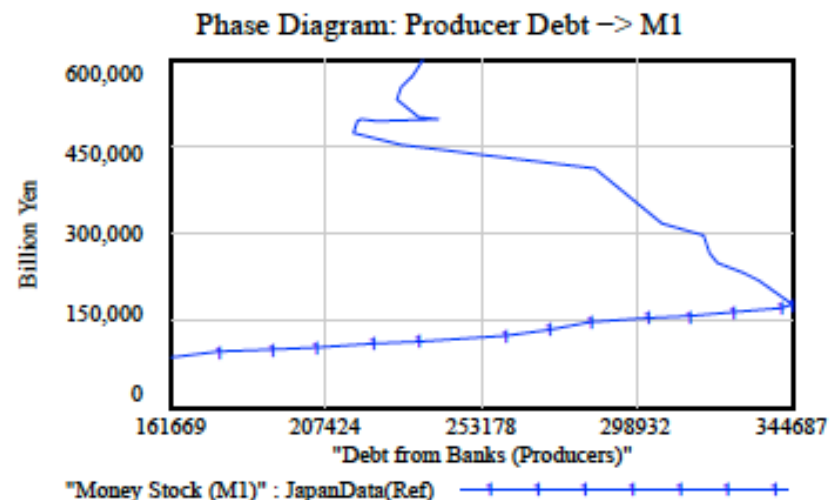
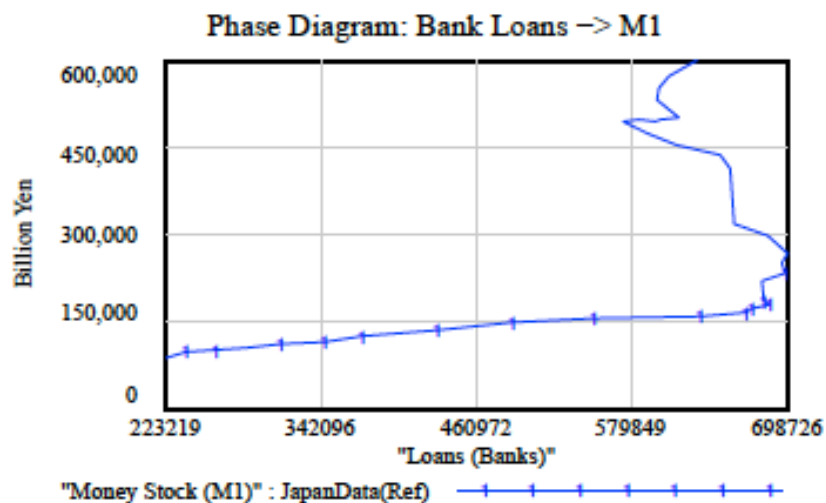
ASD Macroeconomic Model of Japan : Data Simulations

GDP, M0, M1 and Debt (Producers & Government)



"GDP (Revenues)" : JapanData(Ref) —
"Monetary Base (M0)" : JapanData(Ref) —
"Money Stock (M1)" : JapanData(Ref) —
"Loans (Banks)" : JapanData(Ref) ·····
"Debt from Banks (Producers)" : JapanData(Ref) ·····
"Treasury Securities Debt (Government)" : JapanData(Ref) - - - -

Phase Diagrams of Bank Loans and Producer Debt vs M1



Design Failures of the Debt Money System

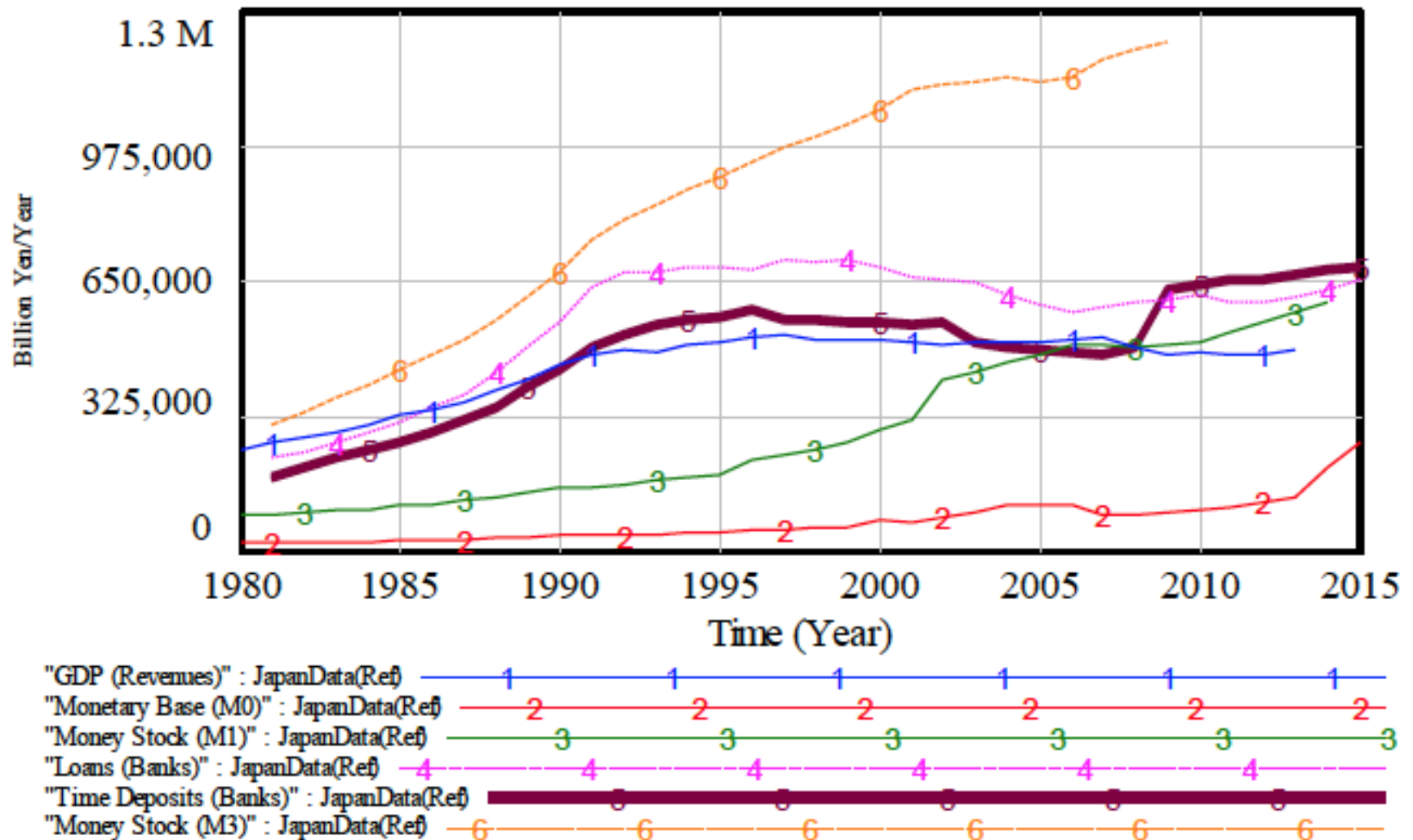
(2) M1 was compensated by Time Deposits

→ Decrease in Savings

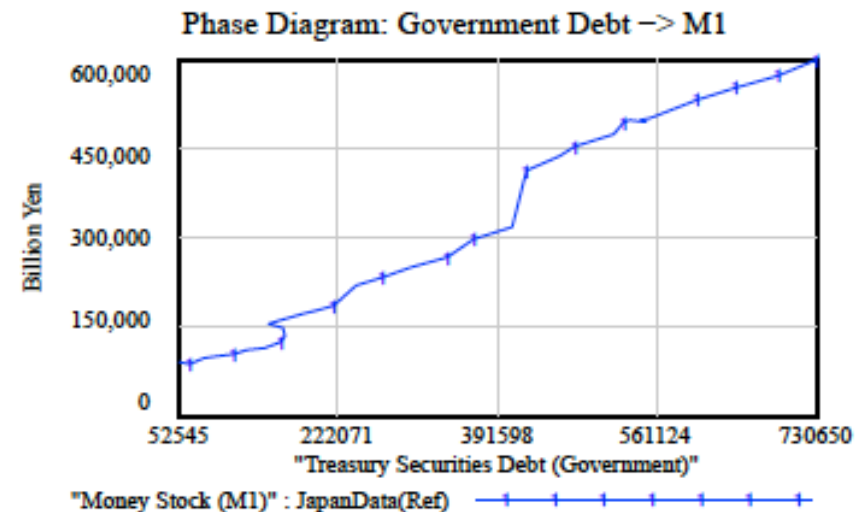
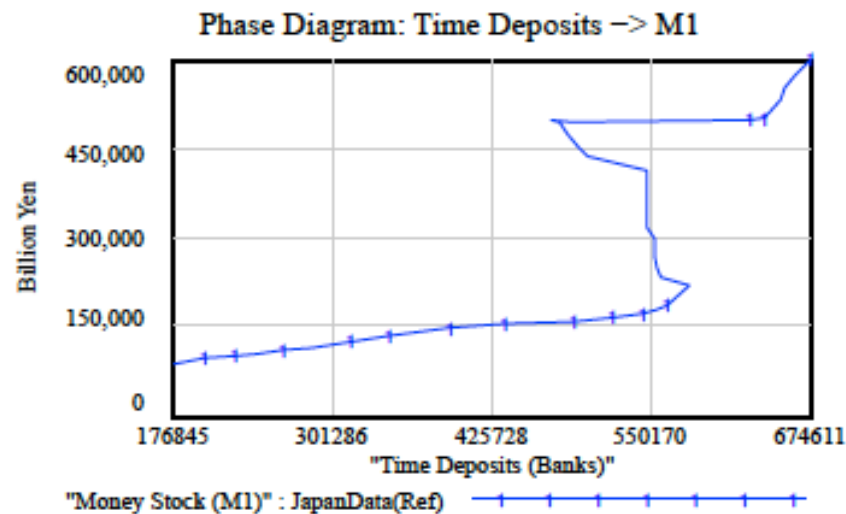
→ Declines of Middle Classes

Monetary Base, Money Stock and Time Deposits

GDP, M0, M1 and Time Deposits



Phase Diagrams of Time Deposits and Government Debt vs M1



Design Failures of the Debt Money System

(3) M1 needs be supplied by the Government Debt

→ Accumulated Debt (Fisher)

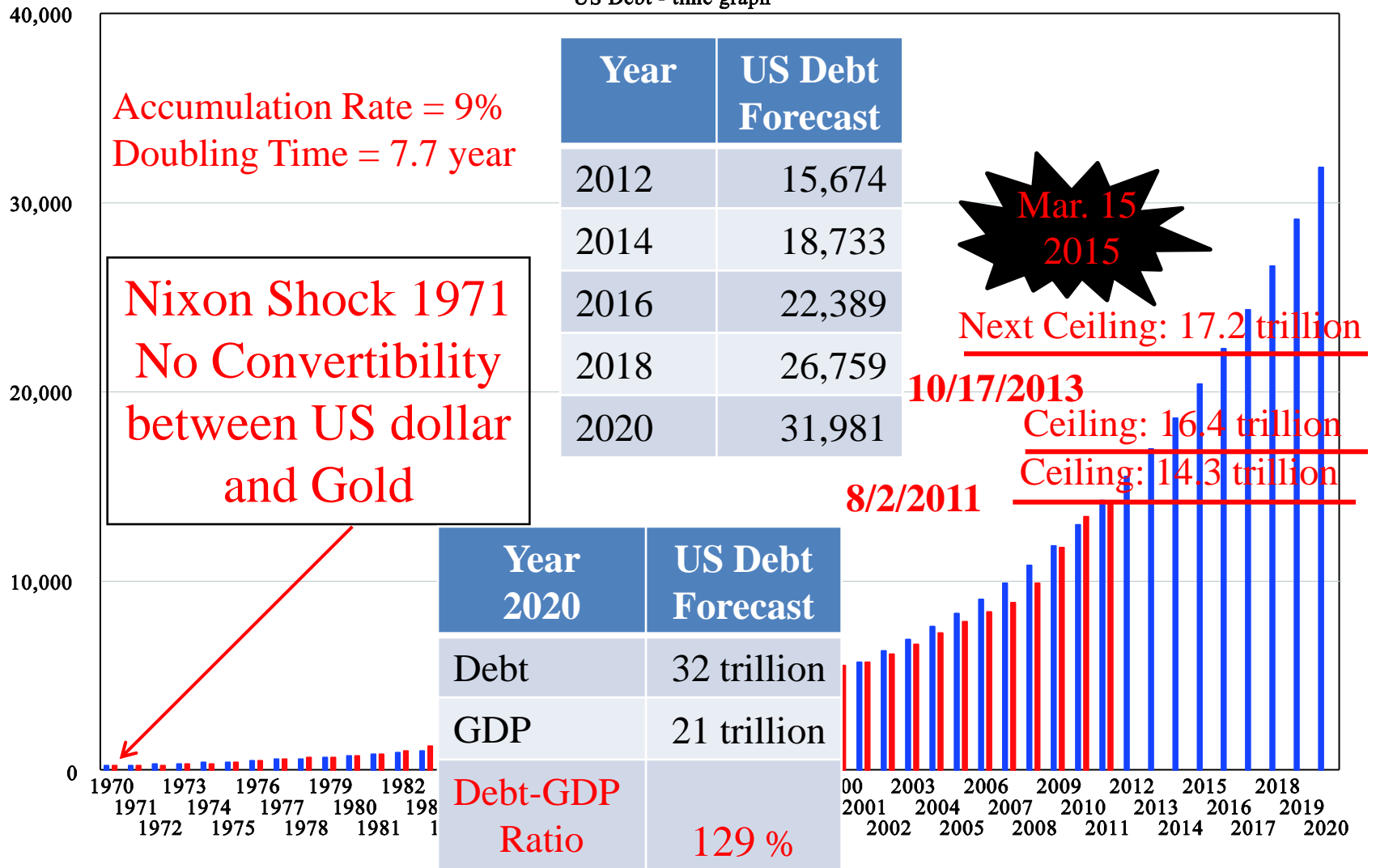
→ Debt Crises

National Debt Crisis

- US Forecast 1970 – 2020 –

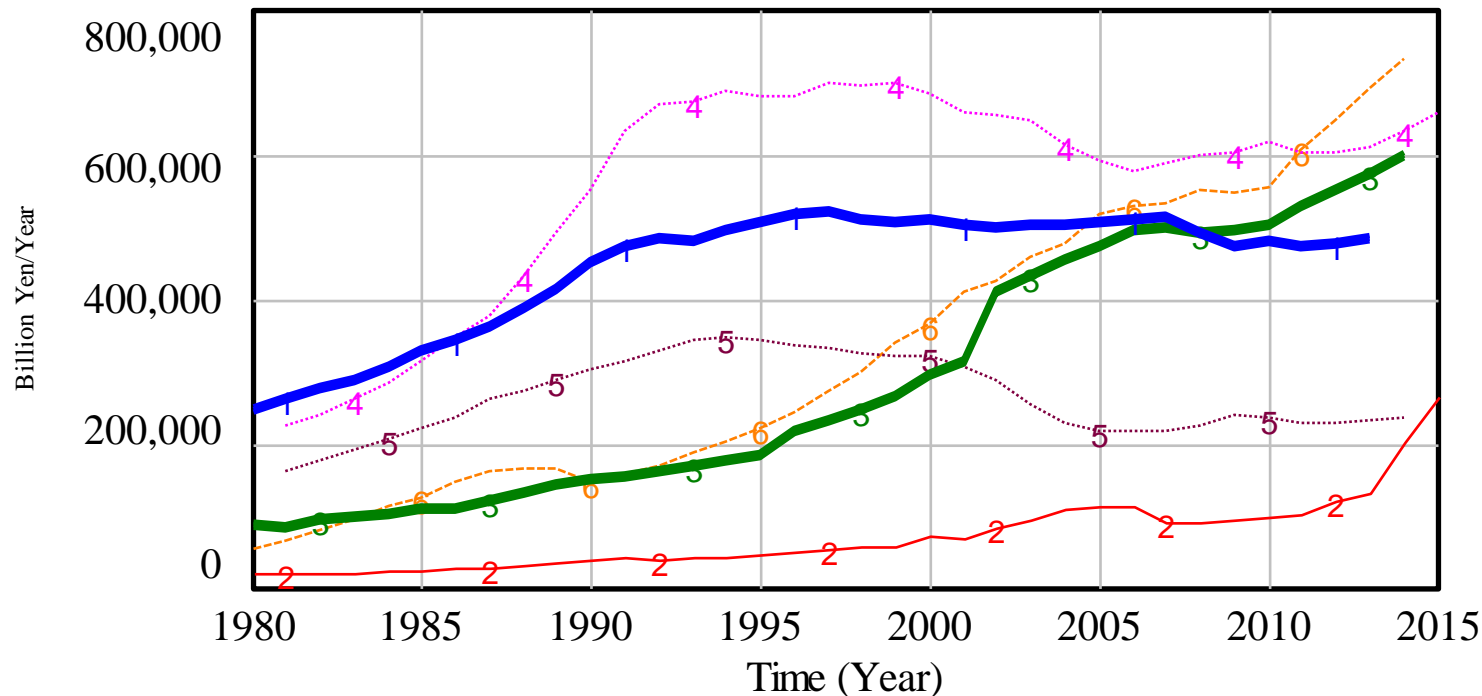
Forecasted Debt
US National Debt

US Debt - time graph



ASD Macroeconomic Model of Japan : Data Simulations

GDP, M0, M1 and Debt (Producers & Government)



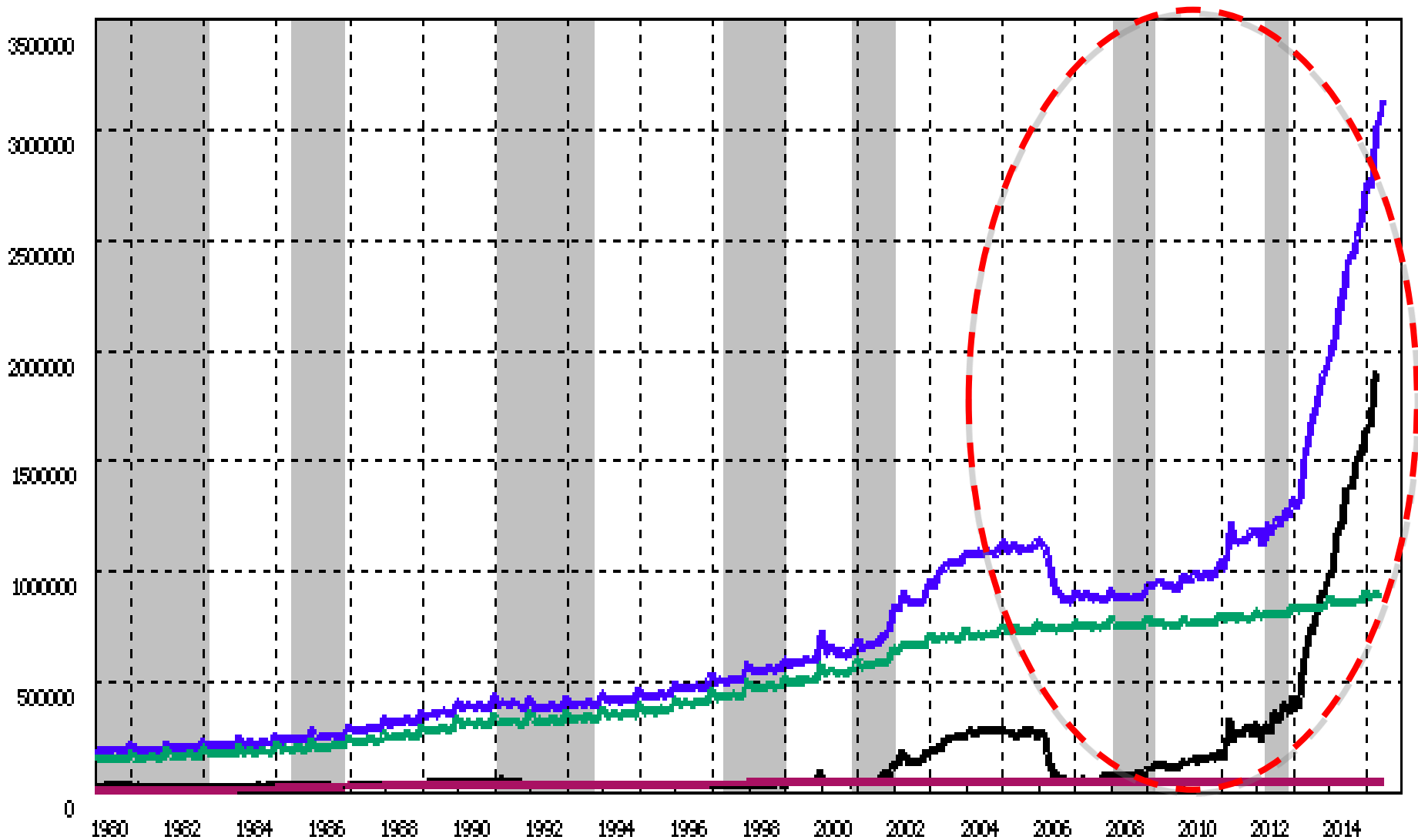
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"Money Stock (M1)" : JapanData(Ref) —
"Loans (Banks)" : JapanData(Ref) ·····
"Debt from Banks (Producers)" : JapanData(Ref) ·····
"Treasury Securities Debt (Government)" : JapanData(Ref) - - - -

Design Failures of the Debt Money System

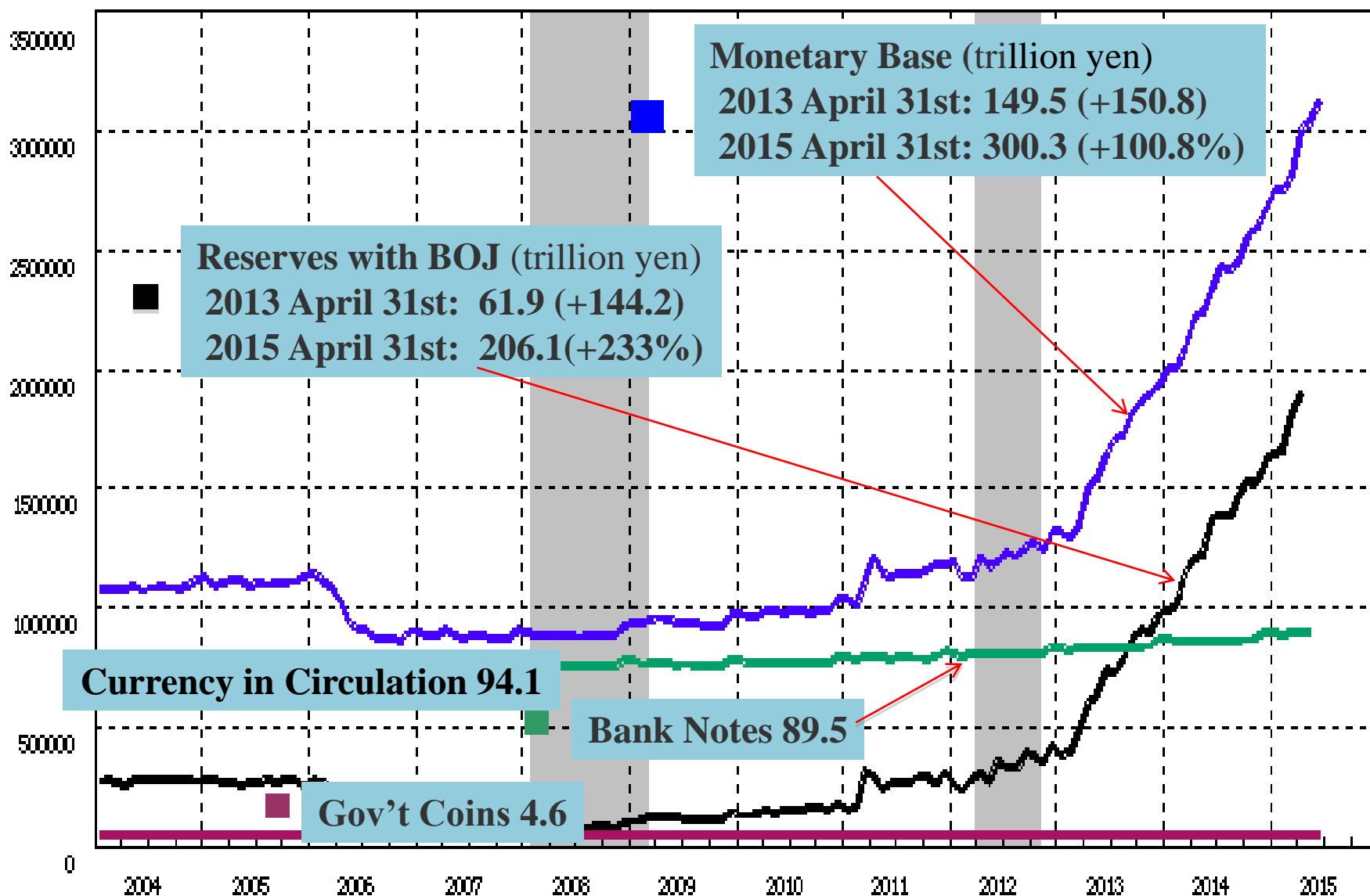
(4) M0 cannot control M1

→ Quantitative Easing (QE) failed

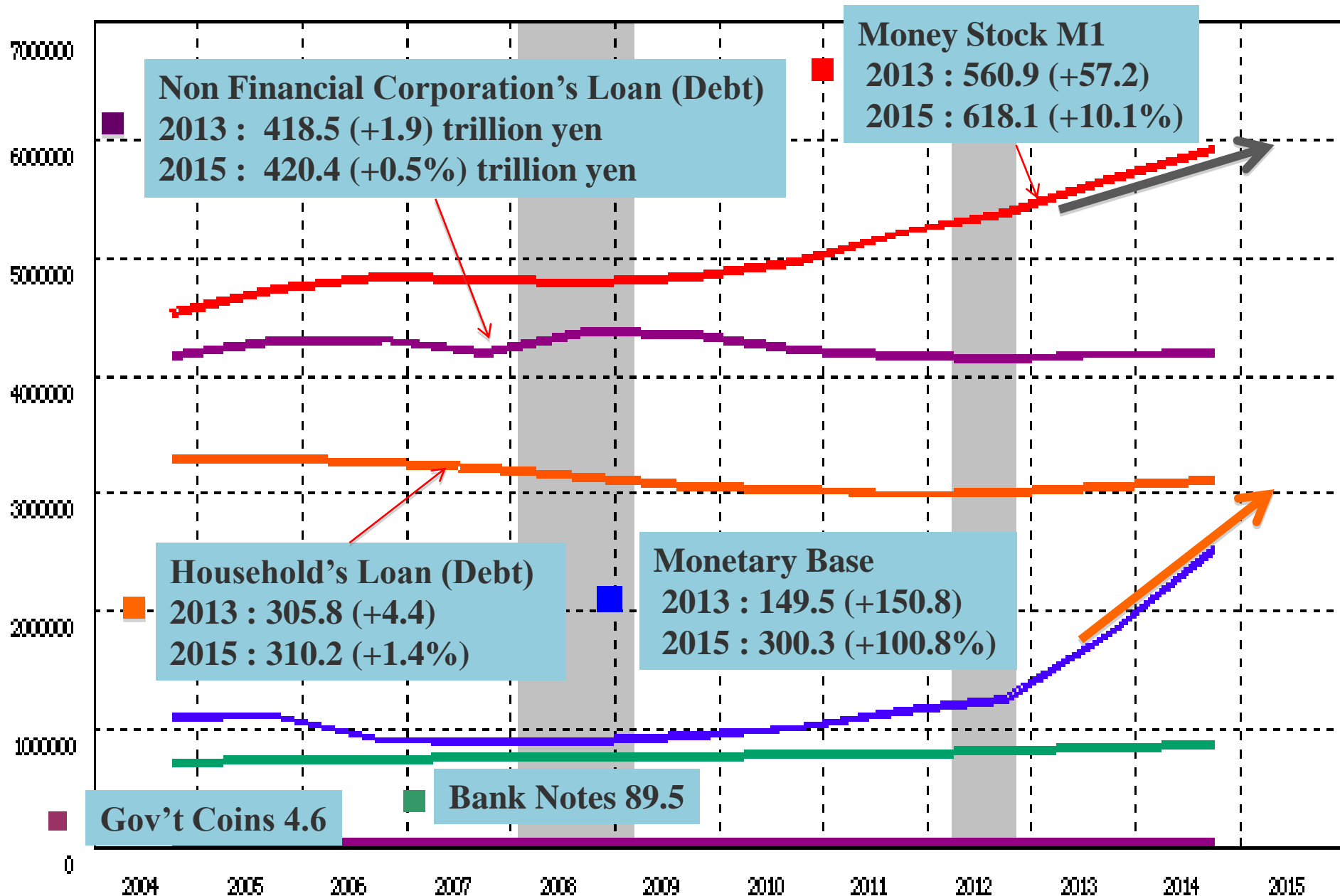
Super “QE” since Q1, 2013



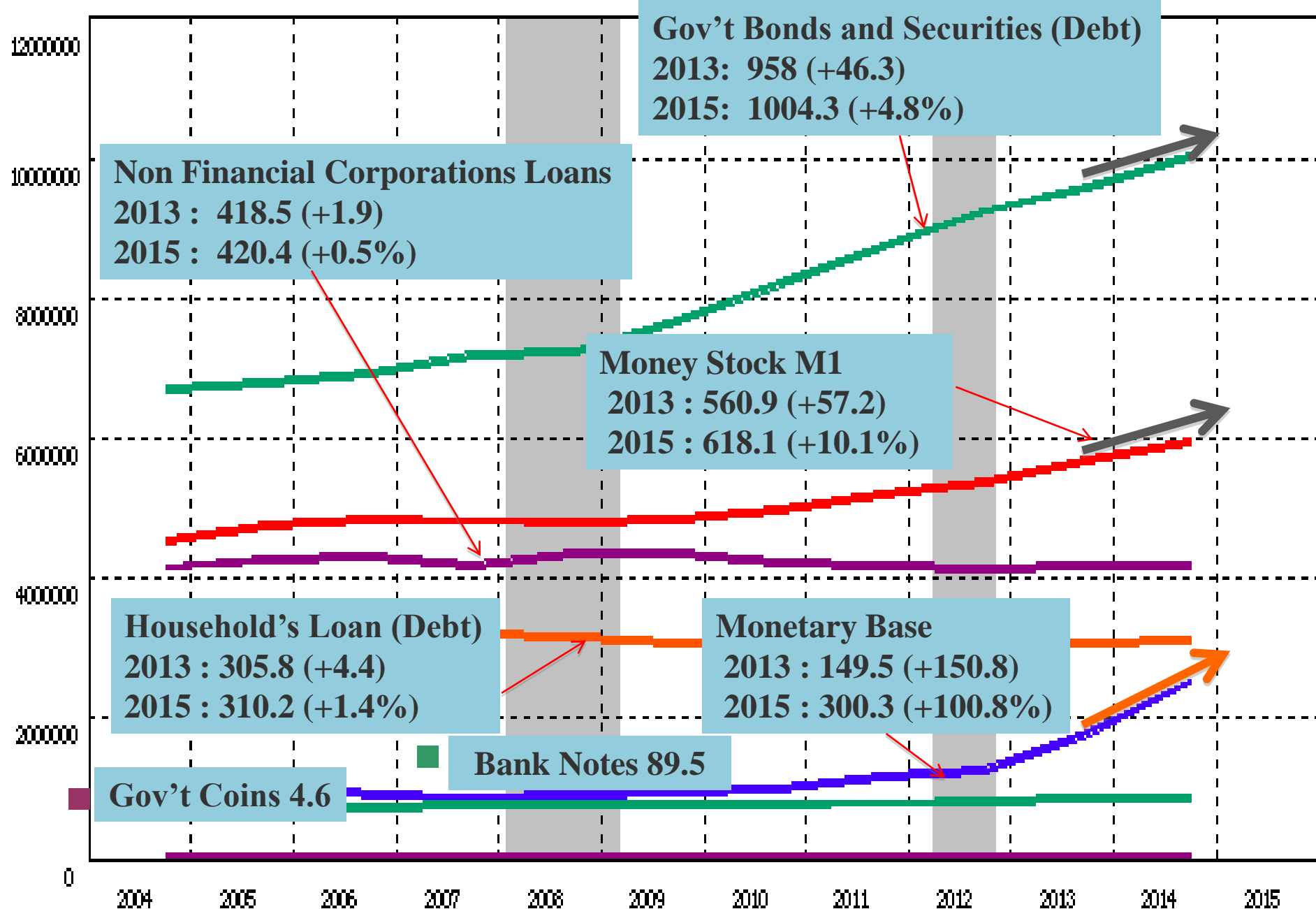
Monetary Base(M0)=Currency Outstanding + Reserves

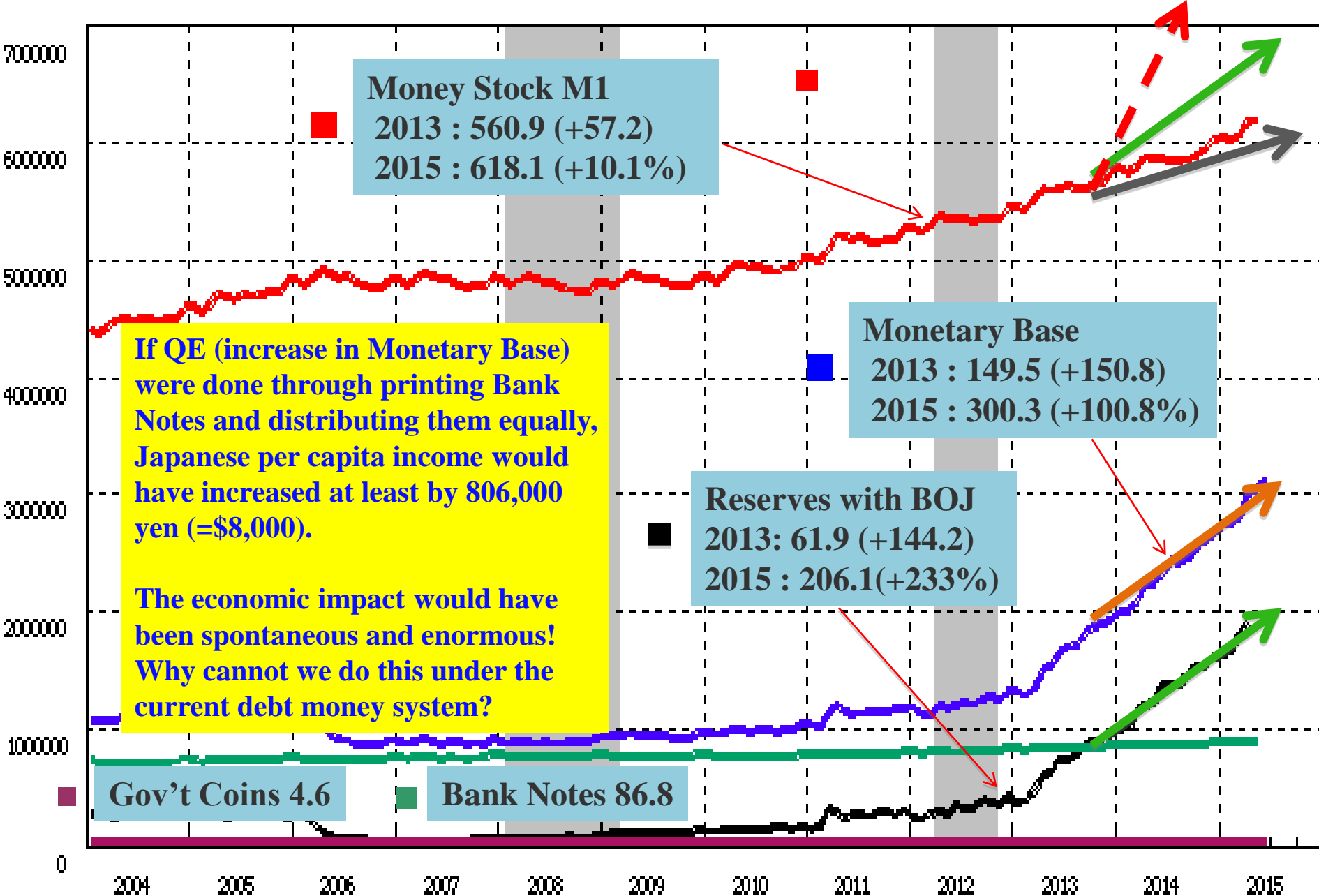


Data obtained from the Bank of Japan Statistics (as of 2015.07.06)



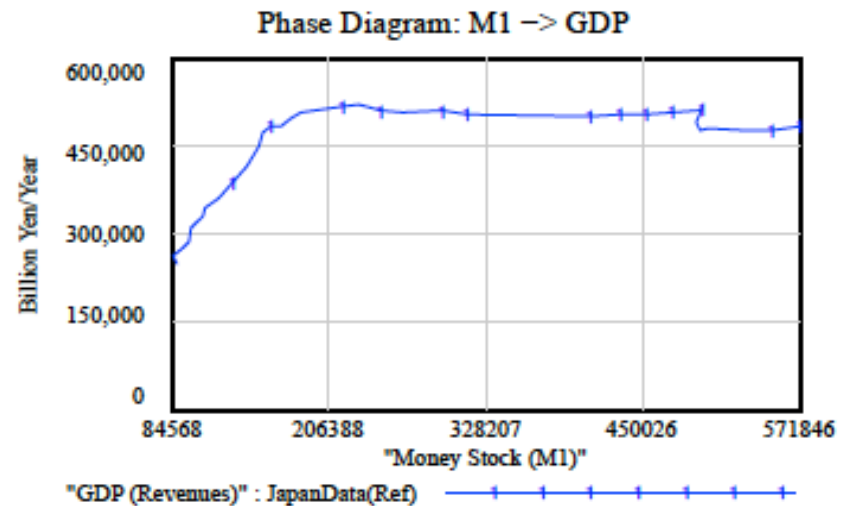
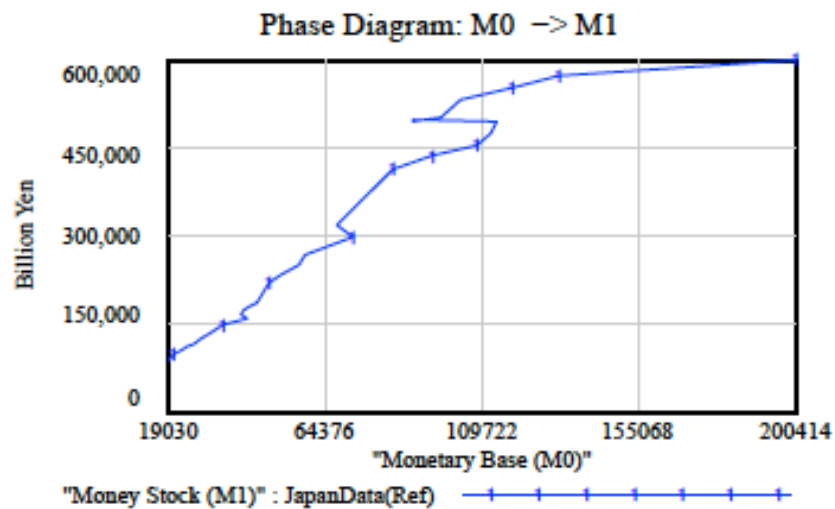
Data taken from the Bank of Japan Web site (as of 2015.07.07)





Data taken from the Bank of Japan Web site (as of 2014.08)

Phase Diagrams of M0 vs M1, and M1 vs GDP



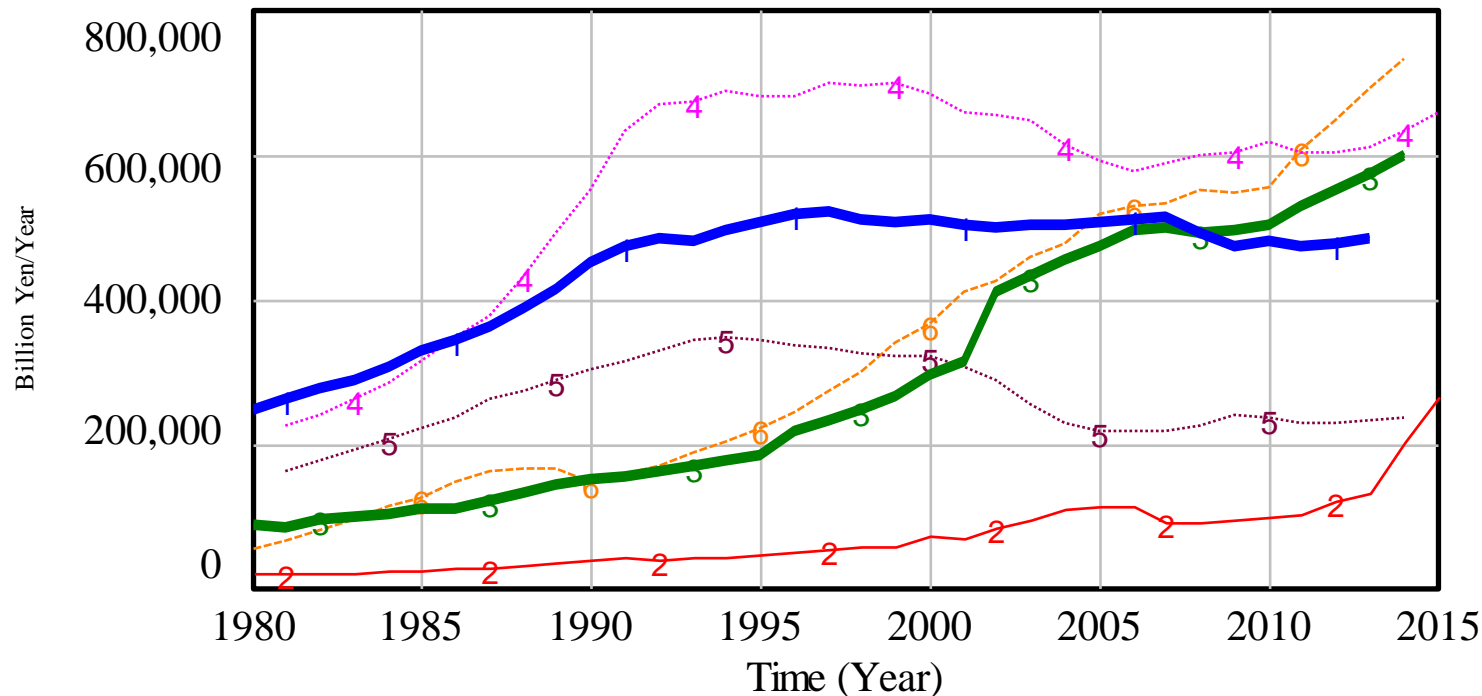
Design Failures of the Debt Money System

(5) M1 failed to increase GDP

→ Prolonged Recessions

ASD Macroeconomic Model of Japan : Data Simulations

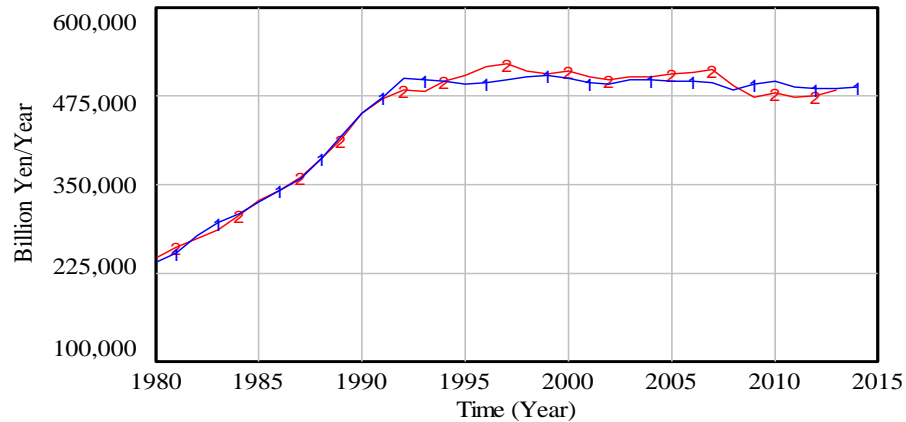
GDP, M0, M1 and Debt (Producers & Government)



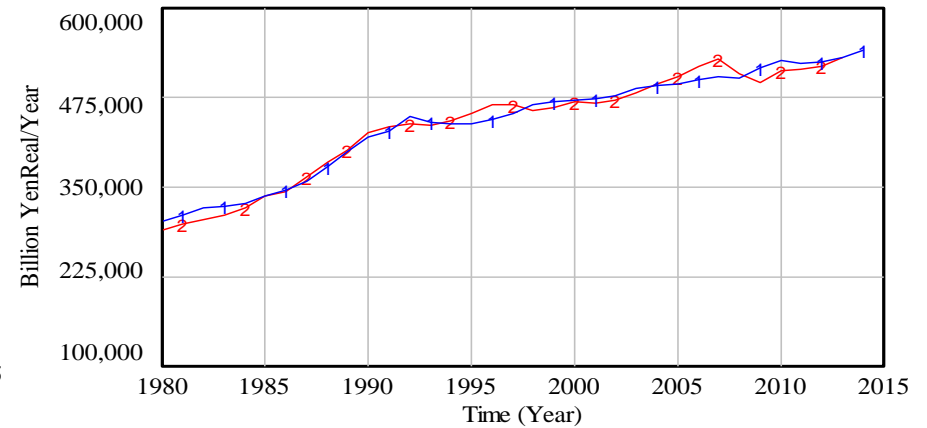
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ASD Macroeconomic Model of Japan : Partial Optimization

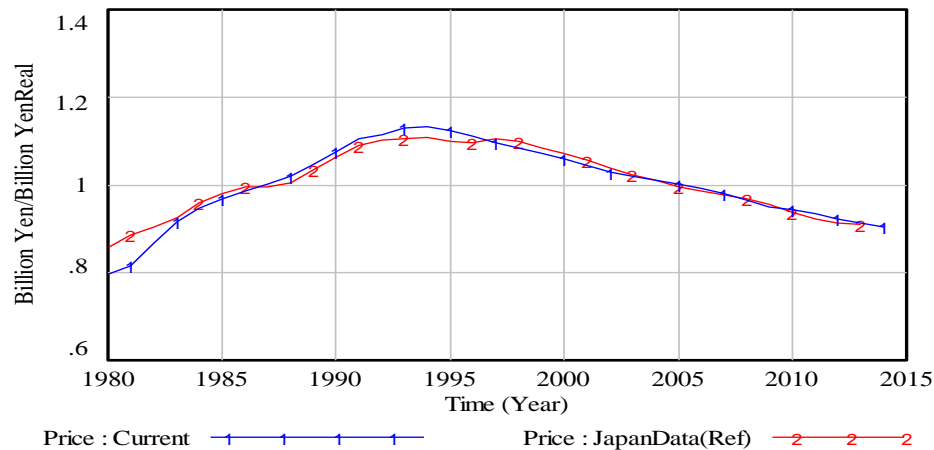
GDP (Revenues)



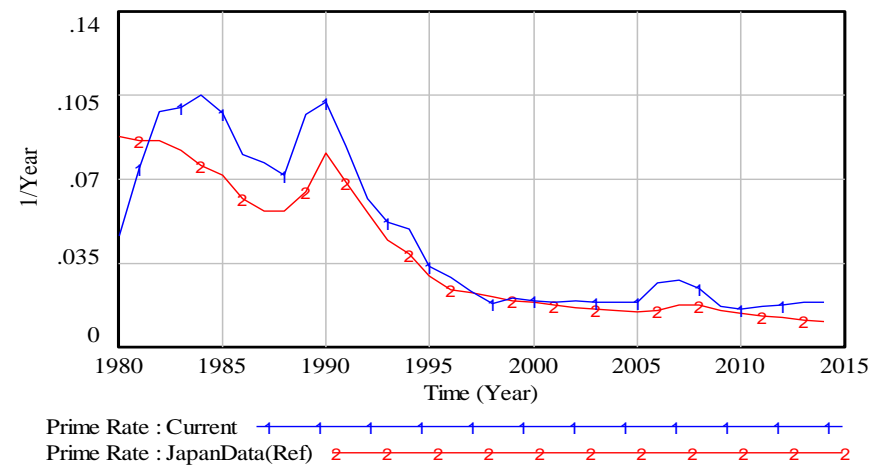
GDP (real)



Price

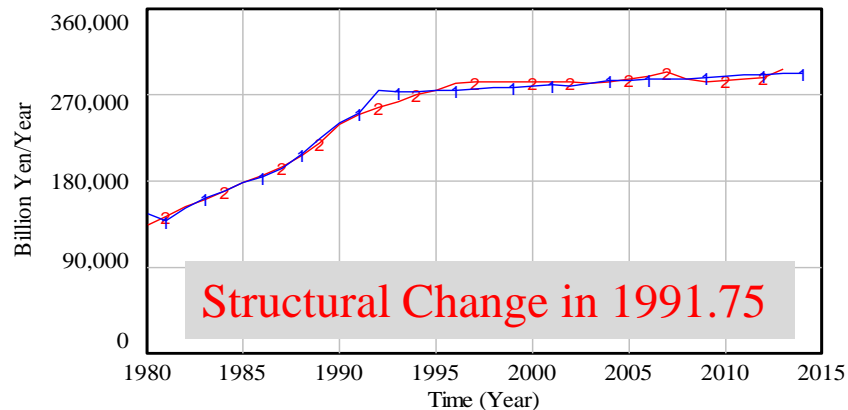


Prime Rate

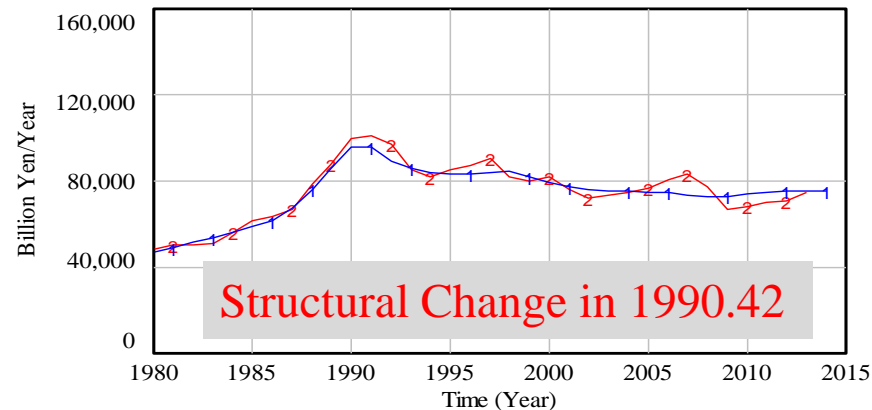


ASD Macroeconomic Model of Japan : Partial Optimization

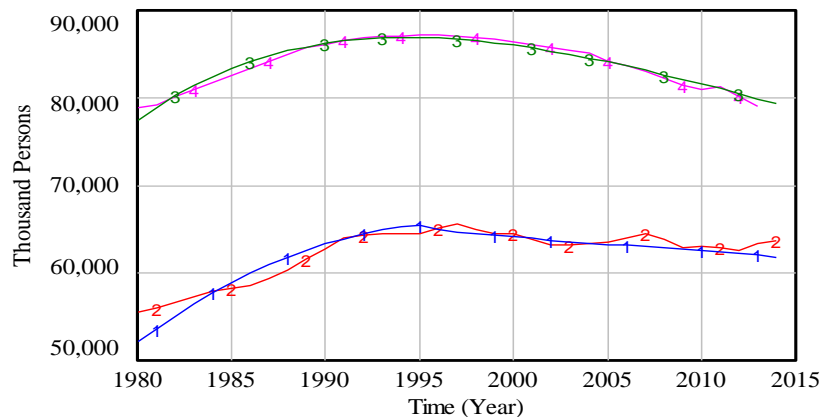
Consumption



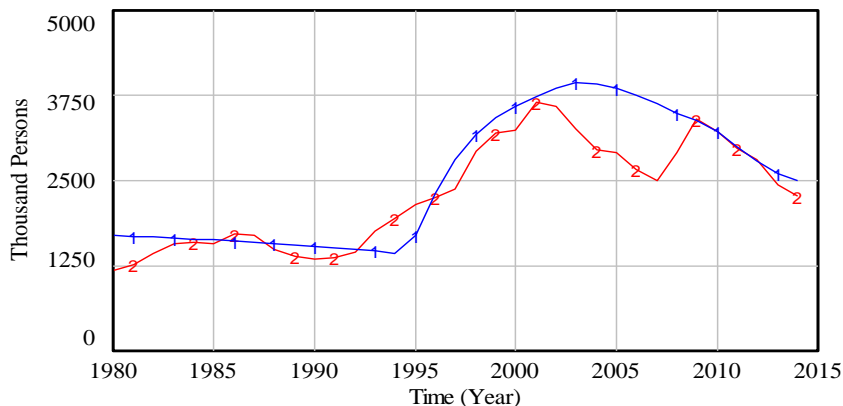
Private Investment



Population and Employed Labor



Unemployed Labor



Structural Change (Government Spending) in 1999.87

ASD Macroeconomic Model

6 Stages of Development

1. Construction of a model that reflects transactions of real and financial economic sectors.
2. Incorporation of real economic and financial data.
3. Partial Optimization of interpolation for real economic behaviors.
4. Construction of detailed interdependent feedback relations among all sectors.
5. Simulation analyses to figure out the structural causes of QE policy failures.
6. Comparative analyses for the workings of debt money and public money systems.

Creating a Better System Design of Macroeconomy



1867-1947

A PROGRAM FOR MONETARY REFORM

(A mimeograph circulated in July 1939

by Paul H. Douglas, Irving Fisher, Frank D. Graham

Earl J. Hamilton, Willford I. King, and Charles R. Whittlesey)

(Fisher at the age of 72)

(9) Fractional reserves give our thousands of commercial banks the power to increase or decrease the volume of our circulating medium by increasing or decreasing bank loans and investments.

This situation is **a most important factor in booms and depressions.**

(17a) Under the present fractional reserve system, the only way to provide the nation with circulating medium for its growing needs is **to add continually to our Government's huge bonded debt**

Two Lessons from the Great Depression in 1930s



(1) Chicago Plan

Irving Fisher



100% Money

Designed to keep checking banks 100% liquid; to prevent inflation and deflation; largely to cure or prevent depression; and to wipe out much of the National Debt.

ThaiSunset.

I have come to believe that the plan, properly worked out and applied, is incomparably the best proposal ever offered for speedily and permanently solving the problem of depressions; for it would remove the chief cause of both booms and depressions, namely the instability of demand deposits, tied as they are now, to bank loans. (p.8)

Yale University, **March, 1935**

(Preface to the First Edition)

First Edition, Adelphi Company, p.9
(Second Ed. 1936, Third Ed. 1945)

A Monetary Reform:

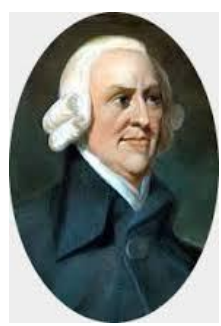
Chicago Plan → American Monetary (NEED) Act

A Debt Money System
- Money out of Nothing -

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

A Public Money System
- American Monetary (NEED) 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**



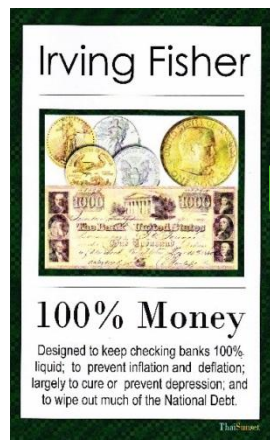
Classical Theory

Neutral Money

Market Liberals

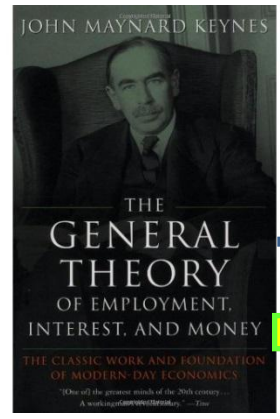
Great Depression, Oct.29, 1929 (Black Tuesday)

1929



1935

Banking Act of 1933 (Glass-Steagall Act)



1935

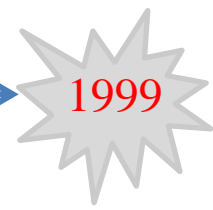
American Monetary Act



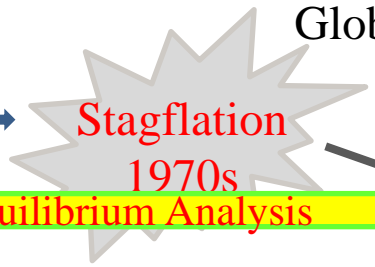
Neoclassical Theory

Market & Financial Liberals

Globalization



1999



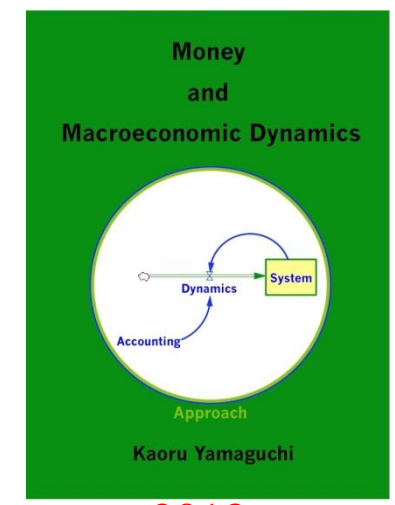
Stagflation 1970s

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)

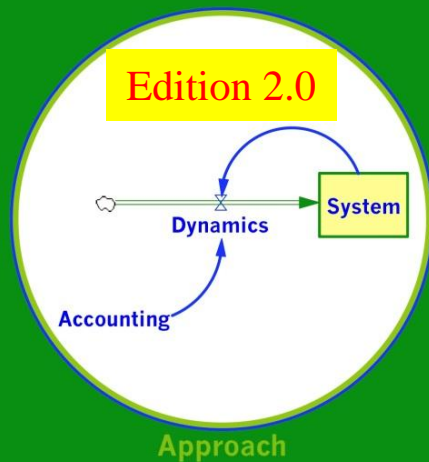


2013



Debt Crisis

Money and Macroeconomic Dynamics



Approach
Kaoru Yamaguchi

520 pages

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Center, Japan

E-mail: director@muratopia.net

(available: www.muratopia.org)

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IV. Macroeconomic Systems of **Public Money**

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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

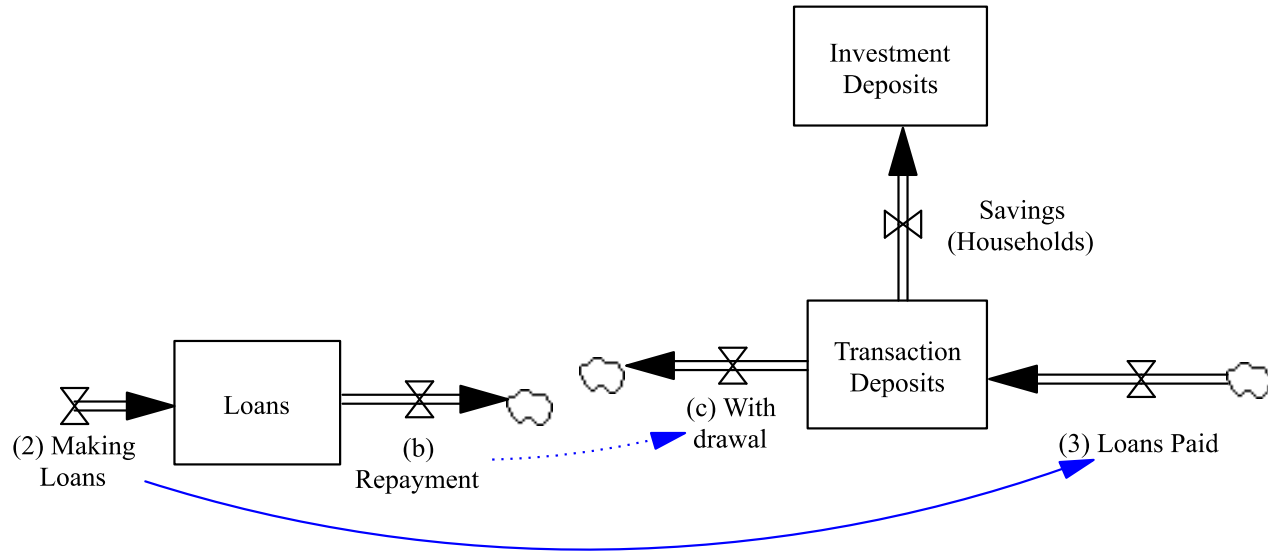
Public Money Act of Japan (Bank Deposits)

Assets

Balance Sheet of Banks

Liabilities

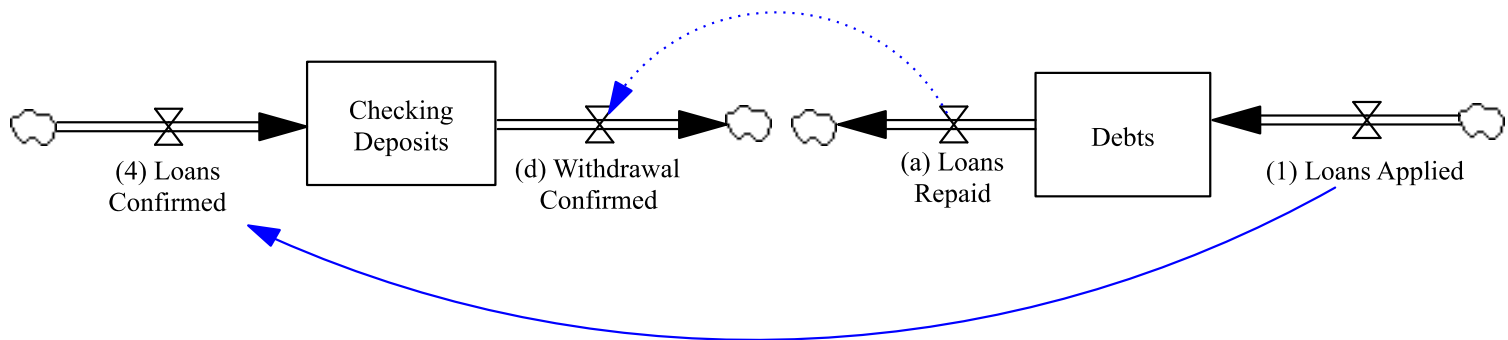
Fractional Reserves



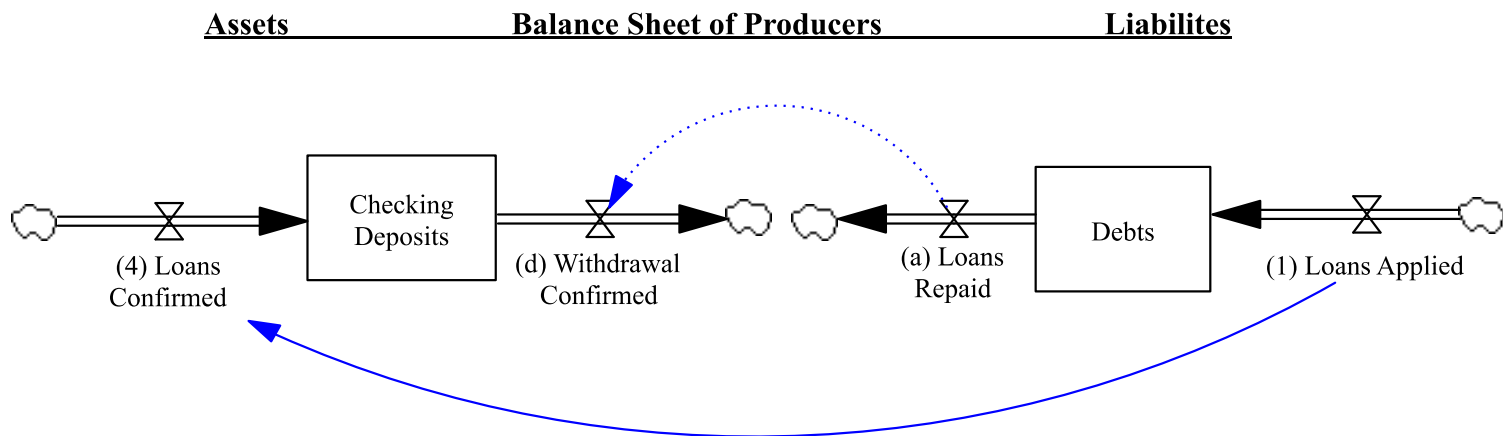
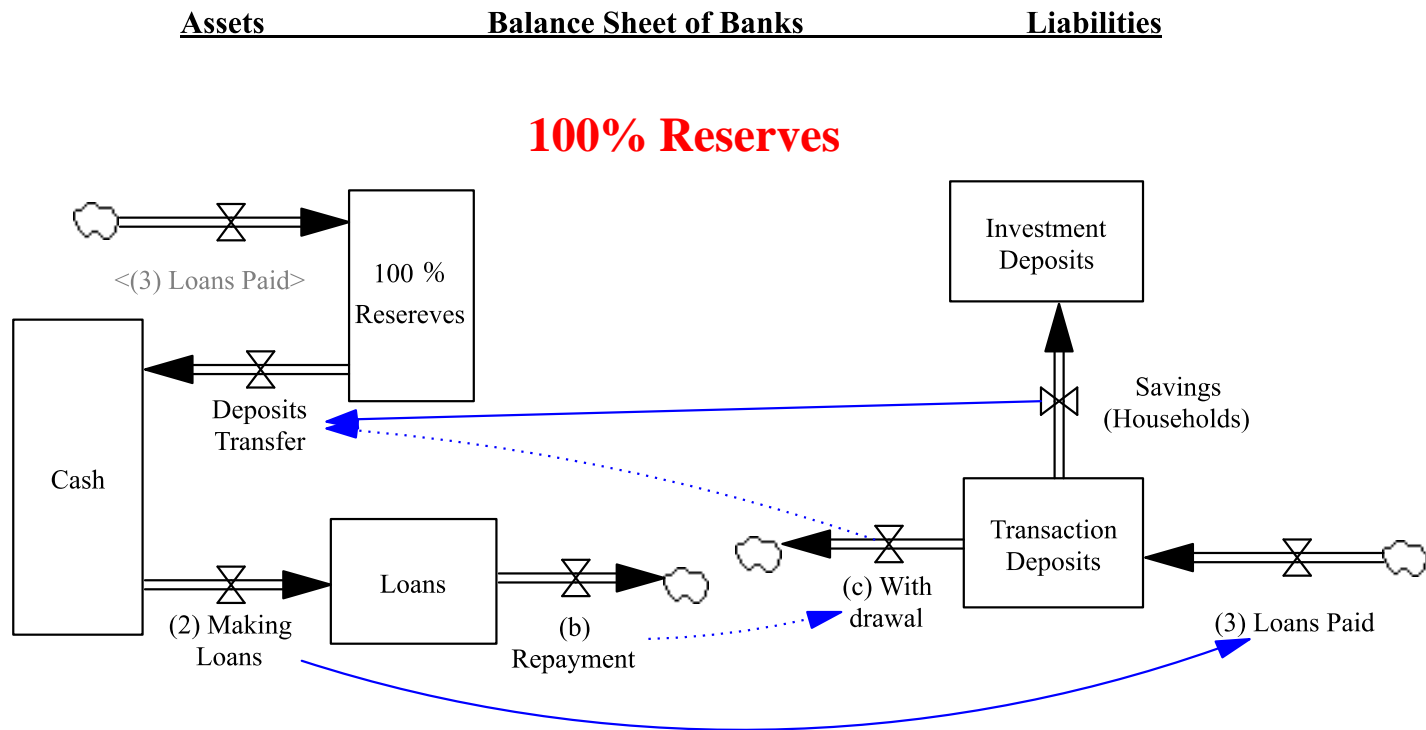
Assets

Balance Sheet of Producers

Liabilities



Public Money Act of Japan (Bank Deposits)



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)



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

Money and Macroeconomic Dynamics (488 pages) , one of the most innovative macroeconomic books, was published in 2013.

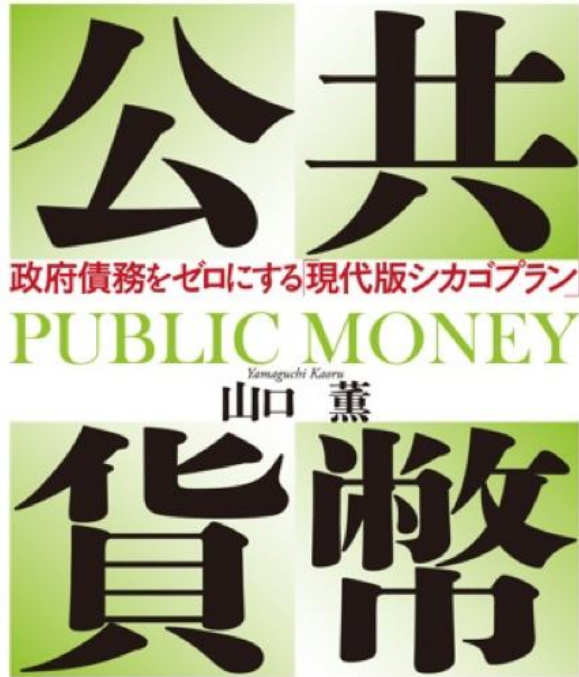
PUBLIC MONEY is its simplified Japanese version (352 pages) to introduce the concept of the Monetary Reform to the Japanese readers. Public money economy is a new economic system in place of the finished Capitalism which was proved to have built-in system design failures.

This new Japanese book focuses on the liquidation of national debts which Japanese economy as well as US and EU economies such as Greece are seriously facing now.

Published on Sept. 10, 2015
by

Toyo Keizai, Tokyo, 352 pp.

PUBLIC MONEY



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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

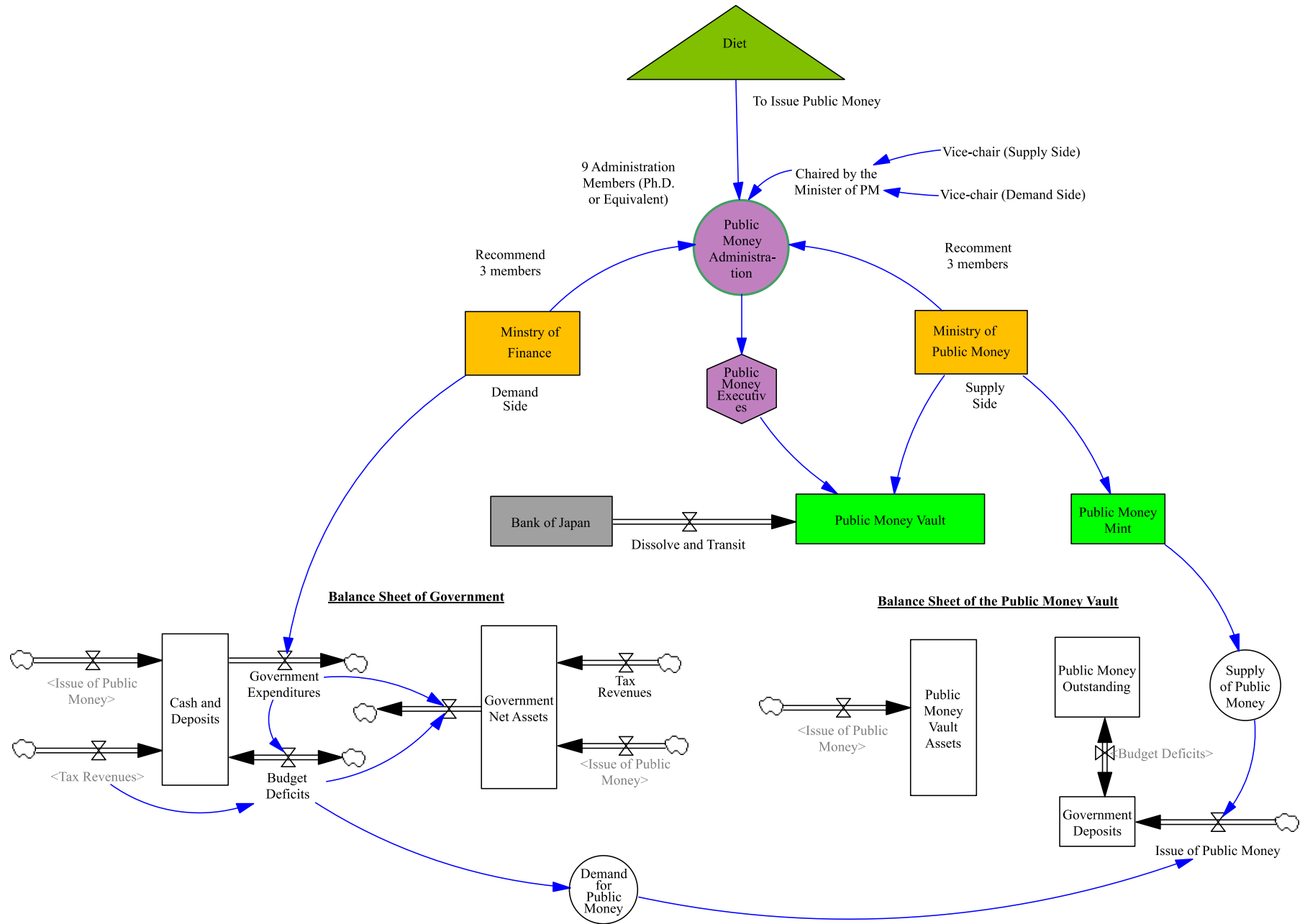
- 12 Modeling a transition to the Public Money System
- 13 The Public Money Act of Japan

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by

Toyo Keizai, Tokyo, 352 pp.

Public Money Act of Japan (Ch.13)



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)

Thank You for your Attention !