

Secrets of the Banking Trade

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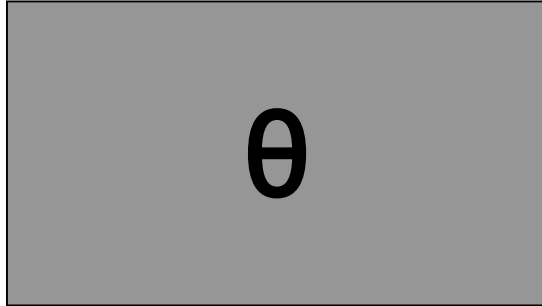
**International Actuarial Association
Annual Conference
President's Forum
Millennium Gloucester Hotel
South Kensington, London SW7 4LH**

1. Risk

Official Story: Risk can be Measured by Volatility

- VaR-based models and other risk measurement models favour low-volatility instruments
- Low-volatility financial products sell well to institutional investors
- **Bear Stearns High Grade Credit Strategies Fund** popular: low volatility
- Banks were happy to lend to the fund to increase leverage.
- **Bear Stearns High Grade Credit Strategies Enhanced Leverage Fund** also very popular.
- Risk measurement systems indicated: not a risky fund. It invested in highly rated financial instruments, and its volatility was very low.
- The NAV (performance) looked like drawn with a ruler – virtually a straight line.
- But: in 2007, the NAV of the fund went to zero on a straight line: **a complete write-off**

What the industry does not want to talk about:



This is the Greek letter **Theta**.

- It represents **time** in option pricing.
- The ancient Greeks thought it looks similar to a **skull**, so it symbolises **death**.
- Define: **θ Risk** measures the risk of total failure – a '**Blow-Up**'
- It is **not measured by the volatility** of past performance/underlying instruments.

Example of θ Risk:

- **‘High grade structured credit funds’**
 - concentrated investments in one asset class and type of instrument
 - lack of liquidity of instruments
 - high leverage
 - low volatility, hence low risk?
- Not a good investment: high θ (theta) ‘blow up’ risk.

1. Risk

Rule 1: Default risk matters most; it is mainly driven by leverage

Revealing Trade Secret No. 1:

- High performance of Hedge Funds is not due to their skill in selecting high return investments, but in achieving low volatility, so that banks will lend to the fund, increasing leverage.
- The **returns come mainly from the leverage, i.e. bank credit.**
- But high leverage also makes such low-volatility ('low risk') funds highly risky
- And bank credit is a public good, its use in this context has severe and expensive consequences – as we shall see later.

The Theta Risk Challenge

- To reduce Theta Risk, funds should be
 - Highly diversified across asset classes, regions and countries
 - Invest only in liquid instruments
 - Have high liquidity in terms of redemptions (no lock-in)
 - Net long bias
- Dilemma:
 - Fulfilling these requirements seems to deliver only modest returns, and perhaps volatile results.
 - More attractive returns can only be achieved at the cost of significant Theta Risk
 - Solution: A fundamentals-based investment strategy that is able to **forecast the business cycle**.

The Solution:

- The only way to solve the dilemma is to utilise an approach that is **not trend-following**.
- This means an approach that has identified the **fundamental cause** of movements in global fixed income, equity and FX markets.
- Such an approach can capture turning-points, and thus generate particularly attractive returns.
- Can this be done? “The holy grail of fund management”.
- **Let’s check it out:** what drives the business cycle?

2. The Key Determinant of the Cycle

Official Story: Interest Rates

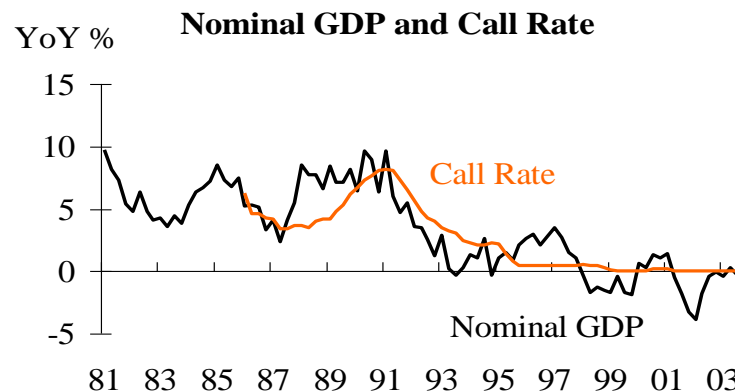
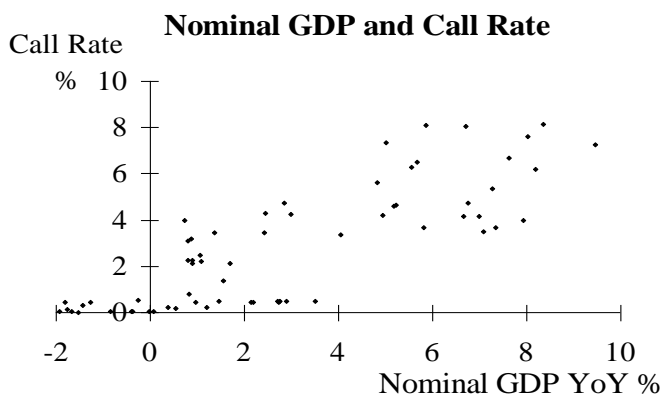
- Central bankers, market pundits, journalists have been repeating the mantra that interest rates are the key variable driving the business cycle.
- Lower rates are supposed to stimulate the economy and equity markets, higher rates are supposed to slow the economy and depress markets.
- The story has been retold so many times over the past three decades, we all assume that it has long been empirically tested and is well-proven and established.
- What is the empirical evidence for the official story?
- **There isn't any.**

Fact: How interest rates and growth are actually related

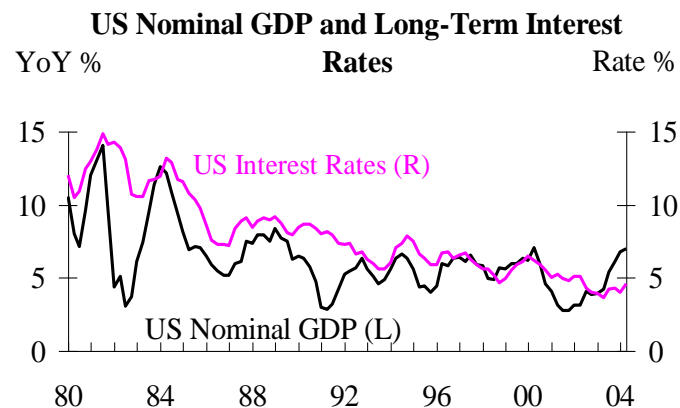
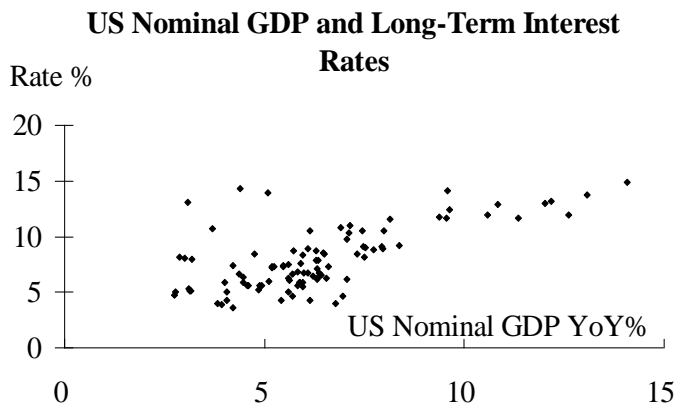
Correlation

Statistical Causation

Japan



US



Rule 2: Rates Follow the Cycle

Trade Secret 2: Central banks don't use rates to run the economy

Official Story:

High interest leads to low growth;

Low interest leads to high growth

Cognitive Dissonance

Empirical Reality:

High growth leads to high interest;

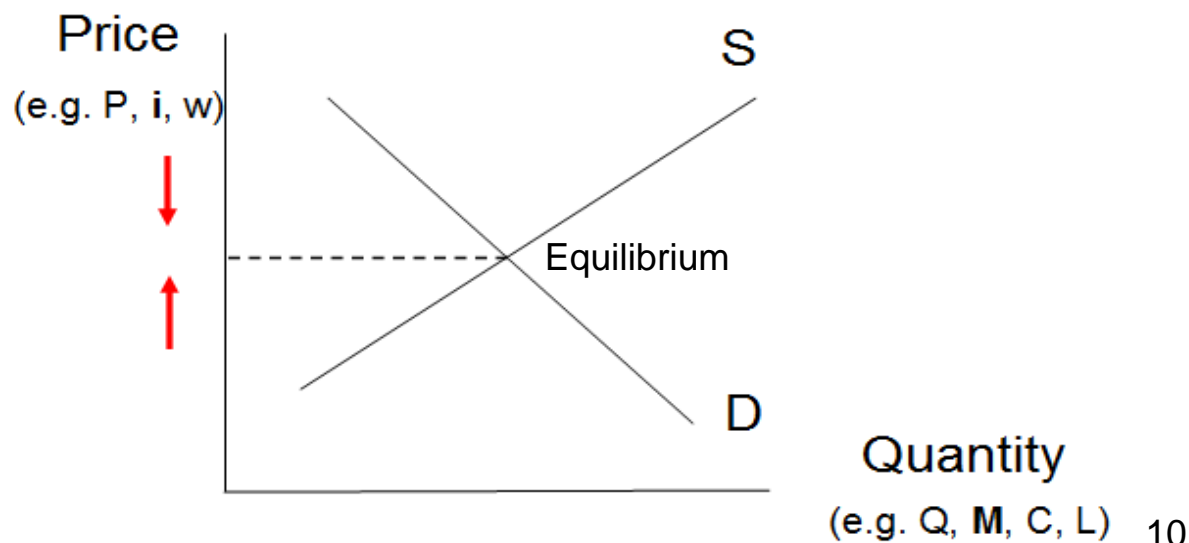
Low growth leads to low interest.

- Interest rates are the result of economic growth.
- So they cannot at the same time be the cause of economic growth.
- The facts contradict the official story of monetary and banking policy.
- Questions: If not rates, what then determines economic growth?
Why do central bankers keep repeating the mantra that they use interest rates as policy tool?

3. Markets

Official Story: Markets always clear and they are efficient. Hence prices are key.

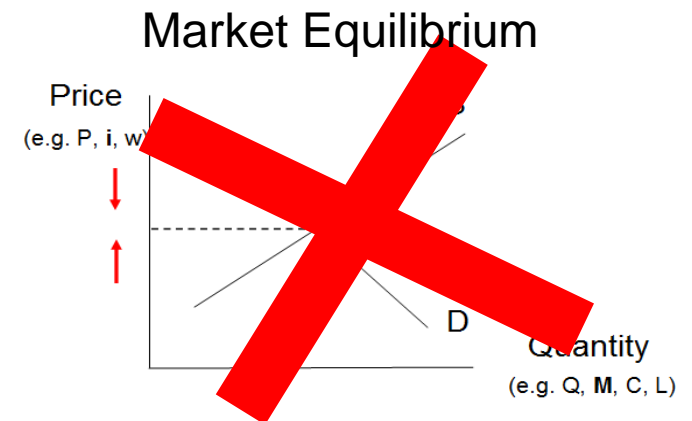
- Assume: 1. Perfect information; 2. Complete markets; 3. Perfect competition; 4. Instantaneous price adjustment; 5. Zero transaction costs; 6. No time constraints; 7. Profit maximisation of rational agents; 8. Nobody is influenced in any way by actions of the others.
- Then: It can be shown that markets clear, as prices adjust to deliver equilibrium.
- Hence prices are key, incl. the price of money (interest)
- Market 'efficiency' is a more advanced condition, requiring more assumptions to hold.



3. Markets

Fact: Markets almost never clear

- Assume:
 1. Perfect information;
 2. Complete markets;
 3. Perfect competition;
 4. Instantaneous price adjustment;
 5. Zero transaction costs;
 6. No time constraints;
 7. Profit maximisation of rational agents;
 8. Nobody is influenced in any way by actions of the others.
- If each assumption has a probability of 55% of being true, what is the probability of all assumptions being jointly true?
- $(55\%)^8 = 0.8\%$
- But the individual probability is much lower.
- Result: **Markets can never be expected to clear.**



3. Markets

Rule 3: Markets are rationed and determined by quantities.

Trade Secret 3: The short side has allocation power and uses it to extract non-market benefits

- Since we cannot expect these assumptions to ever jointly hold true, we know that there cannot possibly be market equilibrium.
- Thus all markets must be expected to be rationed.
- Rationed markets are determined by **quantities**, by the '**short-side principle**': Whichever quantity of demand or supply is smaller determines the outcome.
- The short side has the **power** to pick and choose who to do business with.
- This power is usually abused to extract non-market benefits.
- Think of how Hollywood starlets are selected.

4. Money

Official Story: We don't know what it is, and it doesn't matter

- What is Money? Textbooks say they **do not know**. They talk about deposit aggregates M1, M2, M3 or M4, are not sure which one it is, and admit that these are not very useful measures of the money supply.
- Money and Banking textbook:
“Although there is widespread agreement among economists that money is important, they have never agreed on how to define and how to measure it” (Miller and VanHoose, p. 42)
- Even the **Federal Reserve does not tell us just what money is:**
“there is still no definitive answer in terms of all its final uses to the question: What is money?”
- The leading textbook in advanced (Master-level) economics at leading British and US universities is David Romer (2006), *Advanced Macroeconomics*, 3rd ed.:
“Incorporating money in models of [economic] growth would only obscure the analysis” (p. 3).

4. Money

Fact: Money is not 'neutral'. It affects all aspects of the economy

- This puzzles economists – because within their theoretical dream worlds money should be 'neutral', irrelevant.
- Prices, such as the price of money, matter in theoretical models making many unrealistic assumptions.
- We do not live in such a theoretical dream world. Thus we know that in our world markets are rationed.
- Rationed markets are determined by the short-side. Which is larger, the supply of money or the demand for money?
- The demand for money is infinite.
- **The limiting factor is thus the supply of money.**

4. Money

***Rule 4: Money is key. It can be defined and measured.
Its creation and allocation is more important than rates***

- For economic growth to take place, more transactions have to take place this year than last year.
- This is only possible, if more money is changing hands this year than last year to pay for these transactions.
- How can more money change hands for transactions this year than last year?
- If more money is supplied.
- How is money supplied in the economy?

5. The Supply of Money: Where does it come from?

Official Story: From the central bank

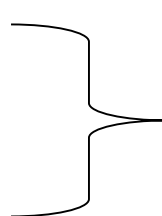
Rule 5: Banks create the money supply

- **Survey: Who do you think creates and allocates the majority of the money supply?**

Survey Result

Correct Answer

- The government
- The central bank
- The banks
- The capital and money markets
- The global financial infrastructure



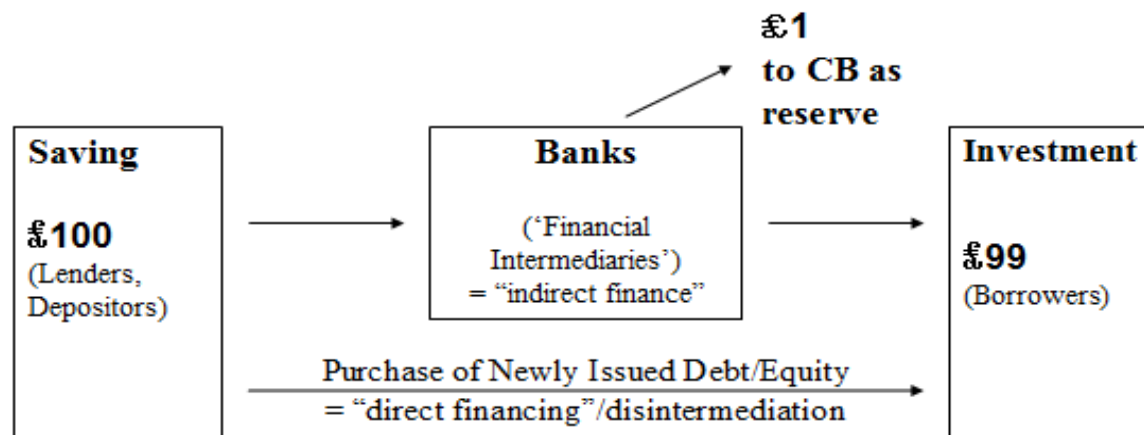
~~84%~~



6. Are banks different? If so why?

Official Story: Banks are mere financial intermediaries, like other non-bank financial institutions.

Textbook Representation of Banks as Mere Intermediaries



- “Banks gather deposits (savings) first and then hand out this money to borrowers”
- “They put a reserve aside with the central bank.”
- “Banks act as mere intermediary agents.”

Where is money safer?

What is its status if

1. you give your money to a stockbroker?

- a) it is owned by the stockbroker, and therefore at risk when the broker becomes insolvent
- b) it is held in custody and therefore unaffected by the failure of the broker

2. you give your money to a bank?

- a) it is owned by the bank, and therefore at risk when the bank becomes insolvent
- b) it is held in custody and therefore unaffected by the failure of the bank

6. Are banks different? If so why?

***Fact:* Banks operate very differently from what they say**

- A loan is when the use of something is handed over to someone else.
- If I lend you my car, I can't also use it myself.
- **There is no such thing as a 'bank loan'.**
- Banks never lend money. They never lend 'out their deposits', as those models that include banks usually assume.
- They cannot lend on their reserves at the central bank to the non-bank public
- What banks do is **more** far-reaching than that.

Trade Secrets of Banking

The unknown legal realities of the banking business

- When a 'deposit' is made with a bank, the customer does not 'have' any money 'at the bank', or 'on deposit' (i.e. held in custody by the bank).
- The money 'on deposit' at the bank is fully owned and controlled by the bank, not by the 'depositor'.
- This is because the 'depositor' lends money to the bank, and becomes a general creditor of the bank. Hence the bank records a 'credit' on behalf of the customer in its records of its debts
- Banks never 'lend' money (unlike firms, insurance companies, others)
- Instead, **banks acquire securities** – the 'loan contract' is a **promissory note** (like BoE notes, but without legal tender status) that the bank acquires.
- The bank *does not pay out* the money referred to in the loan contract. Instead, just as with a 'deposit', it records a 'credit' on behalf of the customer in its records of its debts.

(Werner, 2014)

Richard A. Werner 2014

Trade Secret: What makes banks unique

The case of a £1,000 loan

Step 1 The bank ‘purchases’ the loan contract from the borrower and records this as an asset.

Balance Sheet of Bank A

Assets	Liabilities
£ 1,000	

Step 2 The bank now owes the borrower £ 1000, a liability. It records this however as a **fictitious customer deposit**: the bank pretends the borrower has deposited the money, and nobody can tell the difference.

Assets	Liabilities
£ 1,000	£ 1,000

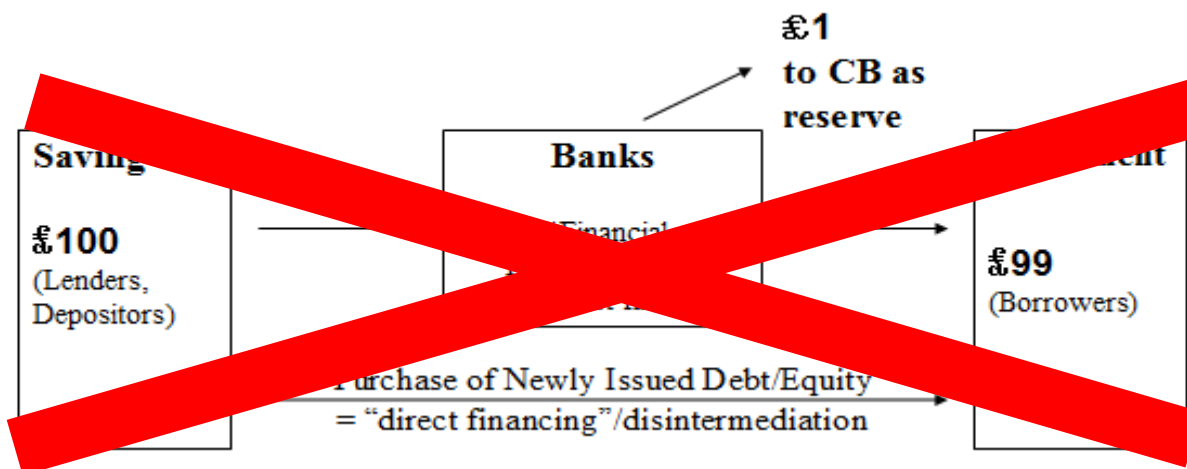
NB: No money is transferred from elsewhere

So the creditor (the bank) does not give up anything when a loan is ‘paid out’

Bank of England Q1 2014 Quarterly Bulletin

- The world is informed about **where money comes from**.
- **97% is created by banks (not financial intermediaries)** when they extend credit ('lend')

Textbook Representation of Banks as Mere Intermediaries



6. Are banks different? If so why?

***Rule:* Banks are the creators of the money supply.**

- Unlike all other non-bank financial institutions, banks can create money out of nothing.
- They do this by what is called ‘bank lending’ – better: **credit creation**. This creates bank credit and deposit money simultaneously.
- **Through this process banks are the lynchpin of the economy.**
- **They decide who gets newly created money and for what purpose.**
- **This is why banks are unique and different from all other non-bank financial institutions.**

6. Are banks different? If so why?

Rule: Banks are the creators of the money supply.

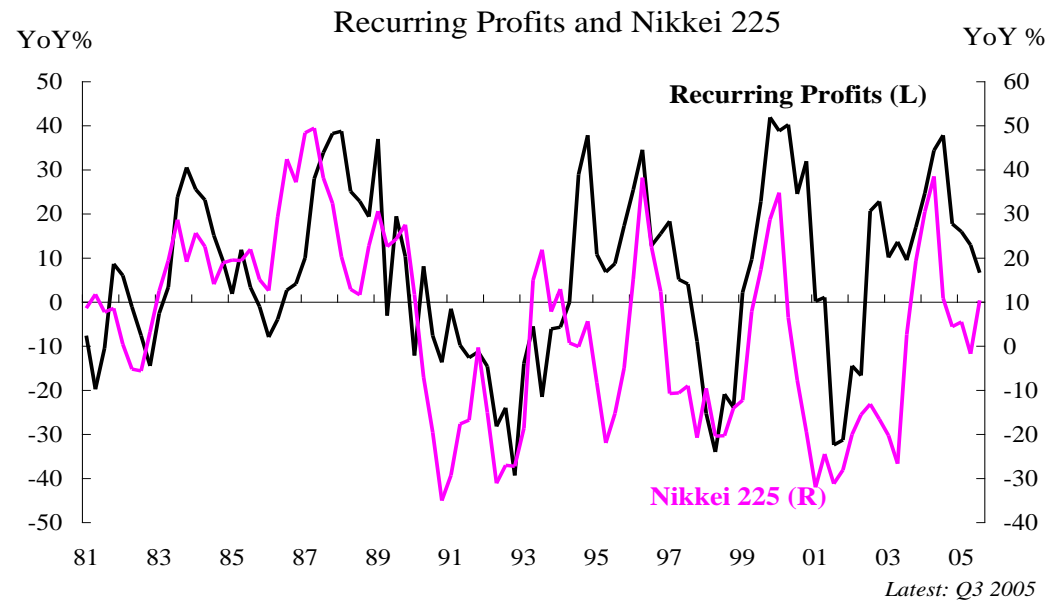
- Banks create money.
- One pound in net new 'lending' increases the money supply by one pound.
- Banks decide who gets the money and for which purpose it is used.
- This decision shapes the economic landscape.
- Banks thus decide over the economic destiny of a country.
- Credit creation is the most important macroeconomic variable.
- This is a simple message, but reflecting it in economics means discarding the currently prevailing models – a veritable revolution. And about time.

Recognition of Bank Credit Creation is a Game Changer for...

- Economics, finance, banking research and forecasting
- Government policy (monetary policy, fiscal policy, regulatory policy)
- Recognition of the banks' true role is the precondition for solving many of the world's problems, including
 - the problem of the recurring banking crises,
 - unemployment,
 - business cycles
 - underdevelopment and the
 - depletion of finite resources.

7. Stock Markets

Official Story: They are determined by valuations, earnings

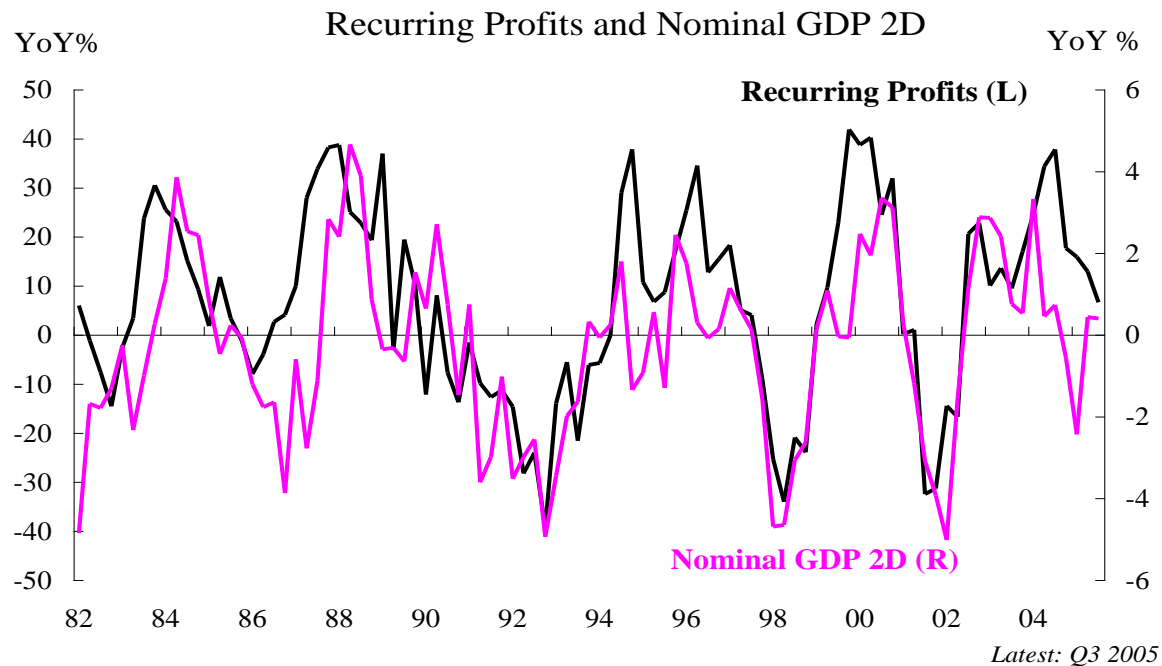


➤ But how can we predict aggregate profit growth?

7. Stock Markets

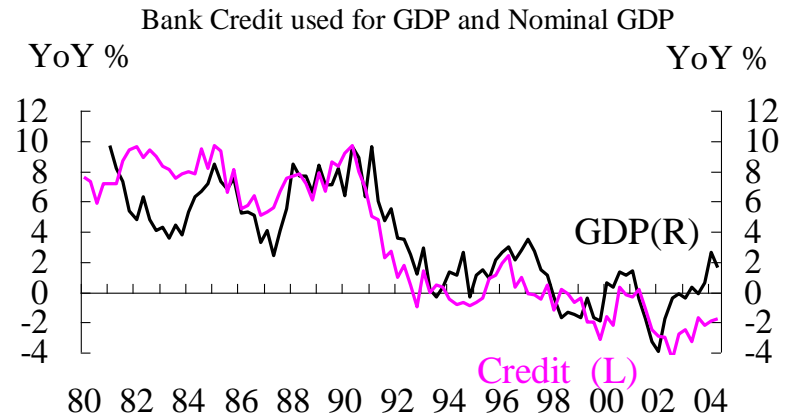
Fact: Profits are driven by GDP acceleration, but what determines GDP?

- GDP data arrive too late; so we need to **forecast GDP**

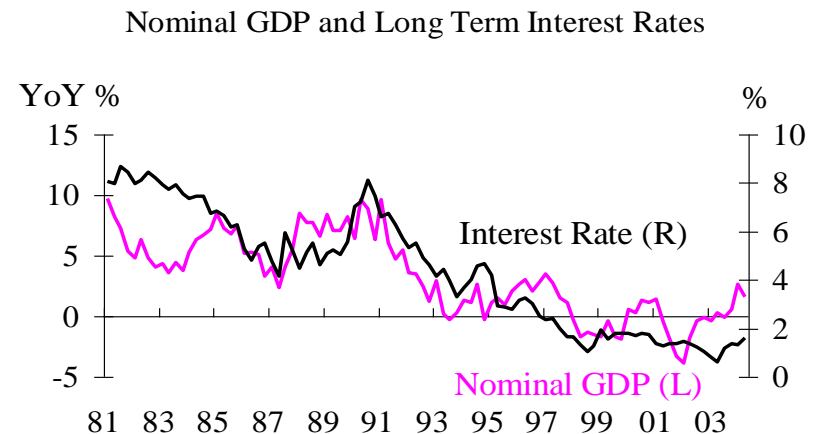


Rule: Credit drives growth, asset prices and interest rates

- GDP follows credit creation



- Bond yields follow GDP growth



Quantity Theory of Credit (Werner, 1992, 1997):
Rule: The allocation of bank credit creation determines what
will happen to the economy – good or bad...

non-GDP credit

GDP credit

= unproductive credit
creation

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

Case 3: 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

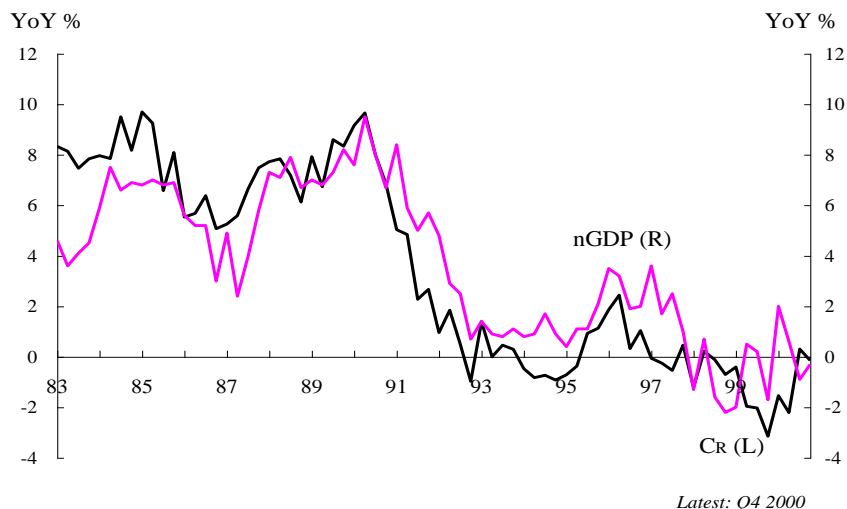
The Quantity Theory of Credit (Werner, 1992, 1997)

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

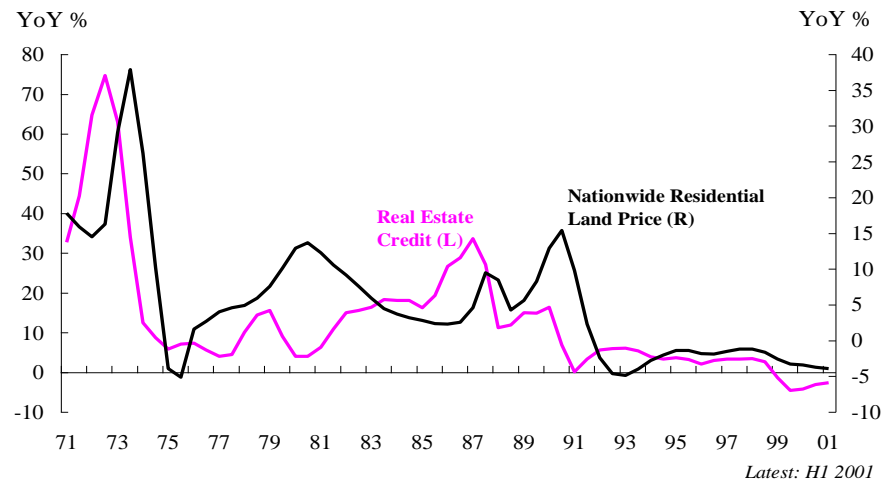
nominal GDP = real economy credit creation

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

asset markets = financial credit creation



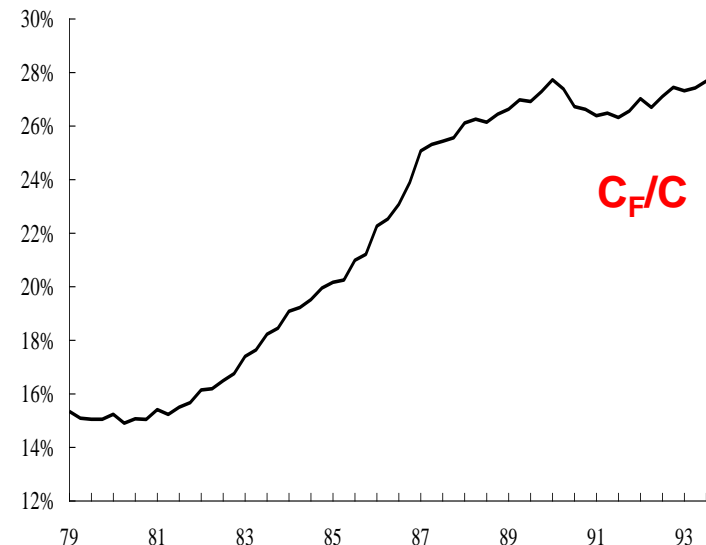
Real circulation credit determines nominal GDP growth



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

Rule: 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

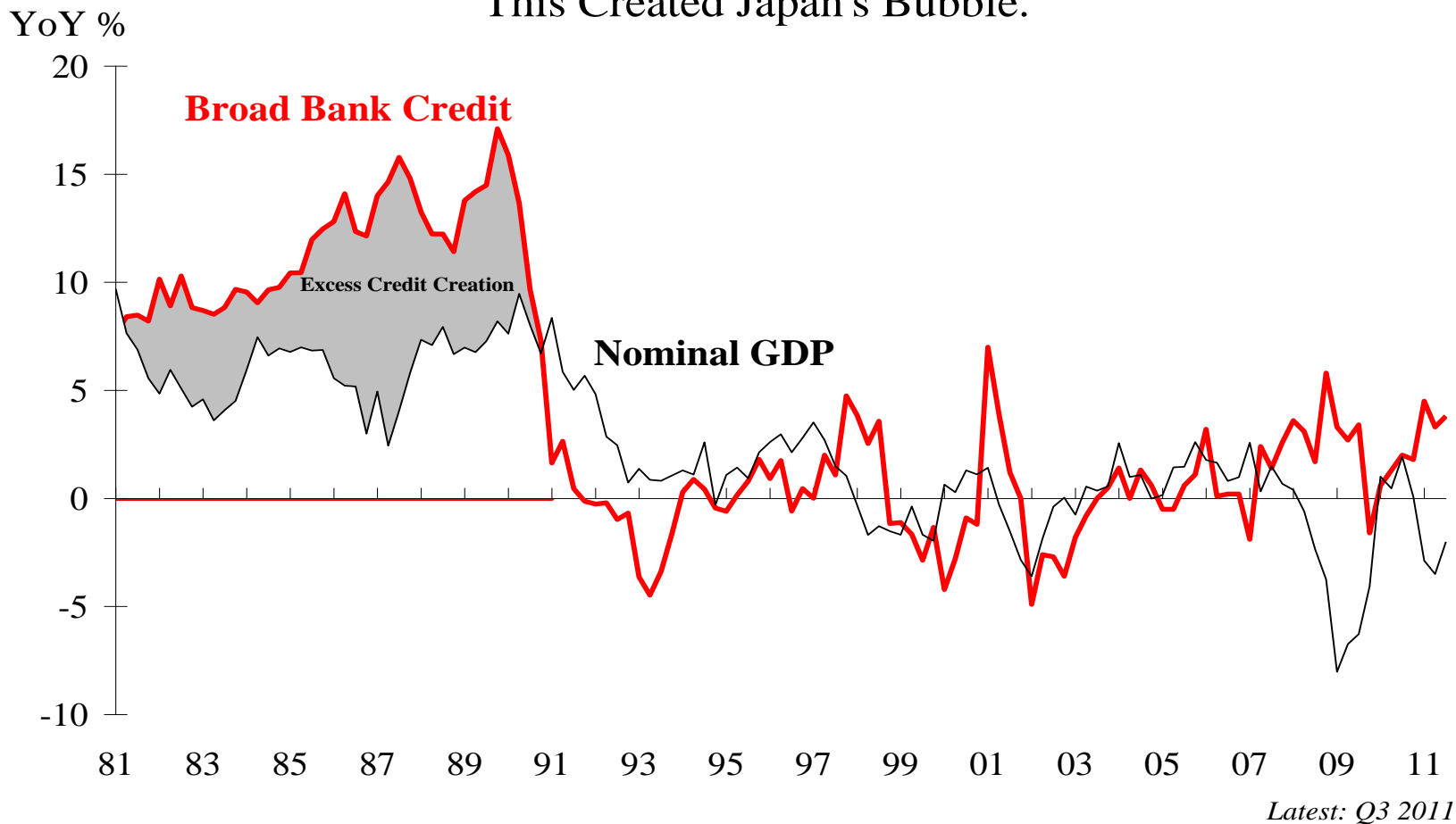


Source: Bank of Japan

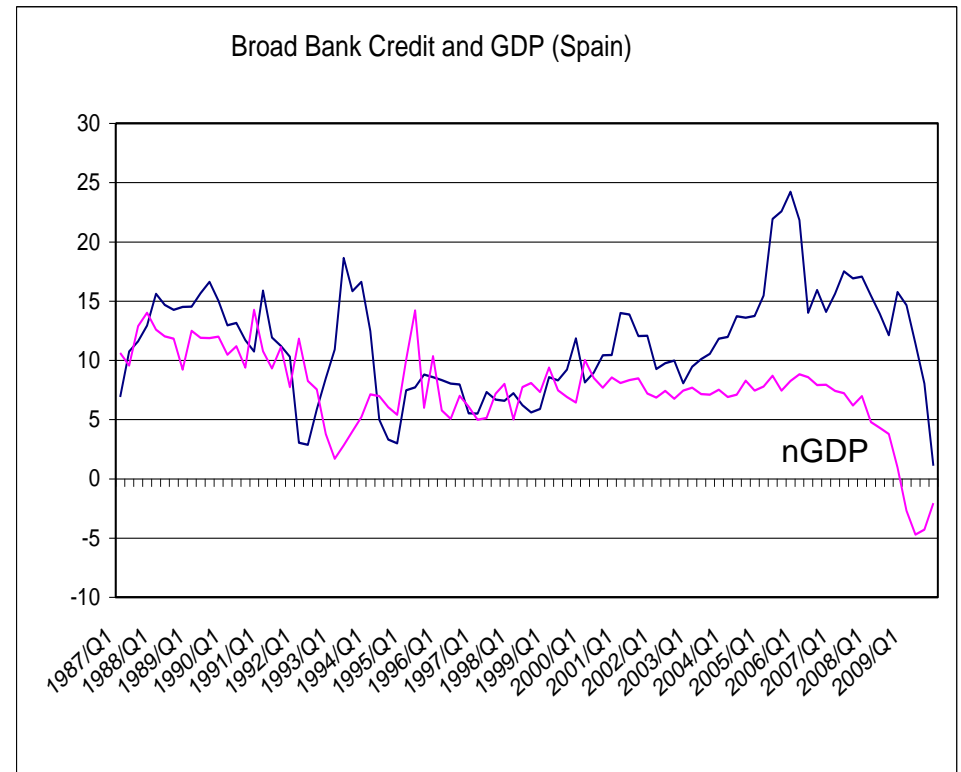
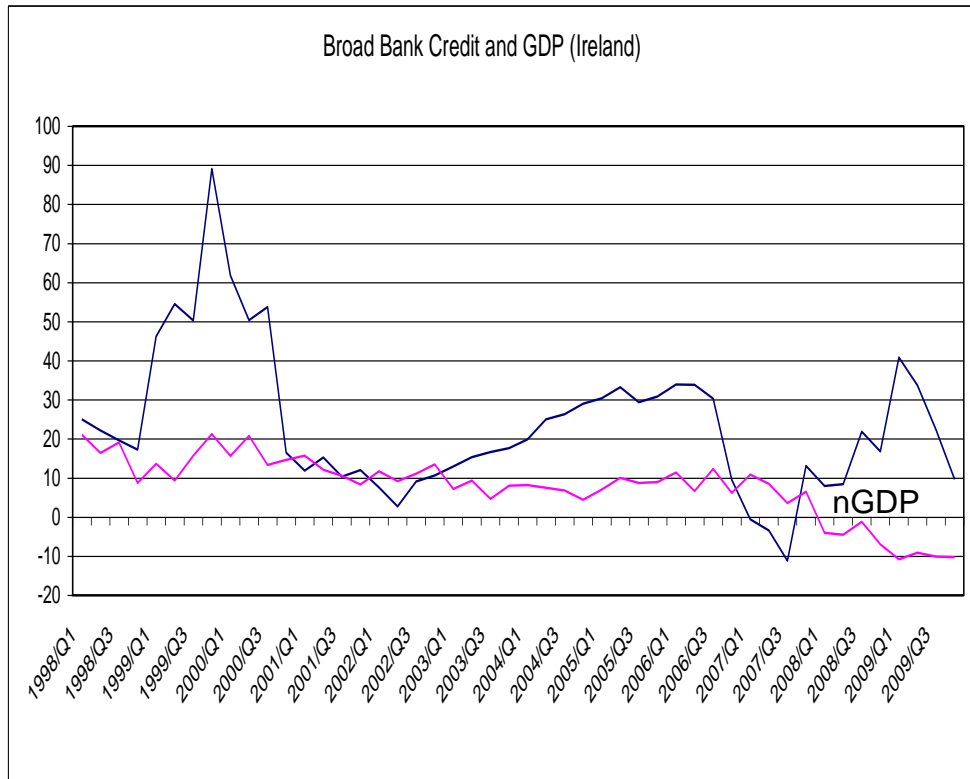
C_F/C = Share of loans to the real estate industry, construction companies and non-bank financial institutions

Rule: Broad Bank Credit Growth > nGDP Growth = banking crisis

This Created Japan's Bubble.



Rule: Out-of-control C_F creates bubbles and crises, e.g. in Ireland & Spain

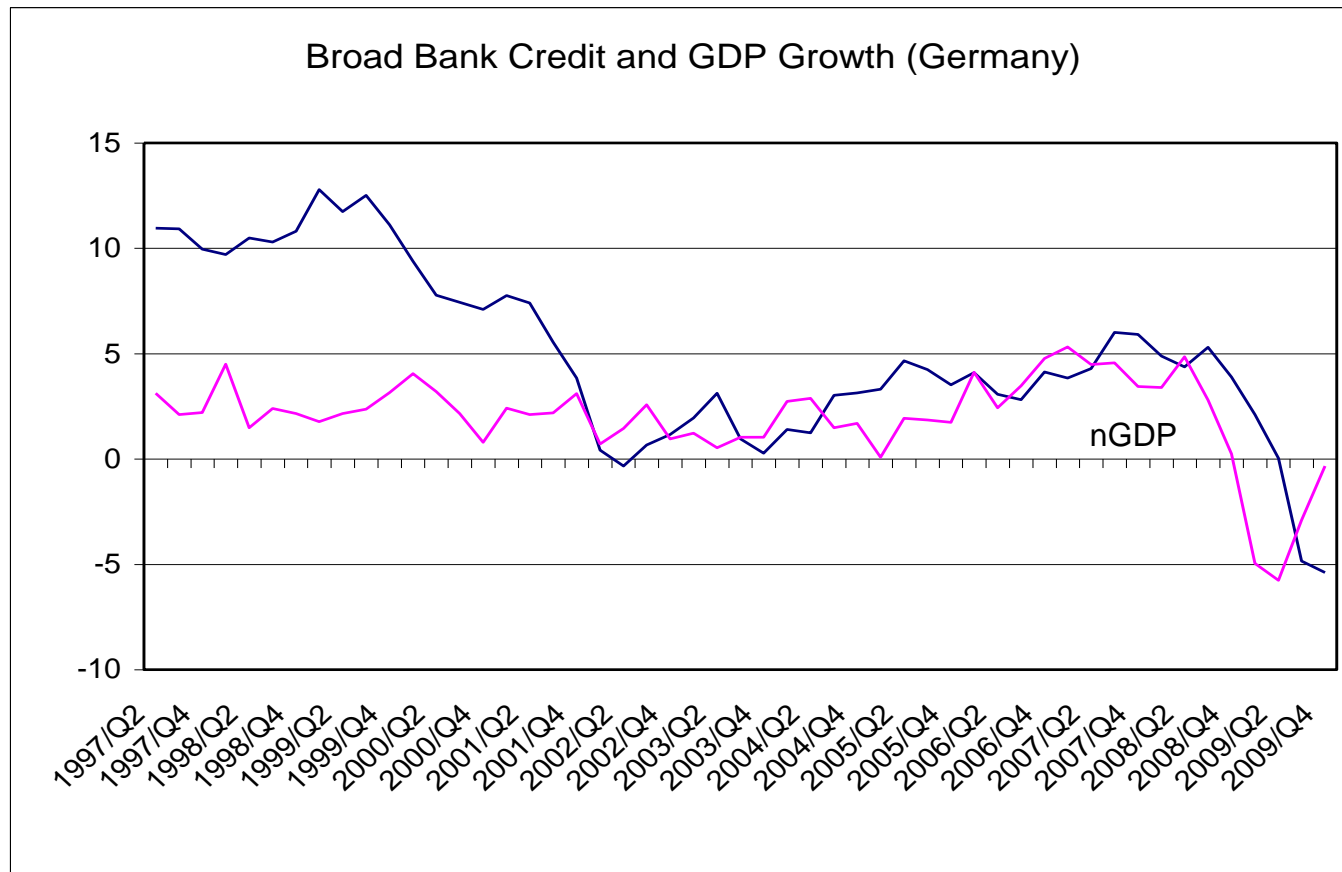


Broad Bank Credit Growth > nGDP Growth

Rule: Concentrated banking systems are prone to recurring crises and instability

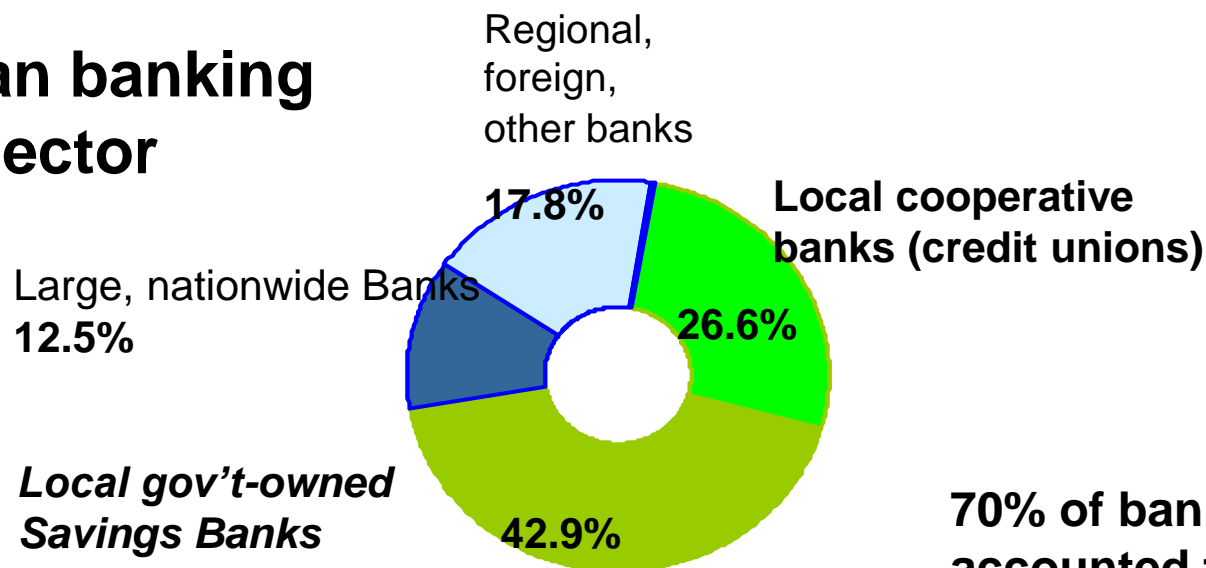
- Banks and bankers maximise their benefits by growing quickly
- The easiest way to grow is to create credit for non-GDP (speculative) transactions
- This is why we have had hundreds of banking crises since the 17th century (when modern banking started)

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



***Rule:* A banking sector dominated by local, not-for-profit banks avoids asset bubbles and banking crises**

German banking sector



70% of banking sector accounted for by hundreds of locally-controlled, small banks, lending mostly to productive SMEs

8. Central Banks

***Official Story:* They aim at stability of prices, growth, currencies**

- What is the **empirical evidence** for this assertion?
- **There isn't any:** Stability of prices, growth and currencies is **not what we observe.**
- Central banks also claim that they pursue these goals by manipulating interest rates.
- But interest rates *follow* growth, and hence are useless as monetary policy tool

8. Central Banks

Fact: Central banks often cause, exacerbate cycles

- Prediction in 2003 (*Princes of the Yen*): The ECB will create massive credit bubbles, banking crises and recessions in the eurozone.
- Between 2004 and 2008 the ECB oversaw between 20% and 40% broad credit growth in Ireland, Spain, Portugal and Greece.
- This could not fail to create massive asset bubbles, banking crises and recessions.
- The ECB has said that the recessions in these countries are ‘opportunities’ to implement structural changes and increase EU control over national budgets.
- The Bank of Japan has said that the long recession was ‘doing good’, by imposing the pressure for deregulation, liberalisation and privatisation.
- The World Bank has said that the central bank-created Asian crisis was a ‘window of opportunity’ for structural changes and the ‘transfer of ownership’.

8. Central Banks

Rule: The job of central banks is to create cycles

- Legal independence of central banks has increased significantly in the past 30 years world-wide.
- Central banks are more powerful than ever before in history.
- They can choose their tools, instruments and often also their policy goals.
- After each crisis, they demand greater powers still, which is always granted.
- The principle of Revealed Preference (Samuelson, 1939) indicates that central banks are choosing to create massive cycles.
- Theory of Bureaucracy: Policies are taken by bureaucracies to perpetuate their power. Central banks increase their power through business cycles.

9. Interest (Usury)

Official Story: Interest is Well Justified in Economics

1. **Opportunity Cost:** The lender must be compensated for foregone alternative use.
2. **Time Preference** (Carl Menger, 1871; Böhm-Bawerk, 1891): Transfer of consumption opportunities from savers to consumers
3. **Marginal Cost of Capital** (Carl Menger, 1871): Factors of production are paid their marginal productivity. Capital is paid interest of such an amount.
4. **Uncertainty requires a risk premium** (Böhm-Bawerk, 1891; Schumpeter, 1912)
5. **Liquidity Preference**, Precautionary Demand for Money (Keynes, 1936):
“the rate of interest is the reward for parting with liquidity for a specified period.” (Keynes, 1936)
6. **Monitoring Fee** to be paid to lenders (Schumpeter, 1912; Diamond, 1984)
7. ~~**Interest equilibrates** the money/credit/capital markets and determines economic growth. Thus it is the **most important monetary policy tool**. (Wicksell, 1898; Woodford, 2003)~~

9. Interest (Usury)

Fact: There is no Justification for Interest

- ~~1. **Opportunity Cost:** The bank has no genuine opportunity cost.~~
- ~~2. **Time Preference** (Carl Menger, 1871; Böhm-Bawerk, 1891): No transfer takes place, but creation of new money.~~
- ~~3. **Marginal Cost of Capital** (Carl Menger, 1871): is zero. Besides, lenders do not 'earn' the interest.~~
- ~~4. **Uncertainty requires a risk premium** (Böhm-Bawerk, 1891; Schumpeter, 1912)
Risk not taken by bank, but by public!~~
- ~~5. **Liquidity Preference, Precautionary Demand for Money** (Keynes, 1936):
The lender does not part with liquidity, or anything else...~~
- ~~6. **Monitoring Fee** to be paid to lenders (Schumpeter, 1912; Diamond, 1984):
Bankers do not actually monitor borrowers. Monitoring does not explain banking.~~
- ~~7. **Interest equilibrates** the money/credit/capital markets and determines economic growth.
Thus it is the **most important monetary policy tool**. (Wicksell, 1898; Woodford, 2003)~~

9. Interest

Fact: Interest serves to transfer wealth



9. Interest

***Rule:* Interest serves to transfer wealth rapidly from the many to the few, and increase wealth inequality**

- Transfers are redistribution policies. Interest achieves clandestine regressive redistribution.
- Interest redistributes very quickly – and from the many to the few.
- Interest costs are borne by all of us via product prices.
- Interest creates national debt and via ‘necessary cuts’ a reduction of public services and social welfare.
- Interest creates economic pressure to deliver dividends and hence the need for continuous growth, just to service the debt mountain created by our private credit monetary system.
- Resource constraints mean that environmental damage will result

10. Economic Growth

***Official Story:* Growth is necessary to maintain our standard of living, keep jobs, safeguard prosperity**

- We are being told that GDP growth is a necessity to maintain our standard of living
- Without GDP growth, we are told, we would face major crises.
- Thus environmental damage and depletion of finite resources are inevitable.
- There is little we can do about this, it is said.

10. Economic Growth

Fact: There is no growth, defined by thermodynamics

- Planet earth receives a constant input of energy from the sun. Other than that, we can only transform existing finite resources (law of conservation) into a more chaotic state (law of entropy).
- GDP was concocted by not counting the negatives (depletion of finite resources, environmental damage, etc.), in order to produce a positive figure.
- GDP was designed to indicate the ability of countries to service debt (such as sovereign loans) and hence support the money game.
- This is why 10-year sovereign bond yields track nominal GDP growth.
- It is the very existence of interest on the money supply (money as debt) that creates the pressure on companies and economies to grow – despite all the environmental destruction.

10. Economic Growth

***Rule:* GDP growth is a fiction to perpetuate the debt-based monetary system and transfer wealth from the many to the few.**

- If the money supply was created not on the basis of debt that needs servicing, but on the basis of work and services accomplished for the community, then no interest would be necessary.
- There is no justification for compound interest.
- All economic arguments to justify it fall with the realisation that banks create credit out of nothing at no cost.
- Interest is a mere regressive transfer payment, from the many to the few.
- But it pushes the economy ever more into **conflict with nature**, hitting binding resource constraints, harming the environment necessary for the ecological system to work.

Rules of the Money Game

1. The biggest risk is default risk; its biggest determinant is leverage; leverage comes from bank credit
2. Interest rates follow GDP growth
3. Markets are rationed and determined by quantities. The short side allocates.
4. The quantity of money is more important than its price. Since demand for money is infinite, it the quantity supplied is the key factor.
5. Money is supplied by banks through credit creation. Banks do not lend, they create and allocate the money supply.
6. Credit creation drives growth, asset prices and & interest rates
7. Credit creation for consumption produces inflation, for financial transactions asset inflation and banking crises, for productive investments sustainable, non-inflationary growth (Quantity Theory of Credit).

Rules of the Money Game

8. Broad bank credit growth \gg nGDP Growth = unsustainable asset bubble, banking crisis
9. Concentrated banking systems are prone to recurring crises and instability
10. A banking sector dominated by local, not-for-profit banks avoids asset bubbles and banking crises
11. Don't listen to what central banks say, watch what they do (credit creation).
12. Their job is to create cycles.
13. GDP growth is a fiction to perpetuate the debt-based and interest-based monetary system and to transfer wealth rapidly from the many to the few.
14. Interest and our debt-based system are driving us up against the environmental resource constraints.
15. It is time to end the money game and introduce alternatives better for society.

Policy Lessons

- Banks and bankers maximise their benefits by creating credit for non-GDP (speculative) transactions
- This is why we have had hundreds of banking crises since the 17th century (when modern banking started)
- 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, including direct rules concerning the quantity and allocation of bank credit, which have an excellent track record (**credit guidance, window guidance**).
- **Central banks have become too powerful and are not accountable for their actions to democratic institutions**; any crisis induced by them is used to argue for greater powers and greater independence.
- Any improvement in our monetary system must be based on **decentralised money creation**, accountable to local people.

The Long-Term Solution: Public Money – Growth without Interest

- **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.
- Costly deposit insurance and bank bailouts would no longer be needed.
- The pressure to create growth would lessen significantly.
- The sovereign right to create and allocate the money supply could be reverted to local communities to whom it belongs, who could issue money as **certification of community work undertaken**.
- Government debt can be reduced substantially, fiscal deficits will shrink as fewer new interest costs arise.

Public Money – Growth without Interest

- The economy could focus on true, sustainable growth without wasteful or harmful growth.
- Focus could shift to improving the quality of life (Keynes: Possibilities for our Grandchildren)
- Local communities and environmental protection could be enhanced
- There would be no more costly banking crises and asset bubbles.
- Growth could then be redefined properly to stop the unnecessary depletion of finite resources and reduction in long-term quality of life.

The Immediate Solution: Founding Local Not-for-Profit Banks

- Bank money creation can only be justified if it is done for the public good.
- Thus bank credit creation can only be justified by the predominance of **not-for-profit banks** that operate for the welfare of the public.
- To keep them accountable, they need to be small, local and decentralised.
- This way, we can reclaim the economy back from the bankers.

The Immediate Solution: Founding Local Not-for-Profit Banks

- There is a need for local, not-for-profit banks in the UK
- **Local First Community Interest Company** is working towards creating a network of such banks.
- One of the first to be established: Hampshire Community Bank, owned by a charitable foundation
- Business proposition for local authorities: such banks can be created currently with an investment of GBP 6m that will be repaid after 10 years and carries a positive yield of about 5%.

The Theta Risk Challenge

- To reduce Theta Risk, funds should be
 - Highly diversified across asset classes, regions and countries
 - Invest only in liquid instruments
 - Have high liquidity in terms of redemptions (no lock-in)
 - Net long bias
- Dilemma:
 - Fulfilling these requirements seems to deliver only modest returns, and perhaps volatile results.
 - More attractive returns can only be achieved at the cost of significant Theta Risk
 - Solution: A fundamentals-based investment strategy that is able to **forecast the business cycle**.

The Solution:

- The only way to solve the dilemma is to utilise an approach that is **not trend-following**.
- This means an approach that has identified the **fundamental cause** of movements in global fixed income, equity and FX markets.
- Such an approach can capture turning-points, and thus generate particularly attractive returns.
- Can this be done? “The holy grail of fund management”.

The Profit Global Macro Fund (UCITS IV): Credit creation as the core of portfolio management

- Credit creation signals in 37 countries indicate macro trends in the 3 major asset classes:

Government Bonds

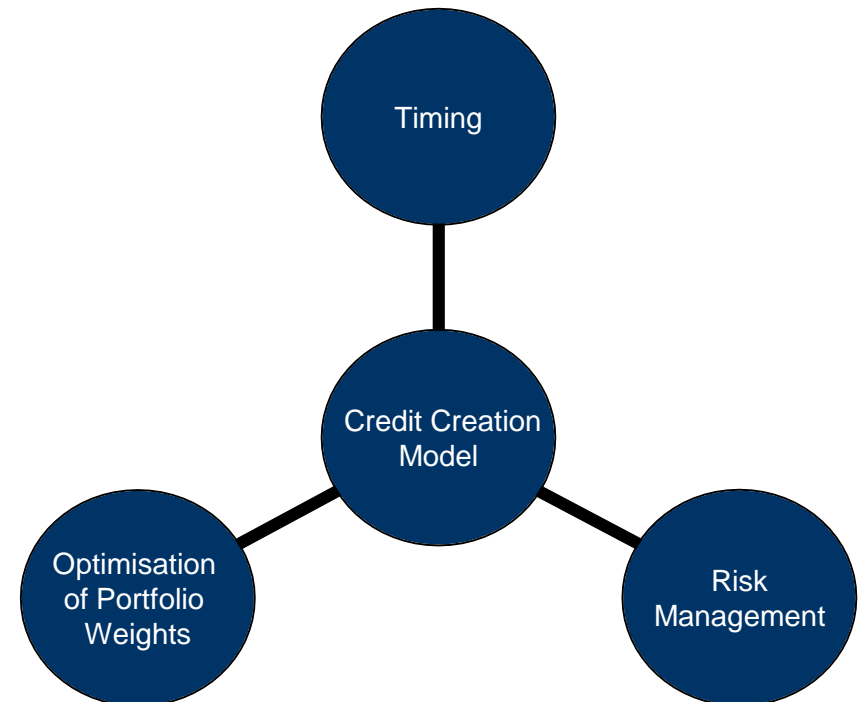
- Buy signal: fall in liquidity
- Sell signal: rise in liquidity

Currencies

- Buy signal: fall in relative central bank liquidity
- Sell signal: rise in relative central bank liquidity

Equities

- Buy signal: rise in liquidity
- Sell signal: fall in liquidity



**Centre for Banking, Finance
& Sustainable Development**



MSCI Hedge Fund Index, constituent member,
category Global Macro



HFR Hedge Fund Index, constituent member,
investment strategy Macro, sub-strategy
Discretionary Thematic

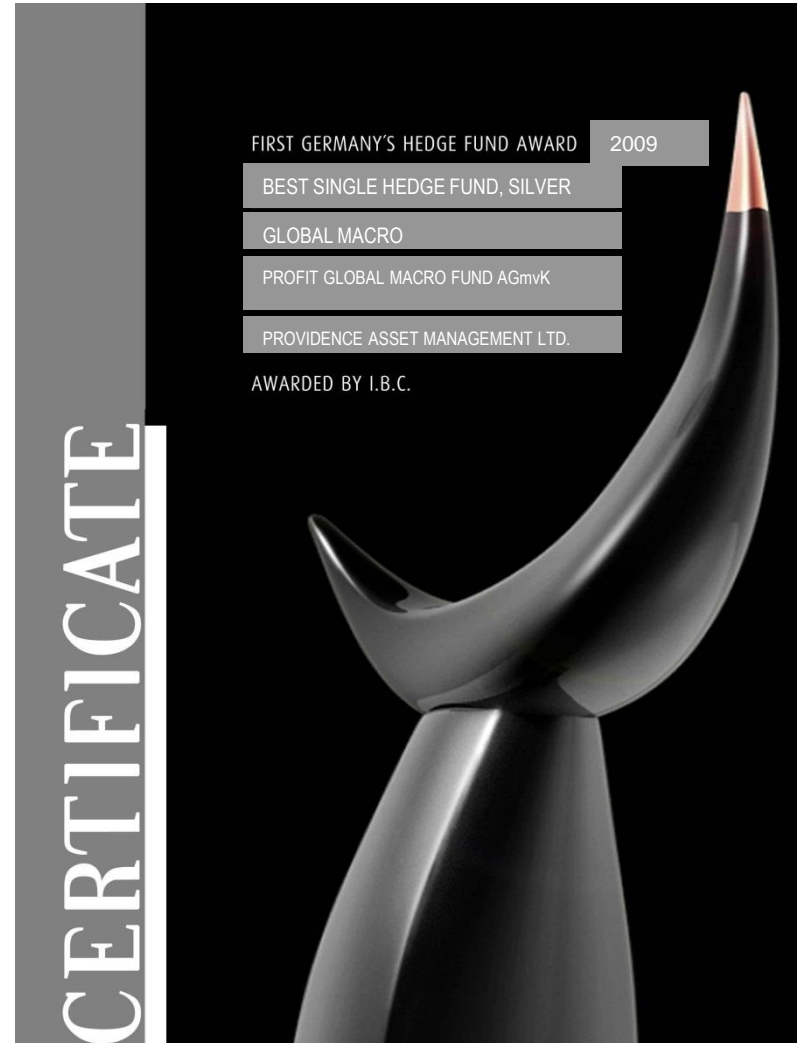


Germany's Hedge Fund Award 2009,
Awarded Best Single Hedge Fund, Silver,
Category Global Macro

Nominated as Best Global Macro Fund in Asia
at the Asian Masters of Hedge Awards 2005

Fund also monitored by:

- | | |
|---------------------------------------------------|----------------------------------------------------------------------------|
| <input type="checkbox"/> Bloomberg | PGLOBMC LE Equity |
| <input type="checkbox"/> Lipper/Reuters | ID: 60058864 |
| <input type="checkbox"/> EurekaHedge | www.eurekaHedge.com |
| <input type="checkbox"/> Wilshire Associates | www.wilshire.com |
| <input type="checkbox"/> Global Fund Analysis | www.globalfundanalysis.com |
| <input type="checkbox"/> Investor Force Altvest | www.investorforce.com |
| <input type="checkbox"/> Cogent Hedge | www.cogentHedge.com |
| <input type="checkbox"/> The Barclay Group | www.barclaygroup.com |
| <input type="checkbox"/> Alternative Asset Center | www.aa-center.net |



FIRST GERMANY'S HEDGE FUND AWARD 2009

BEST SINGLE HEDGE FUND, SILVER

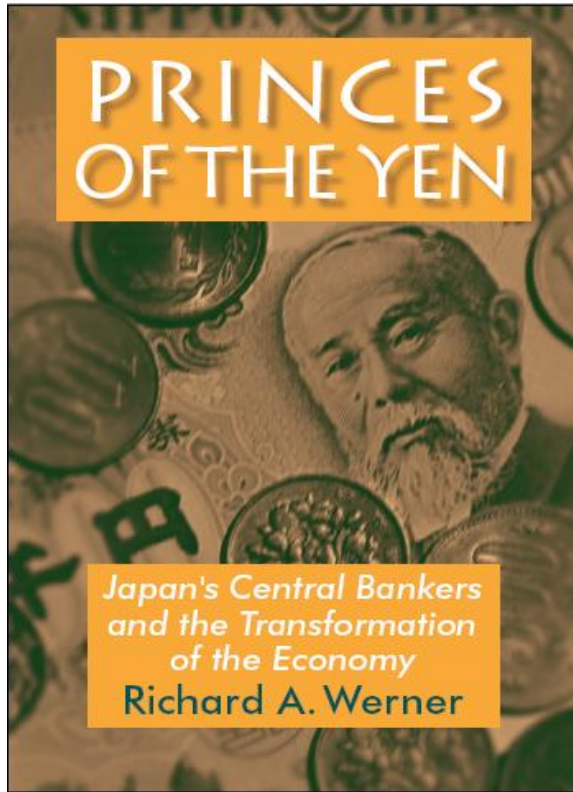
GLOBAL MACRO

PROFIT GLOBAL MACRO FUND AGmvK

PROVIDENCE ASSET MANAGEMENT LTD.

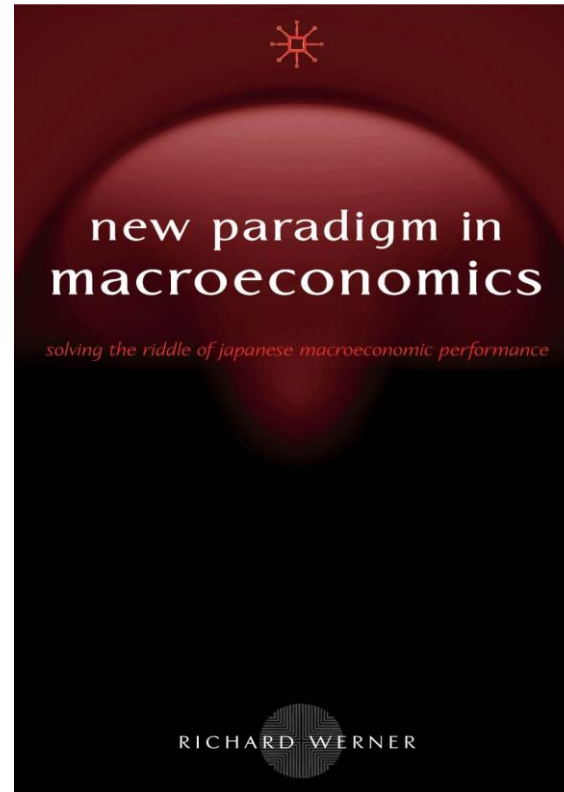
AWARDED BY I.B.C.

Further Reading:

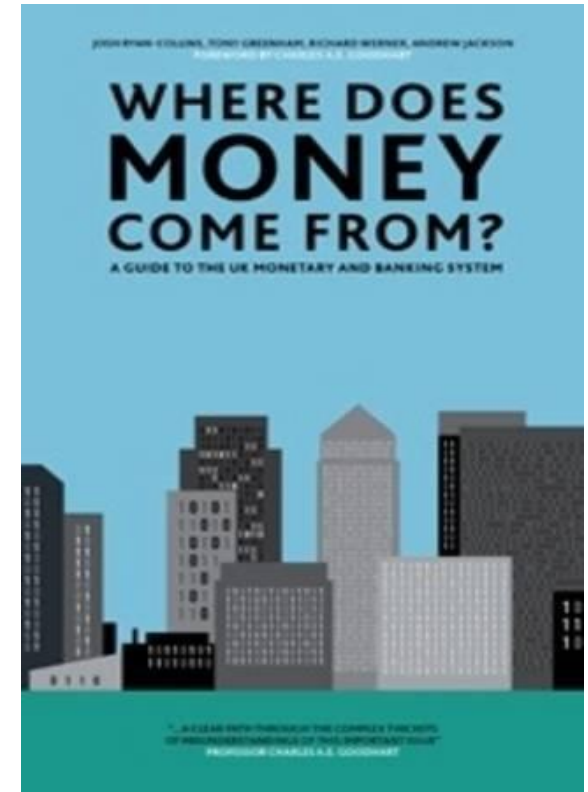


M. E. Sharpe, 2003

Richard A. Werner 2014



Palgrave Macmillan, 2005



New Economics Foundation, 2012