

Financial Markets and Sustainable Development

Concepts, Players, Challenges

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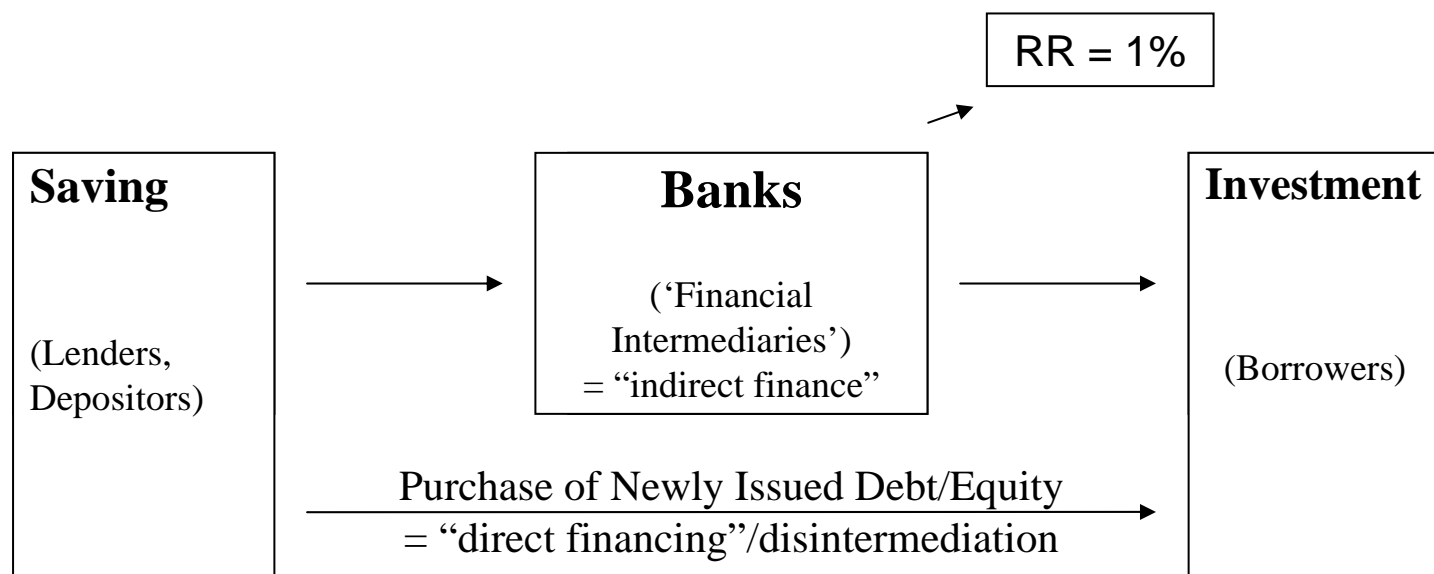
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Financial Markets and Sustainable Development

- a) Financial Markets: Overview**
- b) Financial Intermediation, Banking and ‘Growth’**
- c) Banking, Interest and Sustainability – or Lack Thereof**
- d) How to Utilise the Financial System to Achieve Sustainability**

a) Financial Markets: Overview

- Textbook View of Financial Intermediation



What Makes Banks Special?

But empirically, it had been found that **banks are special**

Their function cannot be easily replaced by other financial players or markets.

- Fama (1985) shows that banks must have a kind of monopoly power compared to other financial institutions.
- Ashcraft (2005) shows that the closure of small regional banks significantly hurts the local economy.

But economic theory could not explain why.

Here is why.

What is money?

- Where does it come from?
- Only about 3% of the money supply comes from the central bank.
- Who creates the remaining 97% of our money supply and who allocates this money?

A: The commercial banks

- This explains why banks are special: They are not (just) financial intermediaries. They have a license to 'print money' by **creating credit**. There is no such thing as a 'bank loan'. Banks do not lend money, they create it.

Bank Credit Creation

Balance Sheet of Bank A

Step 1 Deposit of \$100 by customer at Bank A

| Assets | Liabilities |
|--------|-------------|
| | \$100 |

Step 2 \$100 used to increase the reserve of Bank A

| Assets | Liabilities |
|--------|-------------|
| \$100 | \$100 |

Banks do not actually lend money!

Step 3 Loan of \$9,900 granted, by crediting borrower's bank account with deposit.

The borrower is treated **as if** she/he or the bank had actually deposited the money, but no money was deposited.

| Assets | Liabilities |
|----------------|----------------|
| \$100 | \$100 |
| + | + |
| \$9,900 | \$9,900 |

NB: No money is transferred from elsewhere

There is no such thing as a 'bank loan'.

Bank Credit Creation: Not in Economics Textbooks, but Admitted by Central Banks:

“The actual process of money creation takes place primarily in banks.”

(Federal Reserve Bank of Chicago, 1961, p. 3);

“By far the largest role in creating broad money is played by the banking sector ... When banks make loans they create additional deposits for those that have borrowed.”

Bank of England (2007)

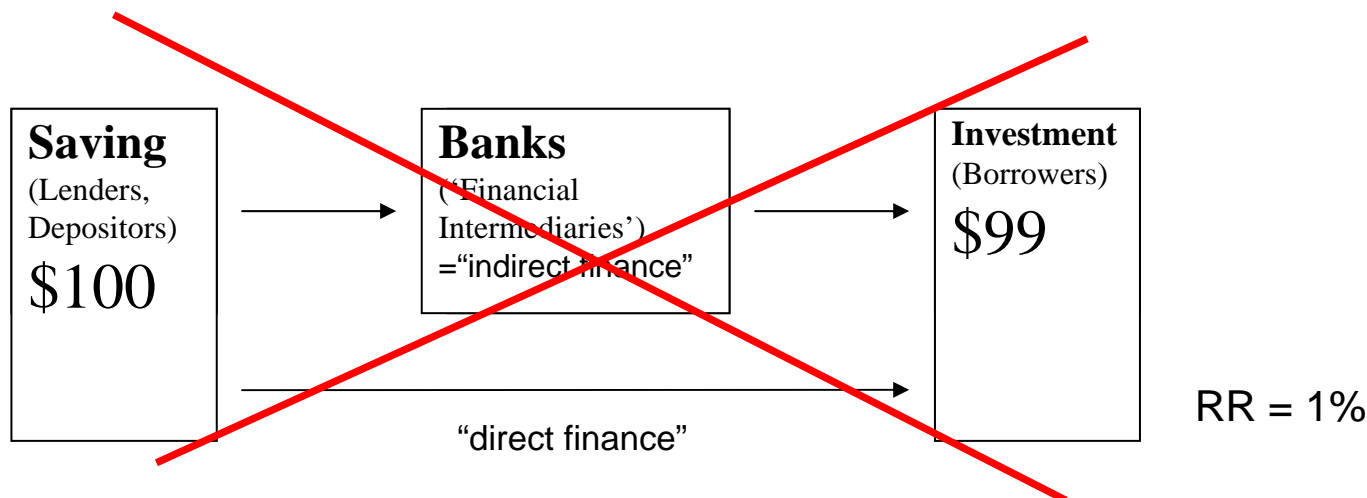
*“Over time... Banknotes and **commercial bank money** became fully interchangeable payment media that customers could use according to their needs”* (ECB, 2000).

*“Contemporary monetary systems are based on the mutually reinforcing roles of central bank money and **commercial bank monies**.”* (BIS, 2003).

*“The **commercial banks can also create money themselves... in the eurosystem, money is primarily created by the extension of credit...**”* (Bundesbank, 2009)

b) Financial Intermediation, Banking and ‘Growth’

Banks are Not Financial Intermediaries



They are the **Creators of the Money Supply**.

And they decide who gets the money and for which purpose it is used.

This decision **shapes the economic landscape**.

Banks thus decide over the economic destiny of a country.

The Quantity Theory of Credit (Werner, 1992, 1997):

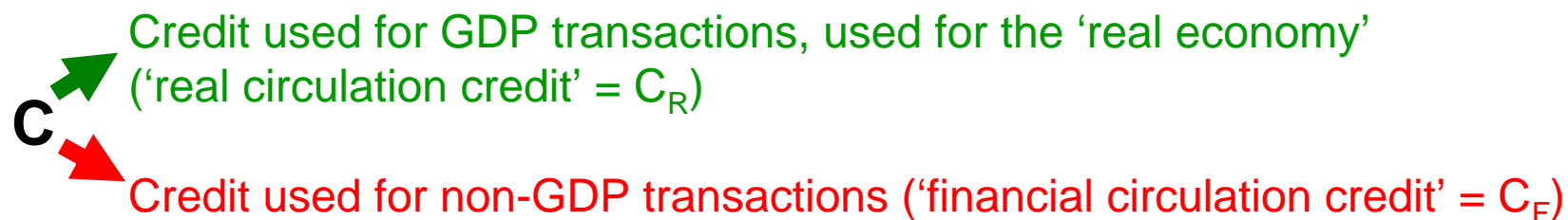
money used = value of all market transactions

Money is best measured by its credit counterpart (C) which created it.

Financial transactions are not part of GDP.

If we want to link this to GDP, we must divide money/credit into two streams:

$$C = C_R + C_F$$



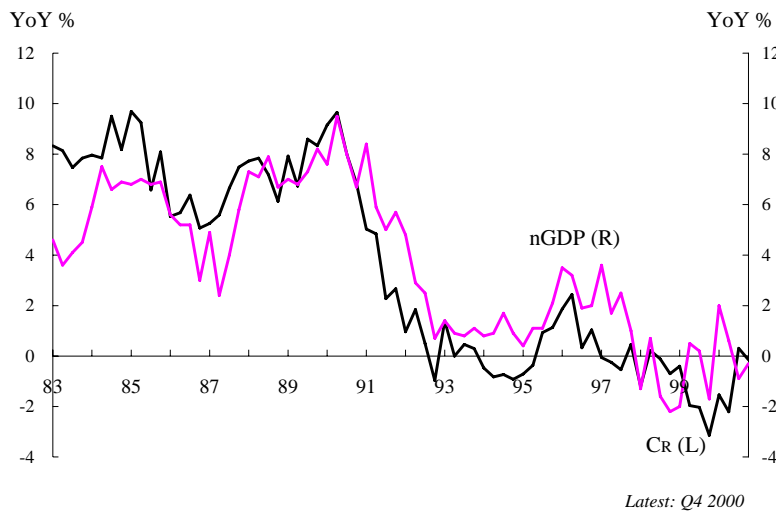
The Quantity Theory of Credit (Werner, 1992, 1997)

$$\Delta(P_R Y) = V_R \Delta C_R$$

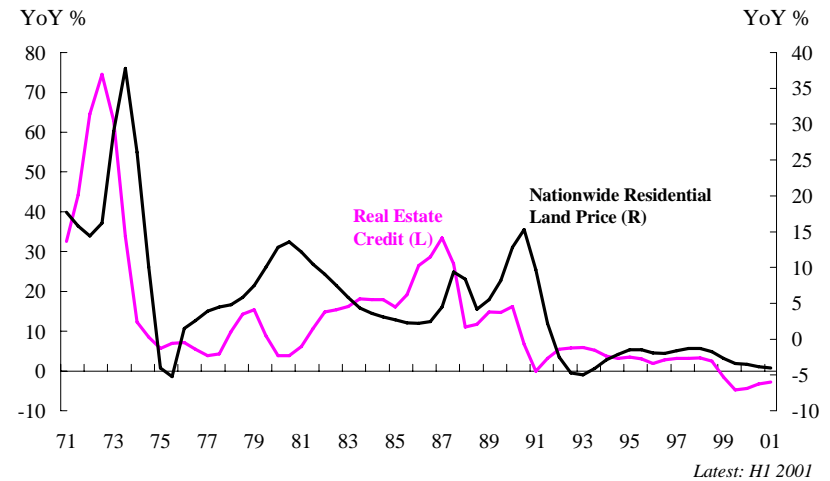
nominal GDP = real economy credit creation

$$\Delta(P_F Q_F) = V_F \Delta C_F$$

asset markets = financial credit creation



Real circulation credit determines
nominal GDP growth



Financial circulation credit determines
asset prices – leads to asset cycles
and banking crises

**Bank credit creation determines economic growth.
The effect of bank credit allocation depends on
the use money is put to**



Case 1: *Consumption credit*

Result: Inflation without growth

Case 2: *Financial credit*

(= credit for transactions that do not contribute to and are not part of GDP):

Result: Asset inflation, bubbles and banking crises

= unproductive credit creation

Investment credit

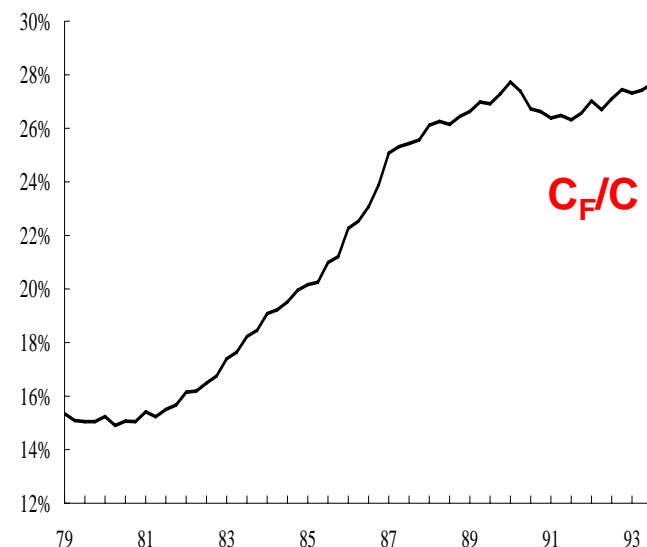
(= credit for the creation of new goods and services or productivity gains)

Result: Growth without inflation, even at full employment

= productive credit creation

Credit for financial transactions explains boom/bust cycles and banking crises

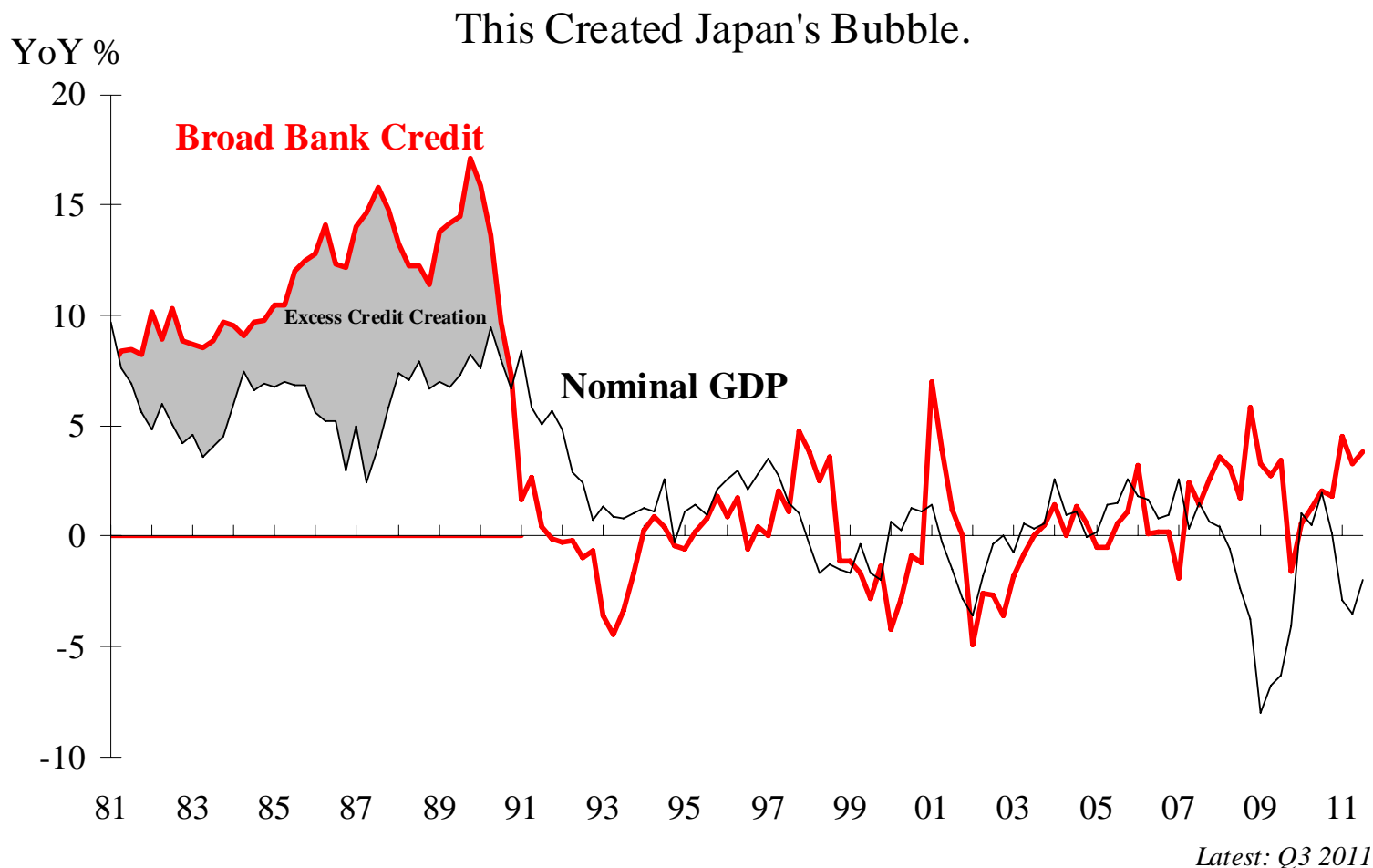
- A significant rise in **credit creation for non-GDP transactions (financial credit C_F)** must lead to:
 - asset bubbles and busts
 - banking and economic crises
- USA in 1920s: margin loans rose from 23.8% of all loans in 1919 to over 35%
- Case Study Japan in the 1980s: C_F/C rose from about 15% at the beginning of the 1980s to almost twice this share



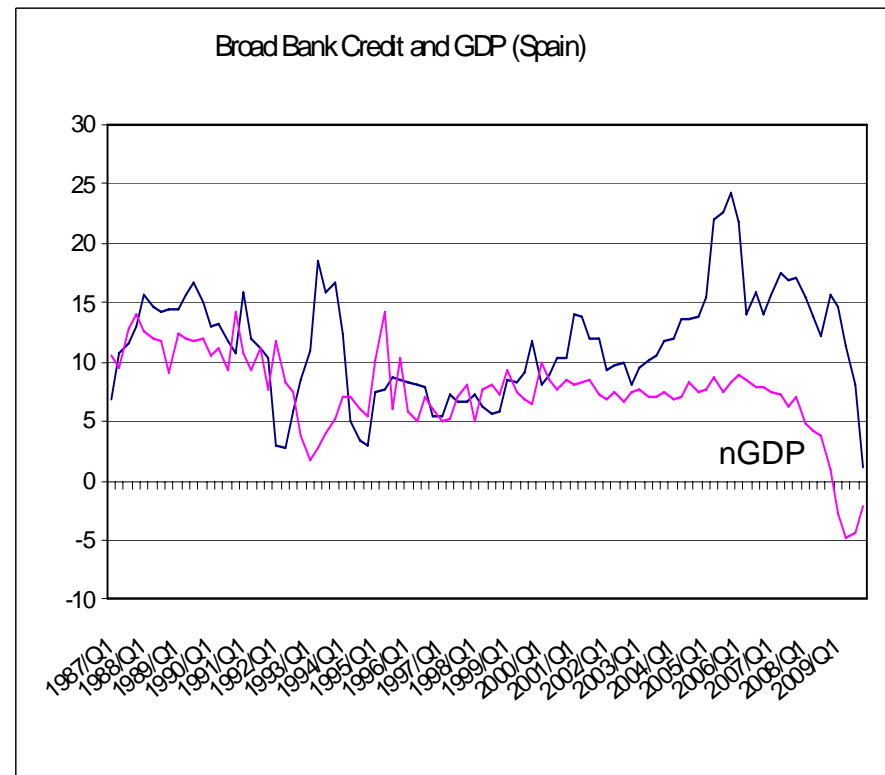
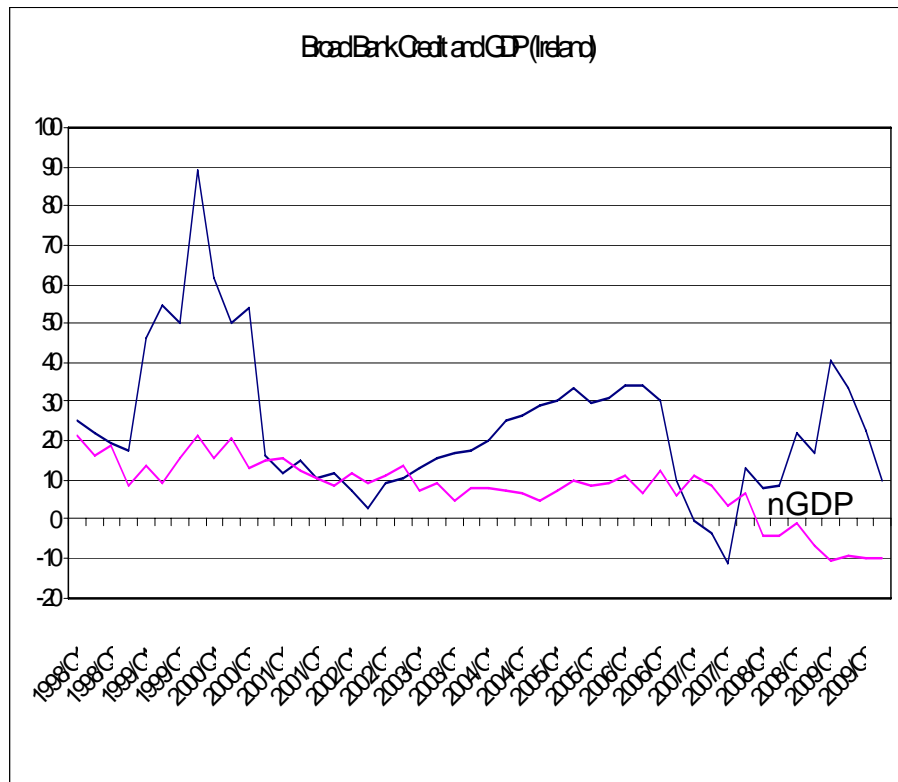
Source: Bank of Japan

C_F/C = Share of loans to the real estate industry, construction companies and non-bank financial institutions

Warning Sign: Broad Bank Credit Growth > nGDP Growth

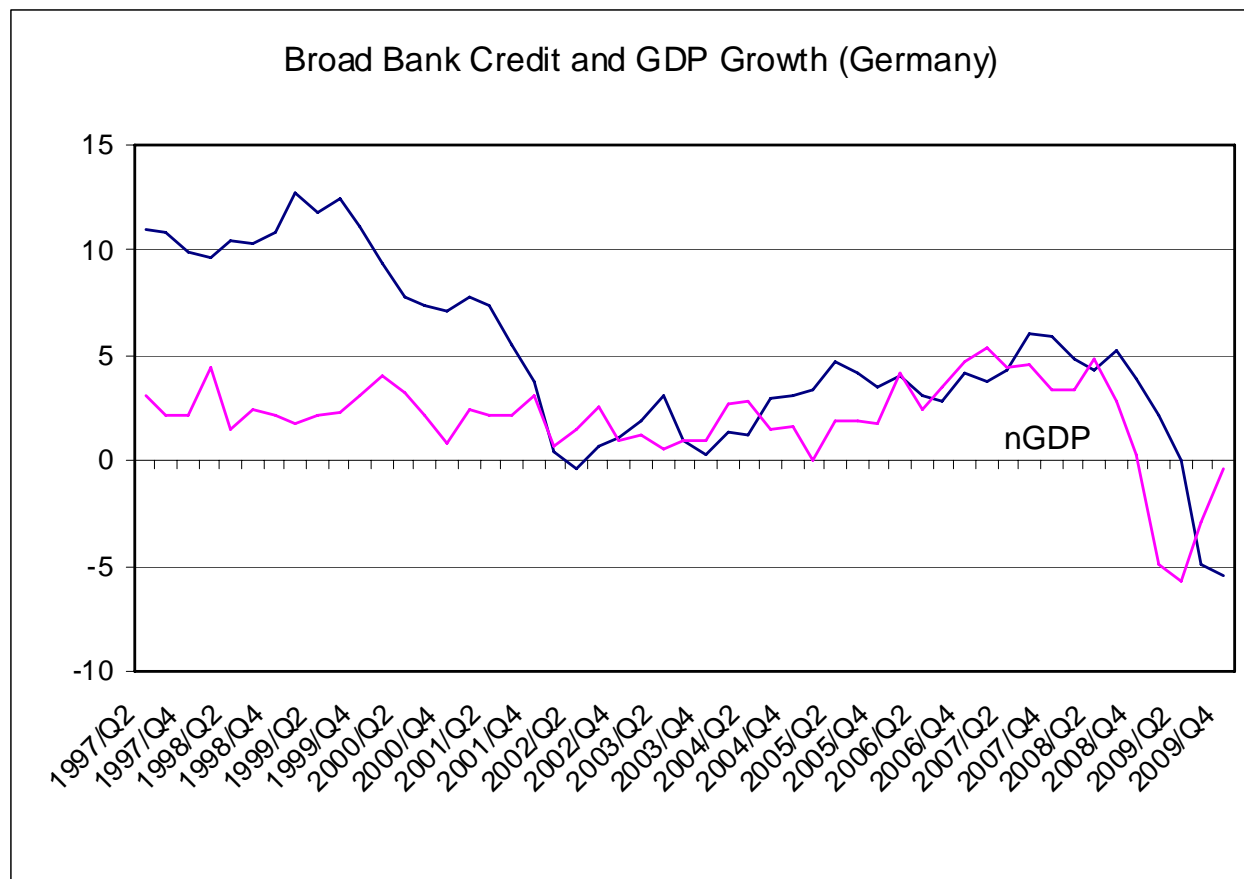


Out-of-control C_F is the problem, creating the Bubbles and Crises in Ireland & Spain



Broad Bank Credit Growth > nGDP Growth

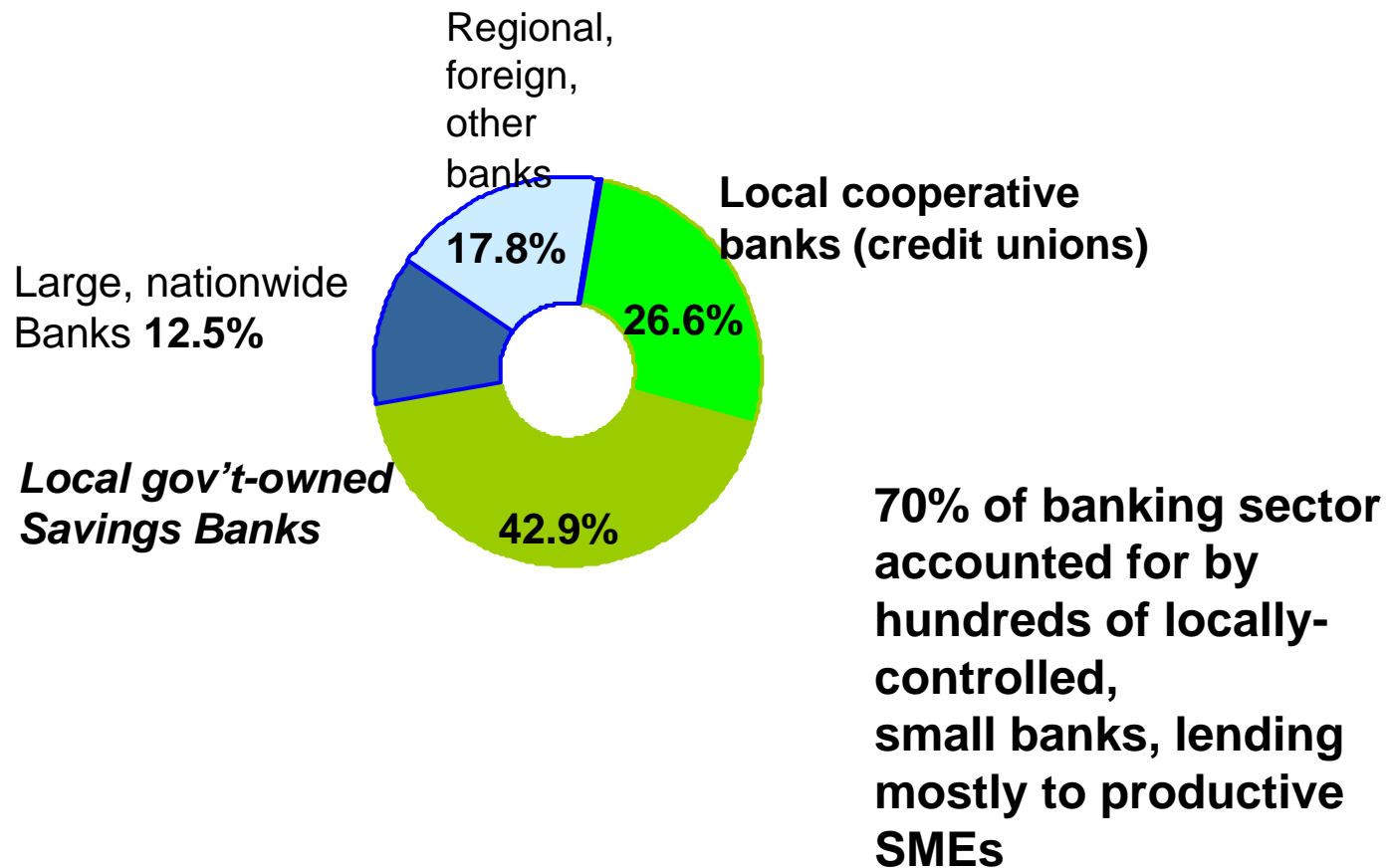
How to Avoid Asset Bubbles & Home-Grown Banking Crises - and ensure ample funding for small firms



Bank credit creation is a public privilege

- It is not a law of nature that commercial banks should be the institutions creating and allocating the money supply.
- It is a public privilege granted to banks, on the implicit understanding that they will not use it against the public interest.
- However, governments and regulators have failed to ask banks to **create and allocate credit mainly for productive purposes** and transactions that are part of GDP. **Only productive credit creation is sustainable.**
- Banks have responded by using the privilege to create the money supply **for their own short-term (speculative) gains.**
- This creates **unsustainable** asset bubbles and costly banking crises and subsequent recessions.

Banking in Germany



The German Experience: 1,700 Local, Not-For Profit Banks Dominate Banking

- The **Sparkassen** are by law required to provide banking services to everyone.
- The cooperative **Volksbanken** and the **Sparkassen**, as not-for-profit banks, contribute from their surpluses to local community needs and interests (ranging from economic needs to health, culture and others).
- The **Sparkassen** are by law required to lend only in their local area. **Volksbanken** have the same rule, imposed by their charta.
- This ties them in with the economic well-being of their local area and ensures local SME lending.
- Due to **credit creation**, having thriving local banks means communities have their own '**local currency**', their own 'local central banks' or 'development banks' expanding the money supply and boosting local economic activity.

The US Experience: Legislation to Force Banks to Disclose Who they Lend to and to Ensure Local Re-Allocation of Funds

- The **Home Mortgage Data Act (HMDA) 1976** requires all lenders to report on every *request* for a mortgage loan (including small business loans). (Data by locality and use of property, price, demographics of borrower etc.)
- The **Community Reinvestment Act (CRA) 1977** requires banks to meet the credit needs of all communities 'safely and soundly' (avoiding subprime mortgage boom-bust)
- As a result, banks have been exposed to various forms of incentives to behave more responsibly and community-oriented
- 1996-2009: \$1.4 trillion in CRA bank loans, over USD 50bn p.a. 60% of loans to SMEs, 40% mortgages. Virtually no consumer credit & subprime.
- Stable, sustainable credit creation for local communities.

Economies of Scale vs. Diseconomies of Scale

- Most productive industries thrive on **economies of scale**, which reduce average costs and contribute towards the implementation of new technologies
- So there is **commercial pressure** towards mergers, acquisitions and ever **greater concentration** of industries.
- These pressures also exist in the banking sector, reducing the number of banks and **increasing the scale of the average bank**.
- Scale economies in banking have an economic impact.
- The larger banks get, the **less they are interested in lending to productive SMEs** and the more they are interested in lending to large financial speculators, creating asset bubbles and costly banking crises.
- Hence there are **diseconomies of scale** in the banking sector.
- So we need reforms that ensure **many small banks**.

Policy Lessons

- Given the **pivotal role of credit creation and its allocation** all methods to **encourage productive credit creation** and **restrict unproductive bank credit** need to be considered.
- **Capital adequacy-based rules**, as recommended by the Basel Committee, have **no track record** of doing the job. They **cannot end the boom-bust cycles and banking crises**.
- This is because **banks create the money that becomes the capital** required for higher capital adequacy – so even counter-cyclical capital adequacy requirements will not work, as during boom times banks create more money and hence find it easier to raise more capital.
- Instead, direct rules concerning the quantity and allocation of bank credit have an excellent track record (**credit guidance, window guidance**).

Bank credit creation is a public privilege

- It is not a law of nature that commercial banks should be the institutions creating and allocating the money supply.
- It is a public privilege granted to banks, on the implicit understanding that they will not use it against the public interest.
- However, governments and regulators have failed to ask banks to **create and allocate credit mainly for productive purposes** and transactions that are part of GDP. **Only productive credit creation is sustainable.**
- **Markets simply do not ensure an efficient allocation of credit.**
- Banks have responded by using the privilege to create the money supply **for their own short-term (speculative) gains.**
- This creates unsustainable asset bubbles and costly banking crises and subsequent recessions.

c) Banking, Interest and Sustainability – or Lack Thereof

- **Usury (=interest)** used to be forbidden until about 200 years ago.
- It is merely a transfer from the many to the few.
- But usury-based banking systems impose pressure on the economy to ‘grow’ in order to justify and make possible the extraction of this transfer payment.
- In actual fact, there is **no economic growth**. It is an accounting illusion.
- We are merely **extracting and depleting finite resources** and accelerating **entropy**, but not counting the negatives (thus get ‘growth’)

c) Banking, Interest and Sustainability – or Lack Thereof

- **The solution:** discontinue the reliance on interest-based banking.
- Disentangle financial intermediation from credit creation (money supply), by requiring banks to **hold deposits in custody**, making them true deposits.
- Banks would then be equal to other ‘mere’ financial intermediaries and their systemic role would disappear.
- The pressure from the financial system to create growth would lessen significantly.
- The sovereign right to create and allocate the money supply would revert to the state to whom it belongs.
- Government debt can be reduced substantially, fiscal deficits will shrink as few new interest costs arise.

d) How to Utilise the Financial System to Achieve Sustainability

Examples of State Money Systems, Not Reliant on Interest-Based Banking:

- US under JFK, 1963: United States Notes
- Germany 1874: Reichskassenscheine
- UK, 12th to 19th century: tally sticks; 1914: 'Bradburys'
- Japan in 1868 (early Meiji): *dasatsu* (*dajokansatsu*)
- America: colonial scrip; later under Abraham Lincoln: Greenbacks
- China in Kublai Khan's day: government paper money
- Rome, about 300 BC to 49 BC : state coins made of cheap copper and brass, not precious metals, spent into circulation by the gov't (with Julius Caesar's assassinatino it was taken out of circulation).
- Sparta 5th to 4th century BC

State Money – A More Sustainable System



**China: Government-issued paper money (Kublai Khan)
Zero Government Debt, Zero Interest Payments**

State-Issued Money

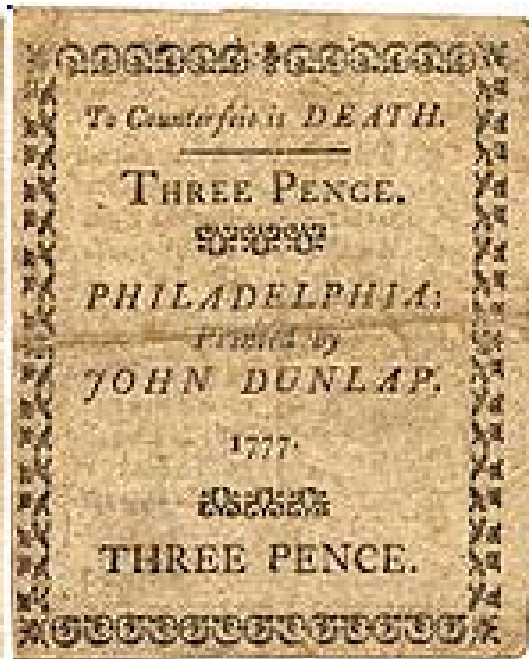
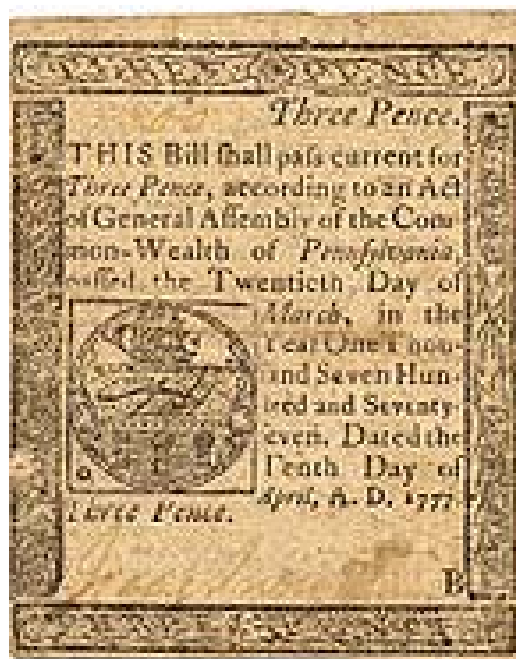


太
政
官
札

Dajōkan
satsu

Japan: Government-issued paper money: 1868

State-Issued Money



Colonial Scrip in North American British Colonies

“In the Colonies we issue our own money. It is called Colonial Scrip. ...we control its purchasing power, and we have no interest to pay to no one.”

(Benjamin Franklin, quoted by Senate Robert Owen, *National Economy and the Banking System*, Senate document 23, Washington DC: US Gov't Printing Office, 1939, p. 98)



Colonial Scrip Banned by Britain (Currency Act 1751 and 1764, forbidding scrip to be designated legal tender and to settle private debt.)

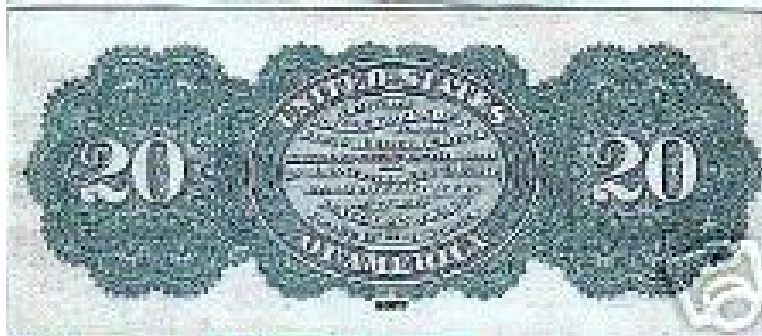
Was the War of Independence fought over taxes on tea? (‘Boston Tea Party’)

Or over new English legislation forcing colonies to abandon their paper money and use gold and silver?

“The Colonies would gladly have borne the little tax on tea and other matters had it not been that England took away from the Colonies money, which created unemployment and dissatisfaction” Benjamin Franklin (as quoted by R. Owen, 1939, op. cit).

State-Issued Money

President Lincoln issued United States Notes



1863 United States Notes, aka 'Greenbacks'

1862, President Lincoln signed the First Legal Tender Act

“The underlying idea in the greenback philosophy... is that the issue of currency is a function of the government, a sovereign right which ought not to be delegated to corporations.”

Davis Rich Dewey (MIT, 1902)

State-Issued Money



Deutsches Reich: German government-issued paper money₃₁

State-Issued Money



Island of Guernsey: Government-issued paper money

‘In 1817, the Island was desperately in need of infrastructure investment, but it was bereft of money. The interest payments alone accounted for most of their tax revenue. They found that they could not bleed any more taxes out of the people and they could not afford to borrow any more money.’

State Money – A More Sustainable System

1917



UK: Government-issued paper money: 1914-1928

The standard
'Federal
Reserve Note'



JFK's 1963
'United
States Note':
No Fed seal



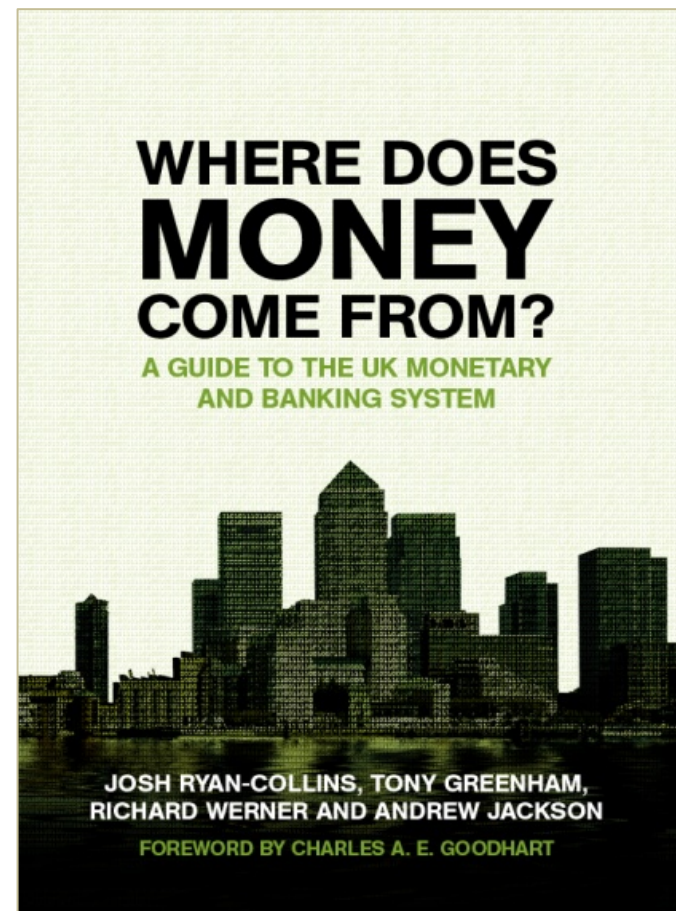
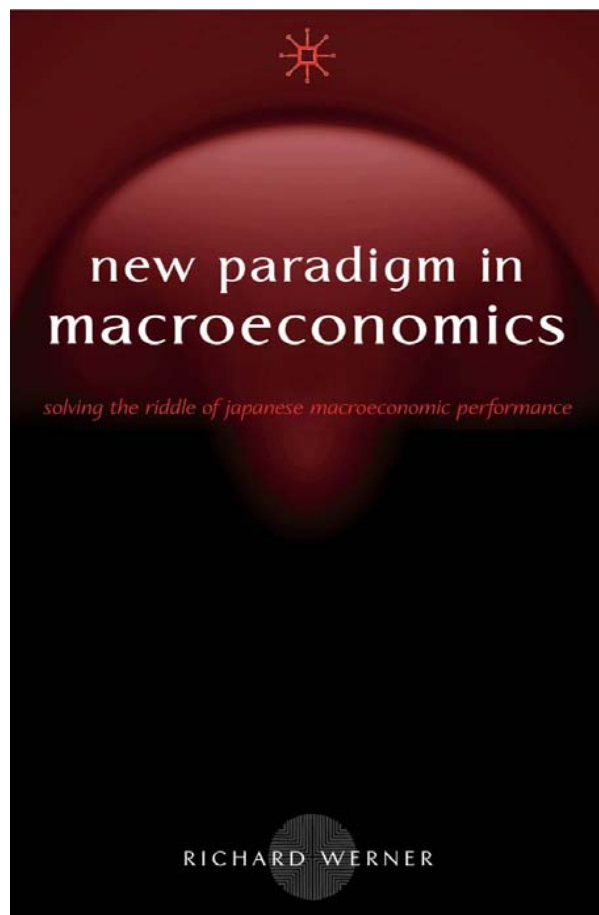


Thomas Edison:

“People who will not turn a shovel full of dirt on the project (Muscle Shoals Dam) nor contribute a pound of material, will collect more money from the United States than will the People who supply all the material and do all the work.

This is the terrible thing about interest ... But here is the point: If the Nation can issue a dollar bond it can issue a dollar bill. The element that makes the bond good makes the bill good also. The difference between the bond and the bill is that the bond lets the money broker collect twice the amount of the bond and an additional twenty percent. Whereas the currency, the honest sort provided by the Constitution, pays nobody but those who contribute in some useful way. It is absurd to say our Country can issue bonds and cannot issue currency. Both are promises to pay, but one fattens the usurer and the other helps the People. If the currency issued by the People were no good, then the bonds would be no good either. It is a terrible situation when the Government, to insure the National Wealth, must go in debt and submit to ruinous interest charges at the hands of men who control the fictitious value of gold. Interest is the invention of Satan.”

Further Reading:



Basingstoke: Palgrave Macmillan, 2005

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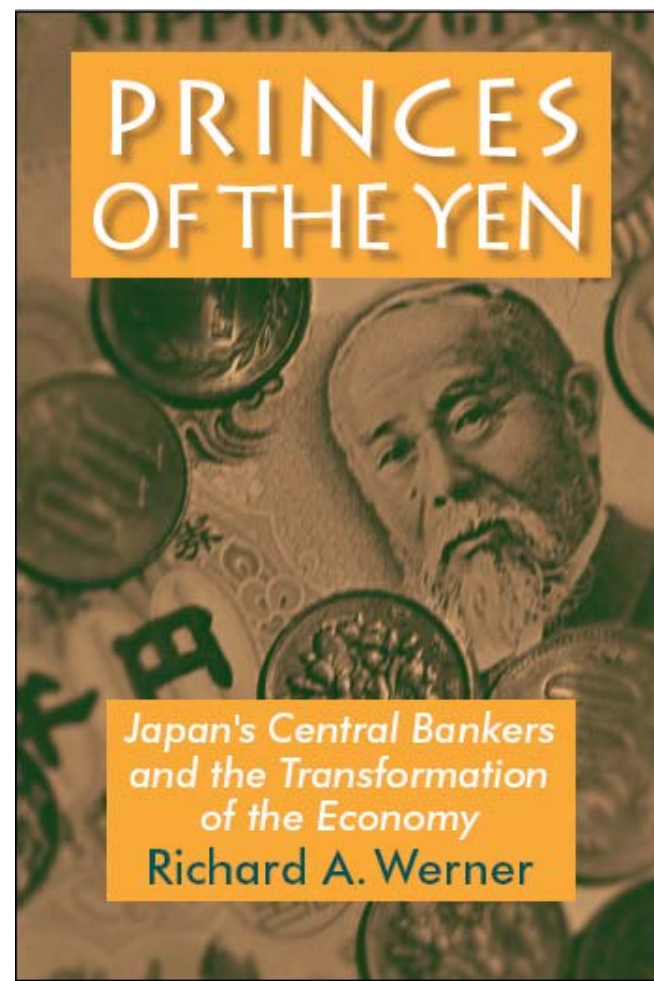
New Economics Foundation, 2011

Weitere Details:



München: Vahlen Verlag, 2007

Richard A. Werner 2012



M. E. Sharpe, 2003