

It's a Banks' World

Functioning and dysfunctions of the present money system

University of Fribourg
21 April 2016

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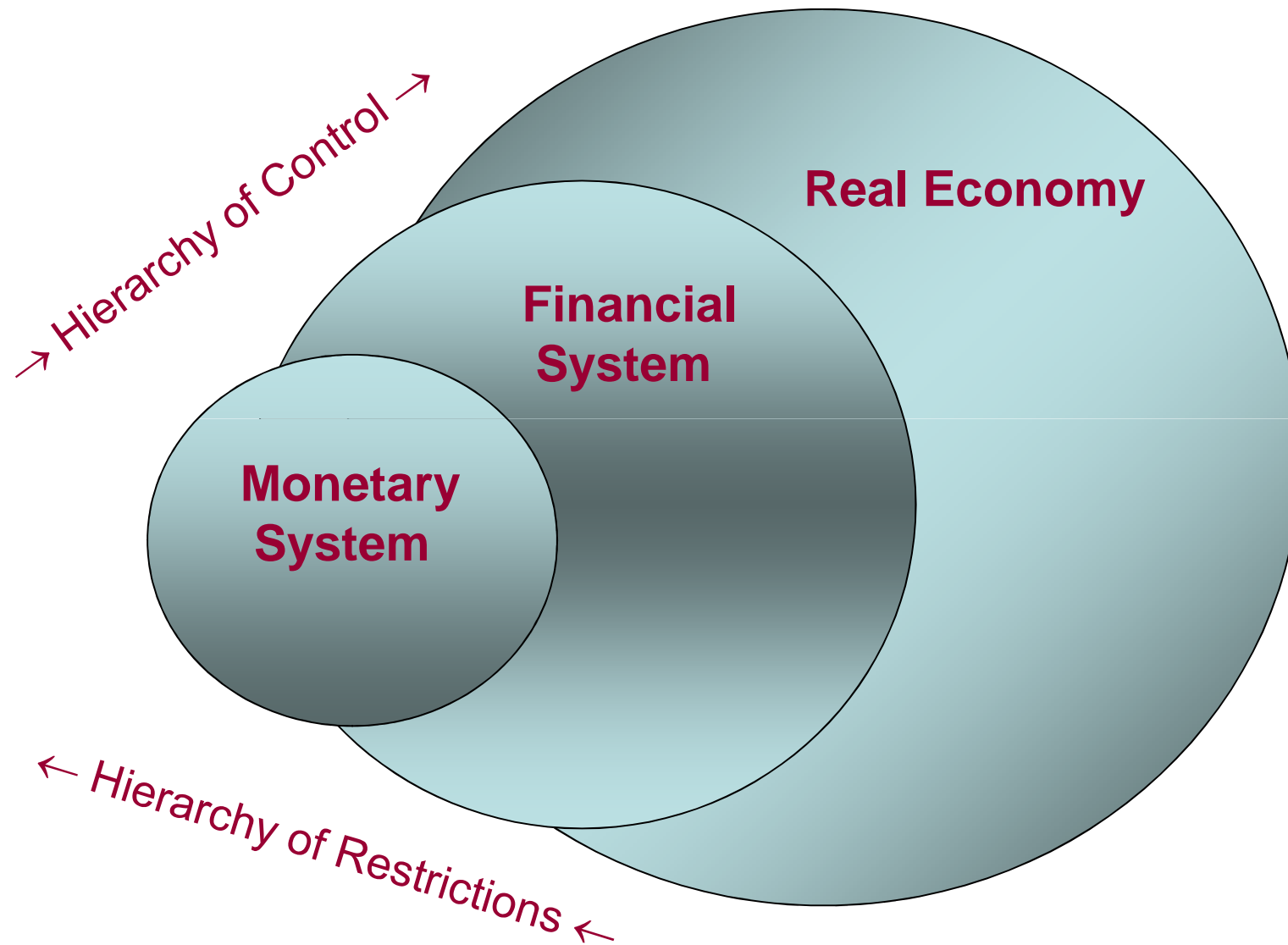
Martin Luther University
Halle Wittenberg



My concern

Putting the monetary system in the central position it actually occupies in today's highly monetarised and financialised economies

In a monetarised and financialised economy
money governs finance, as finance governs the economy



Bringing back in the monetary system

Analyses of the subprime crisis and the euro sovereign debt crisis all have their point, but fall short of recognising the **monetary system as the root cause** of the problems.

The *financial* causes of crises have a common *monetary* cause: excessive bankmoney creation (extension of primary credit and debt). Financial markets cannot work properly on the basis of a malfunctioning monetary system.

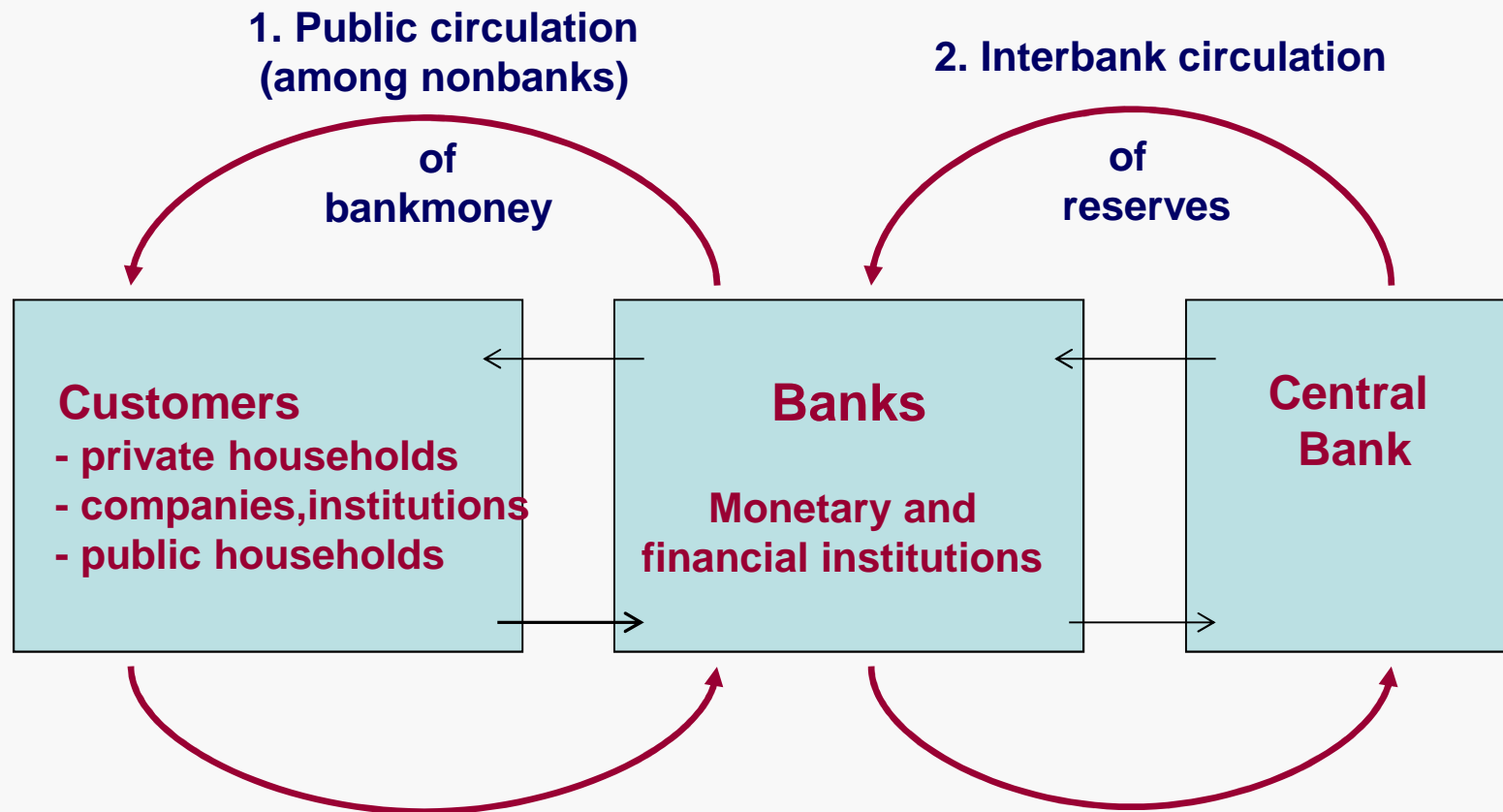
For sorting out banking and financial markets, one has to come to grips with the money system.

The present money system

- bank-led credit and deposit creation
(bankmoney)
- accommodated by a fractional base of
cash and reserves
(central-bank money)

State-backed rule of private bankmoney

The split circuit of reserve banking



Bankmoney = Credits on current account, available any time on demand (thus: demand deposits or sight deposits), serving for cashless payments in electronic payment systems.

Reserves = Credits on banks' central-bank accounts = Central-bank money.

Today, both are created *uno actu* with credit (loans) = non-cash credit or debt money.

Cash (coin, notes) is but a residual subset of the money in circulation, exchanged out of account, or back into account. Cash thus isn't constitutive for the money system anymore.

Primary creation of bankmoney, accommodated after or upon the fact by a fractional base of cash and reserves

- Uno-actu identity of credit and money, i.e. creation of credit/debt and bankmoney (demand deposits) by ledger entry in one and the same act.

Credit extension and bankmoney creation in one act

Bank Balance Sheet		Customer	
Assets	Liabilities	Debit	Credit
100 k, mio	100	- 100	+ 100
Claim on customer from credit creation	Liability towards customer	Interest-bearing debt to the bank	Credit as liquid bank money (means of payment) = claim on cash and bankmoney transfer

Accounting record:

Bank Credit/Securities/Tangibles Account to Customer Current Account

In actual fact, however, this does not make sense – not yet, because you borrow in order to make use of the money, and using bankmoney involves central-bank money, i.e. cash and reserves.

Primary creation of bankmoney, accommodated after or upon the fact by a fractional base of cash and reserves

- Uno-actu identity of credit and money, i.e. creation of credit/debt and bankmoney (demand deposits) by ledger entry in one and the same act.
- Banks create credit (= non-cash bankmoney) whenever they
 - make loans and grant overdrafts
 - purchase assets such as bonds, stocks, real estate, ...
 - spend money on anything else.

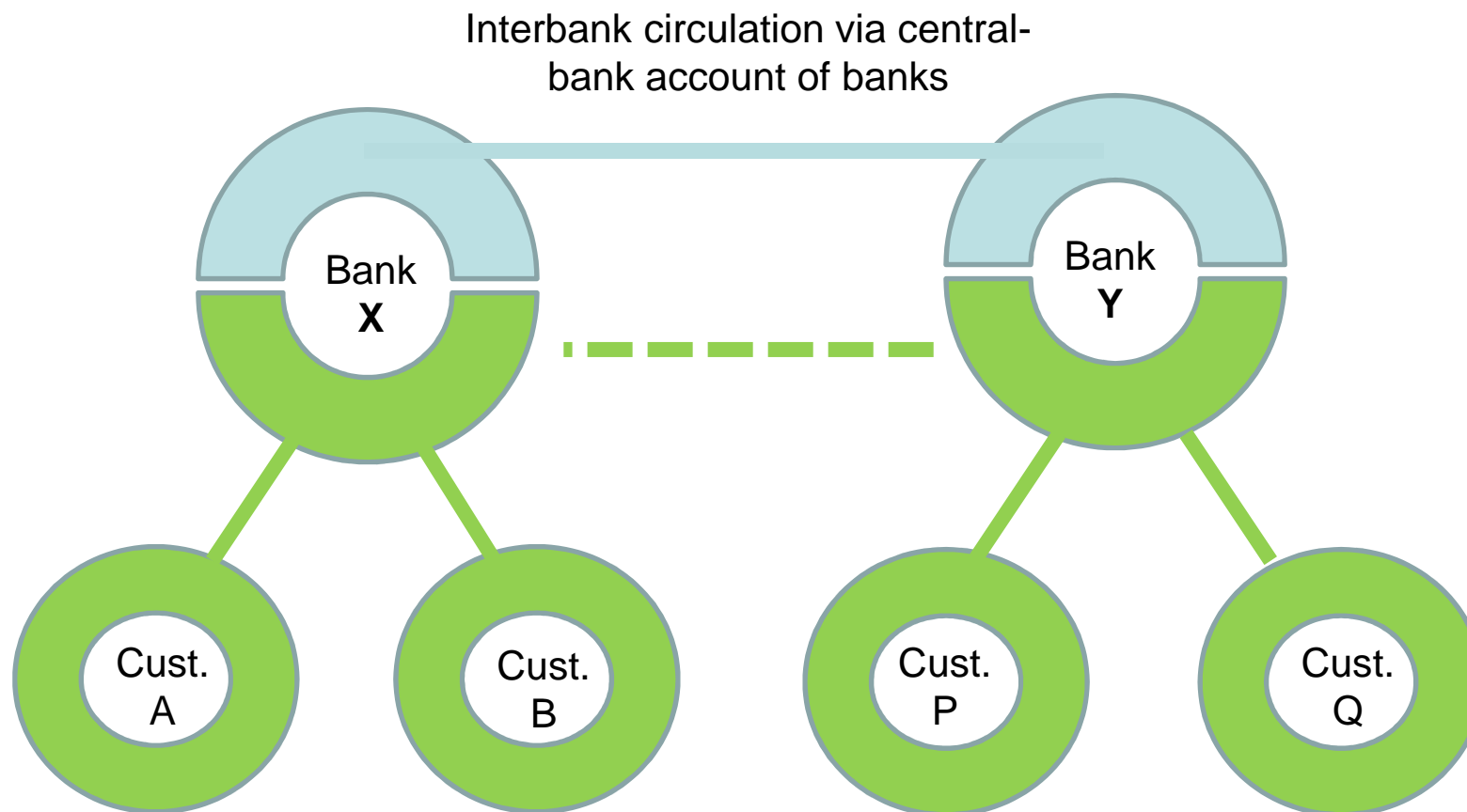
**Payment from bank to nonbank creates bankmoney.
Payment from nonbank to bank deletes bankmoney.**

- The system is bank-led: *pro-active* creation of bankmoney. Central banks do not have the lead and do not control the quantity of money. They always accommodate the banks' demand for reserves and cash; re-actively and residually, upon or after the fact. The banking industry thus determines the entire money supply.

Cashless payments in interbank and public circulation

Central bank money (reserves)

Bankmoney (deposits)



Fractional Reserve Banking

In order to create and maintain 100 units of demand deposits, the euro banking sector needs fractional 'coverage' in central-bank money of about 2.5%, composed of

- 1.4% cash (coin and banknotes) for the ATMs
- 0.1% liquid reserves (excess res.) for settlement of payments
- 1.0% obligatory minimum reserve (of no use at all)

Today's money supply M1 (liquid money in circulation) consists of

82 % bankmoney on current account (demand deposits)

18 % sovereign money (1% coins, 17% banknotes)
although not even this put into circulation by sovereign supply-push, but by banking demand-pull for fractionally re-financing themselves).

Operating principles of fractional reserve banking

- **Outflows = Inflows**

Outgoing reserve payments of a bank are incoming reserves in other banks, and vice versa.

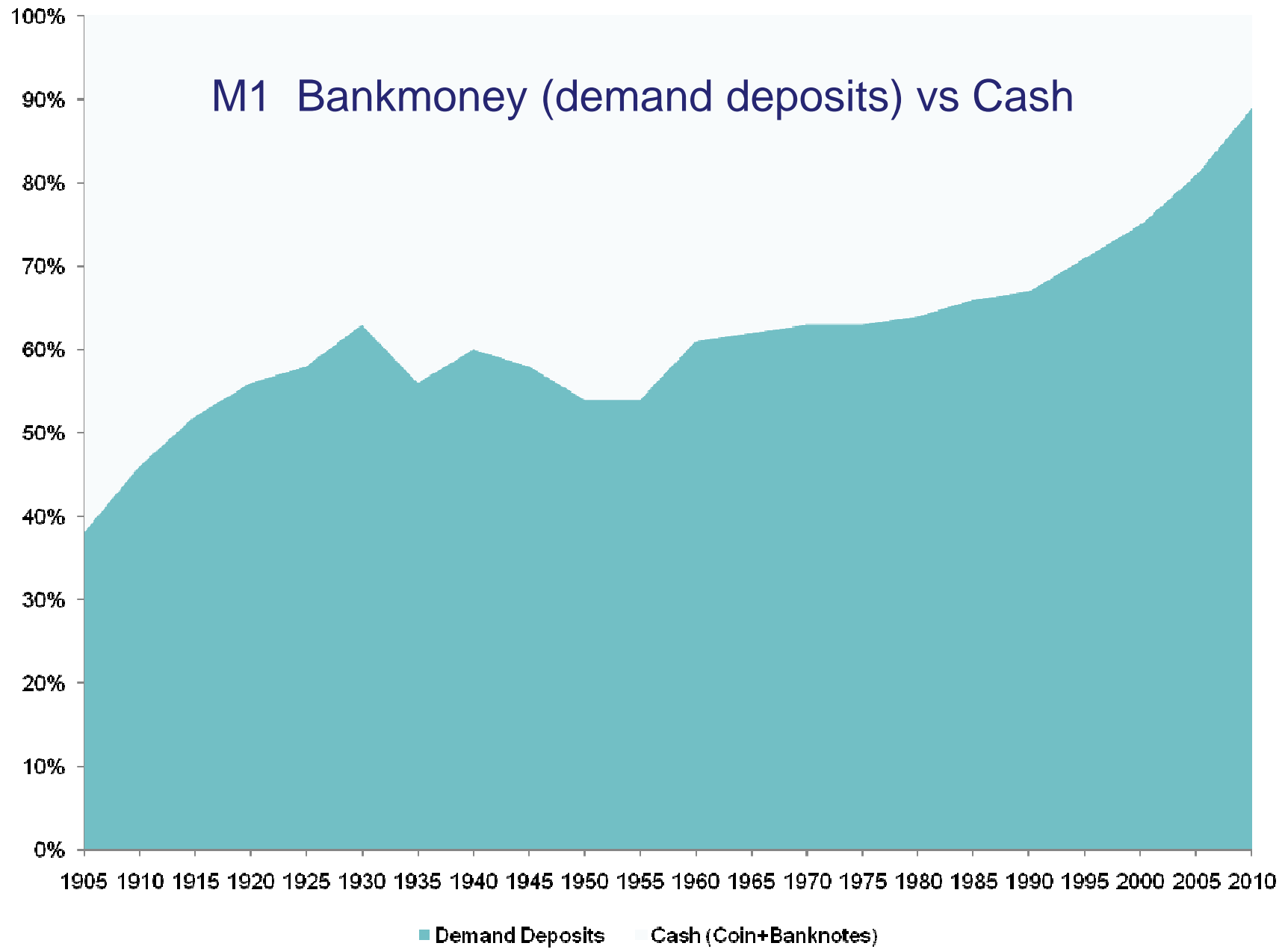
- **Distributed transactions**

i.e. payments are spread over time and actors and do not include all of the bankmoney at once, with outgoing and incoming payments largely offsetting each other.

→ see figure

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i.e. payments are spread over time and actors and do not include all of the bankmoney at once, with outgoing and incoming payments largely offsetting each other.
- **Non-segregation of client money**
No requirement to keep own money and client money in separate accounts. All outgoing and incoming payments of a bank are processed via one and the same operational central-bank account of a bank.
- **Cooperative bankmoney creation**
Pace and rate of credit extension and bankmoney creation must be largely in step, and the banks must accept each other's transfer of deposits (bankmoney).



Data: Swiss National Bank, Historical Time Series, No.1, Feb 2007, 1.3, 2.3

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State-backed rule of private bankmoney

Short-Term Restrictions to Bank-Led Credit Creation

- 1) Market volume = preparedness to go into debt = potential of demand for credit (loans, debentures, equity)
- 2) Size of banks. For large banks it is much easier to extend their balance sheet than for smaller banks
- 3) Capital adequacy according to Basel rules (assets-to-equity ratio or loan-to-equity ratio)
- 4) Liquidity rules (liquid and near-liquid assets must be equal to or bigger than overnight liabilities)

after H.Seiffert, Geldschöpfung, Nauen 2012, 78-97.

In the longer term there are no restrictions. By mutually crediting/debiting, buying/selling, paying out/taking in, banks mutually create all of the required assets and equity they need.

Fallacious models of money and banking

- Piggy bank model I - 'Deposits are created by depositing cash'

A bank is no 'piggy bank' for the safekeeping of money, rather, a monetary institution for *creating* bankmoney by way of primary bank credit; in contrast to secondary credit, i.e. on-lending or investing of already existing bankmoney among nonbanks.

Strictly speaking, 'deposits' aren't deposited anymore, they are but credit entries.

At source, modern money is cashless. Cash has become but a technical exchange form of money, withdrawn from and paid back into a current bank account.



Fallacious models of money and banking

- Piggy bank model II - 'My money is in the bank' or 'My money is in my current account/savings account at the bank'.

In a current account as well as in a savings or time account there is no positively existing money, such as cash or central-bank reserves.

Bank credits are but promissory entries, a liability of a bank to the customer; in reverse, a claim of the customer of being paid out in cash on demand, or having the 'promise' transferred to somewhere else.



Fallacious models of money and banking

- Loanable funds model of banking - 'My bank is working with my money'.
- Financial intermediation theory of banking
 1. 'A bank intermediates between savers in and borrowers from that bank'.
 2. 'A bank passes reserves on to customers'.

Bank loans, generally speaking bank payments, are not funded with customer deposits. Deposits cannot, and need not be on-lent by a bank. For a bank, deposits are a liability, no monetary asset and no means of payment, such as cash and reserves.

A bank creates and deletes deposits. For doing so, a bank needs reserves and cash of a fractional amount. The banking sector obtains these means by way of central bank credit to banks.



Fallacious models of money and banking

- Loanable funds model of banking, cont.
- Financial intermediation theory of banking, cont.

Savings and time deposits (in M2/M3) are temporarily deactivated bankmoney; out of use, even though they cost a bank deposit interest.

Having to accept each other's deposits is unavoidably part of the banks' cooperative credit and deposit creation.

It also prevents deposits from draining away to the competition, which would cause liquidity shortage. Keeping inactive deposits at low deposit interest allows for the creation of additional primary credit at much higher lending rates.



Fallacious models of money and banking

As a consequence for macroeconomics,

- regarding primary bank credit, 'Investment \neq Savings'.

As deposits do not fund bank loans or other bank expenses, bank-financed investment does not put in savings, but operates on self-created bankmoney.

If there is a money or capital shortage, this is not for monetary reasons. Modern money can be created by the banks anytime at any amount.



Fallacious models of money and banking

However,

- with regard to secondary credit, that is, on-lending of bankmoney among nonbanks, 'Investment = Savings' still holds true.

Financial intermediation is the business of nonbank financial institutions such as investment trusts, pension and hedge funds, insurance companies, etc.

In certain branches of investment banking, however, e.g. as brokers and financial market makers, banks act as financial intermediaries, too.

This gives the banks an unfair advantage, in that the nonbank competition needs to finance its business in full, while the banks can do with only a small fraction of amounts involved.



R. Werner's questionable typology of banking models

- (1) Financial intermediation theory of banking, based on the loanable funds model of deposits
- (2) Reserve circulation theory, more precisely: exogenous reserve position theory and multiplier model
- (3) Bank credit creation out of nothing.

Werner rejects (1) and (2), and presents (2) fractional reserve banking and (3) bank credit creation as 'mutually exclusive views', while in actual fact both elements go hand in hand.

The elements (2) and (3) in the typology are inappropriate.

(3) Extending credit without the credit being used does not make sense, and in this regard credit creation 'out of nothing' is misleading, because using bankmoney involves a fractional base of cash and reserves.

(2) Cash and reserve circulation undoubtedly exist, endogenously too. Today's huge payment systems (Fedwire, CHIPS, CHAPS, Target2) are reserves-based.

Richard Werner 2014: Can banks individually create money out of nothing? The theories and the empirical evidence, *International Review of Financial Analysis* 36 (2014) 1–19.

Problems and dysfunctions
of bank-led fractional reserve banking

The dysfunctions of fractional reserve banking

The bankmoney regime

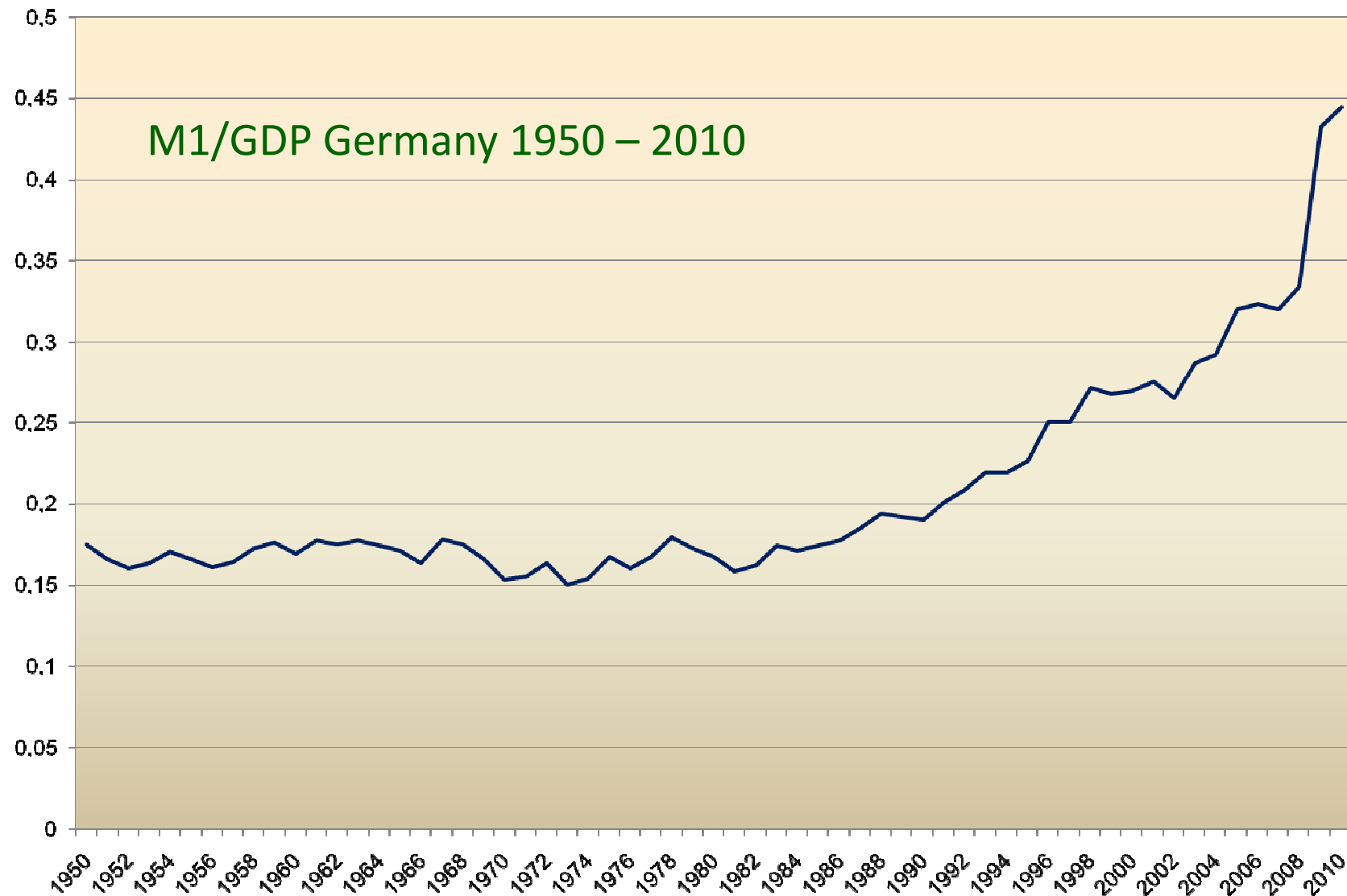
- is unnecessarily complicated and opaque
- fosters financial instability. The credit/debt creation, thus creation of bankmoney, is out of control. The money supply is pro-cyclically overshooting, resulting in
 - inflation, currency depreciation, and asset inflation
 - extreme oversteering of business cycles and financial-market cycles, resulting in severe crises.
- Bankmoney is unsafe in a banking crisis.
- GDP-disproportionate growth of the quantity of money and financial fortunes contributes to distributional inequality.
- Seen from a constitutional point of view, the creation of bankmoney is an illegitimate, neo-feudal privilege:
 - special monetary benefits in the form of funding costs avoided (2.5% fractional rather than 100% funding of loans and purchases)
 - large amounts of seigniorage foregone to the public purse
 - implicit state guarantee for systemically relevant major banks and the entire sector in case of systemic crisis.

The monetary root cause of many financial problems: GDP-disproportionate credit-and-deposit creation

billions units	nominal GDP 2008	1/12 = assumed M1	actual M1	overshoot coefficient
Britain	£ 1'550	£ 127	£ 1'029	8.10
Eurozone	€ 9'259	€ 772	€ 3'974	5.15
Germany	€ 2'496	€ 208	€ 1'028	4.94
Suisse	SFr 597	SFr 60	SFr 273	4.57
USA	\$ 14'369	\$ 1'193	\$ 1'616	1.35

Sources: Bank of England, Quarterly amounts outstanding of M4, of M1 (UK estimate of EMU aggregate) www.bankof-england.co.uk/boeapps/iadb. - Office for National Statistics, <http://www.ons.gov.uk/ons/datasets-and-tables/index.html>; Quarterly National Accounts, Time Series Data. - European Central Bank, Monthly Bulletin, Tables 2.3, 2.4, 5.2.1. - Bundesbank, Monatsberichte, Tables II.1, XI.1. - Banque Nationale Suisse, Bulletin mensuel, Tab. B2, P1. – www.federal-reserve.gov/Releases/H6/hist/h6hist1.txt. - FRED Economic Data St. Louis Federal Reserve, <https://research.stlouisfed.org/fred2/>, series/ M1, series/GDP.

Bankmoney creation is out of control and growing in disproportion to GDP, resulting in Inflation, asset Inflation and bubble building



Data: http://www.bundesbank.de/statistik/statistik_wirtschaftsdaten_tabellen.php#wirtschaftsentwicklung

The monetary root cause of many financial problems: GDP-disproportionate money supply

Switzerland 1992 – 2008

M1	121 %
BIP nominal	37 %

Germany 1992 – 2008

M1	189 %	[73% of increase]
GDP nominal (price-inflated)	51 %	[15% of increase]
GDP real (price-deflated)	23 %	[12% of increase]

Sources: www.bundesbank.de/statistik/zeitreihen; Deutsche Bundesbank, Monthly Bulletins, tables II.2;
Schweizerische Nationalbank, Monatsberichte, Tab. B2, P1

The Monetary Root Cause of many Financial Problems: GDP-disproportionate Money Supply

Britain 1980 – 2008

M4 (broad money)	1'744 %	[77% of increase]
GDP nominal (price-inflated)	392 %	[16% of increase]
GDP real (price-deflated)	121 %	[7% of increase]

United States 1980 – 2008

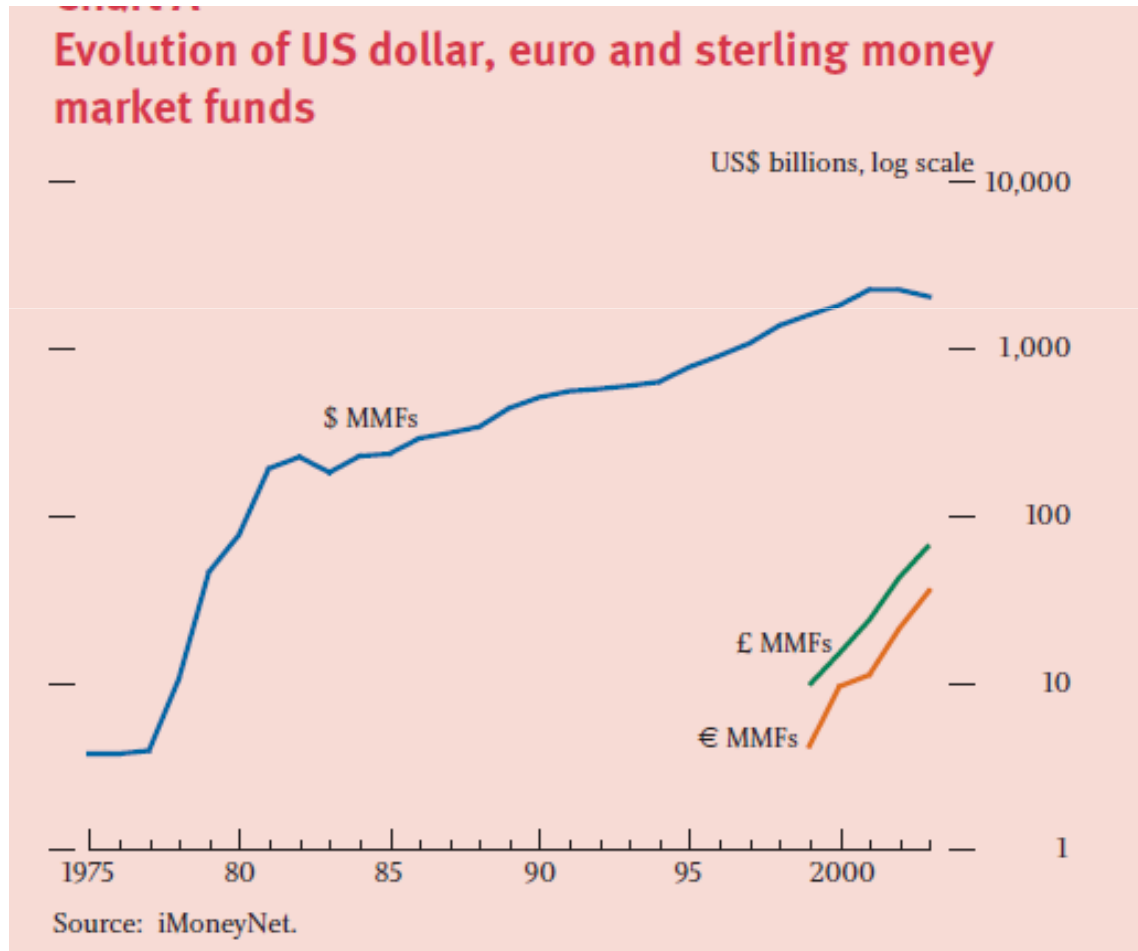
M2 (broad money)	413 %
GDP nominal (price-inflated)	386 %
GDP real (price-deflated)	129 %

Sources: FRED Economic Data St. Louis Federal Reserve, <https://research.stlouisfed.org/fred2/series/M2,/GDP,/GDPCA>. - Bank of England, Quarterly amounts outstanding of M4, of M1 (UK estimate of EMU aggregate), <http://www.bankofengland.co.uk/boeapps/iadb>. - Office for National Statistics, <http://www.ons.gov.uk/ons/datasets-and-tables/index.html>; Quarterly National Accounts, Time Series Data

The Monetary Root Cause of many Financial Problems: GDP-disproportionate Money Supply

Money Market Fund Shares

used as deposit-like new money surrogates on the basis of bankmoney



Sources:
Baba/McCauley/Ramaswamy 2009
68, Hilton 2004 180, Mai 2015.

The Monetary Root Cause of many Financial Problems: GDP-disproportionate Money Supply

Money Market Fund Shares (in USD)

USA 1980 – 2008

MMF-shares	~ 90 bil	→ 3.800 bil	+ 4.222%
GDP nominal			+ 37 %

EU 1998 – 2008

MMF-shares	~ 8 bil	→ 1.300 bil	+ 16.250%
GDP nominal			+ 51 %

Main channels of monetary overshoot

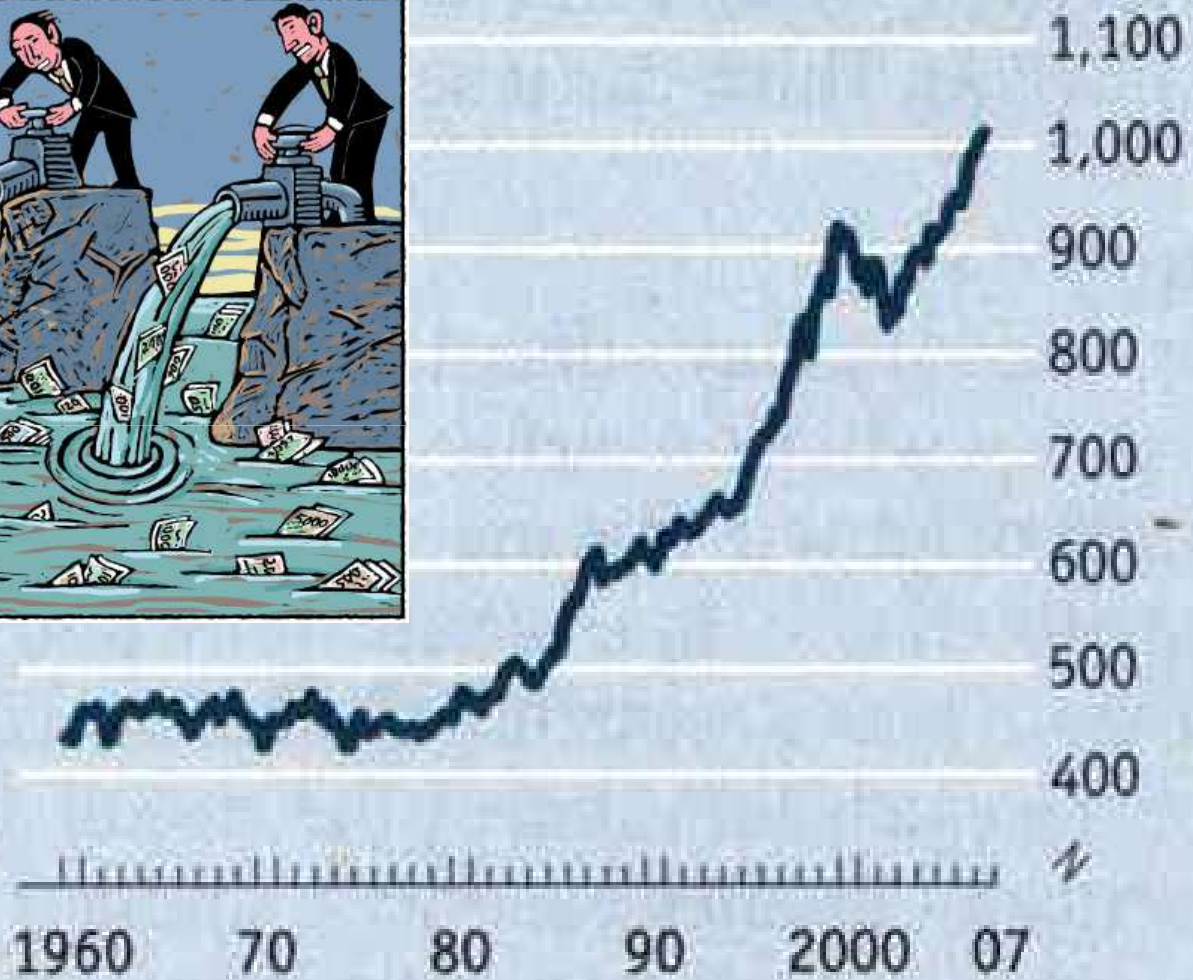
There are three main channels through which the extension of primary bank credit, thus additional bankmoney, contributes to credit bubbles, financial asset bubbles, and over-indebtedness of actors involved:

- funding **mortgages and real estate**
- **funding public debt**. The volume of sovereign bonds and bills is nothing but just another bubble, in fact the biggest bubble of all
- **direct leverage of speculative financial-market investment** in stocks, real estate, derivatives, foreign exchange, private equity (e.g. hostile leveraged buy-outs most of which are credit-funded)

Inflation and Expansion of Financial Assets



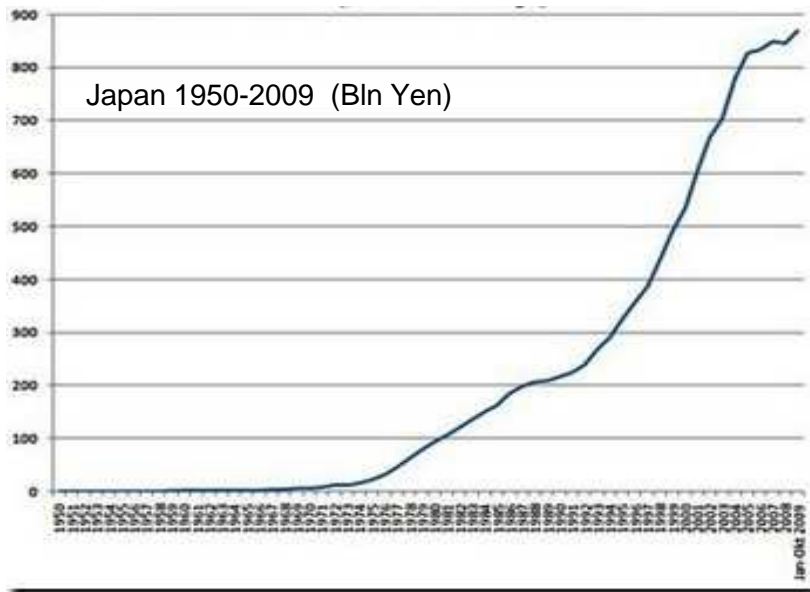
US financial assets as a % of GDP



Sources: Thomson Datastream; Federal Reserve
Taken from The Economist

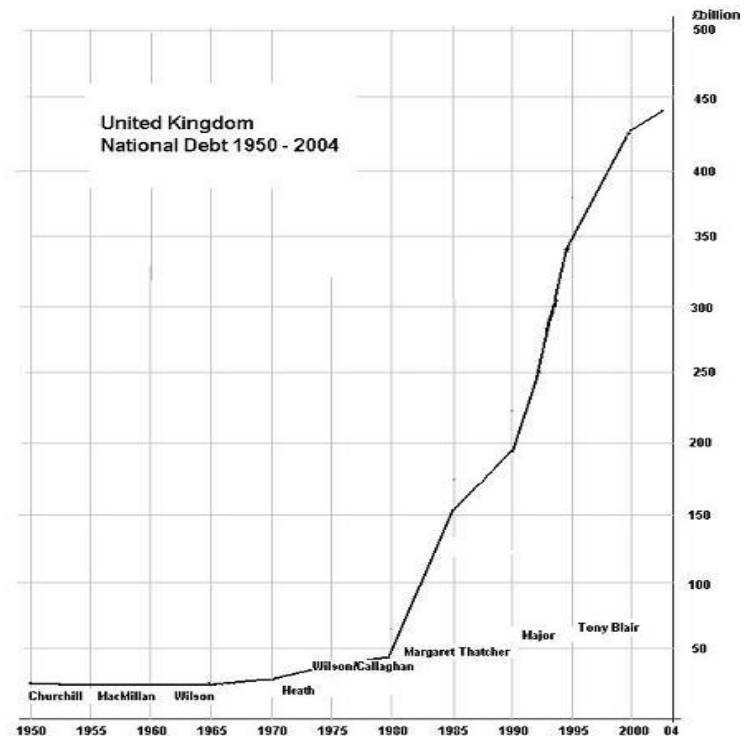
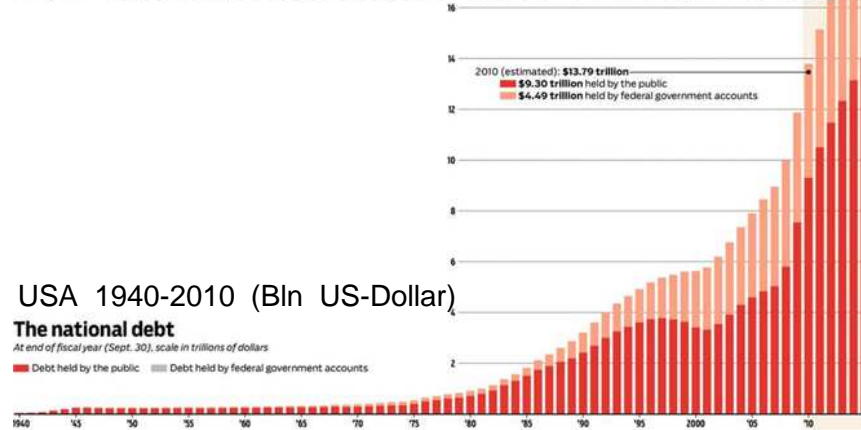
Sources: Trader's Narrative, November 7th, 2009. The Economist, March 22, 2008. Andere Abgrenzungen erbringen ein niedrigeres Niveau, aber gleiche Proportionen, z.B. bei Ashok Vir Bhatia 2011: Consolidated Regulation and Supervision in the United States, IMF Working Paper, No.23, 2011, p.8.

Public debt in old-industrial countries



UNDERSTANDING THE NATIONAL DEBT

A tsunami of red ink

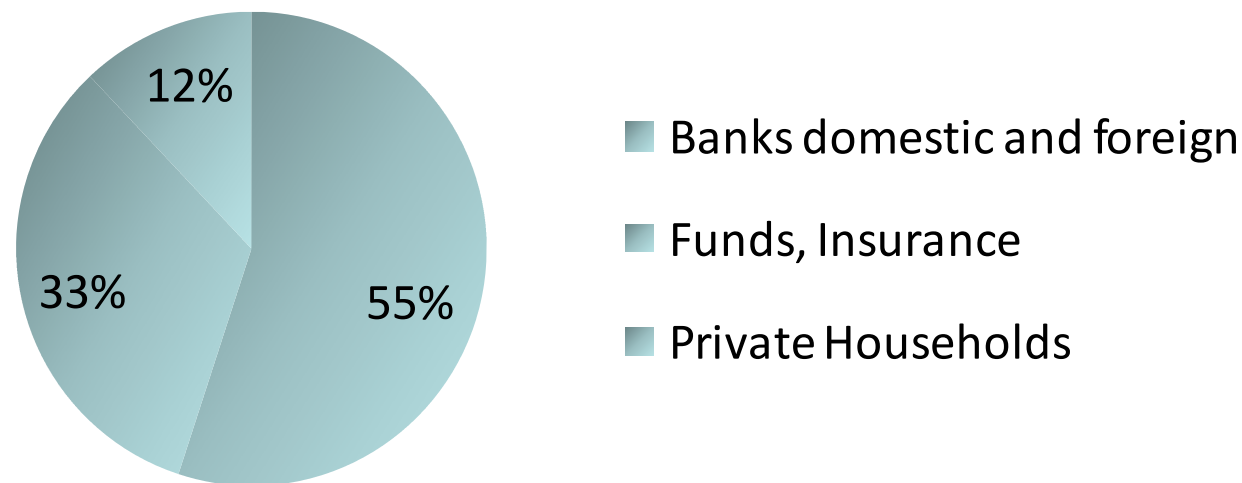


Government Debt = Interest-Bearing Assets (Gov Bonds & Bills)

Who has profited from European government debt until 2008?

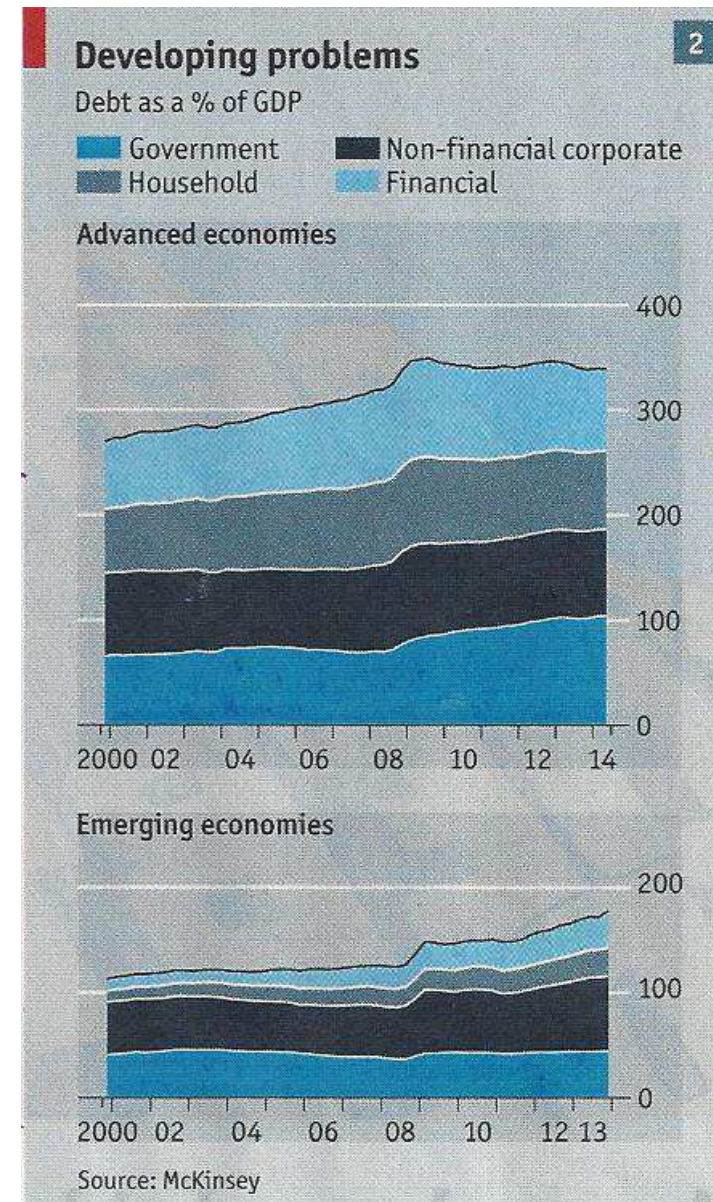
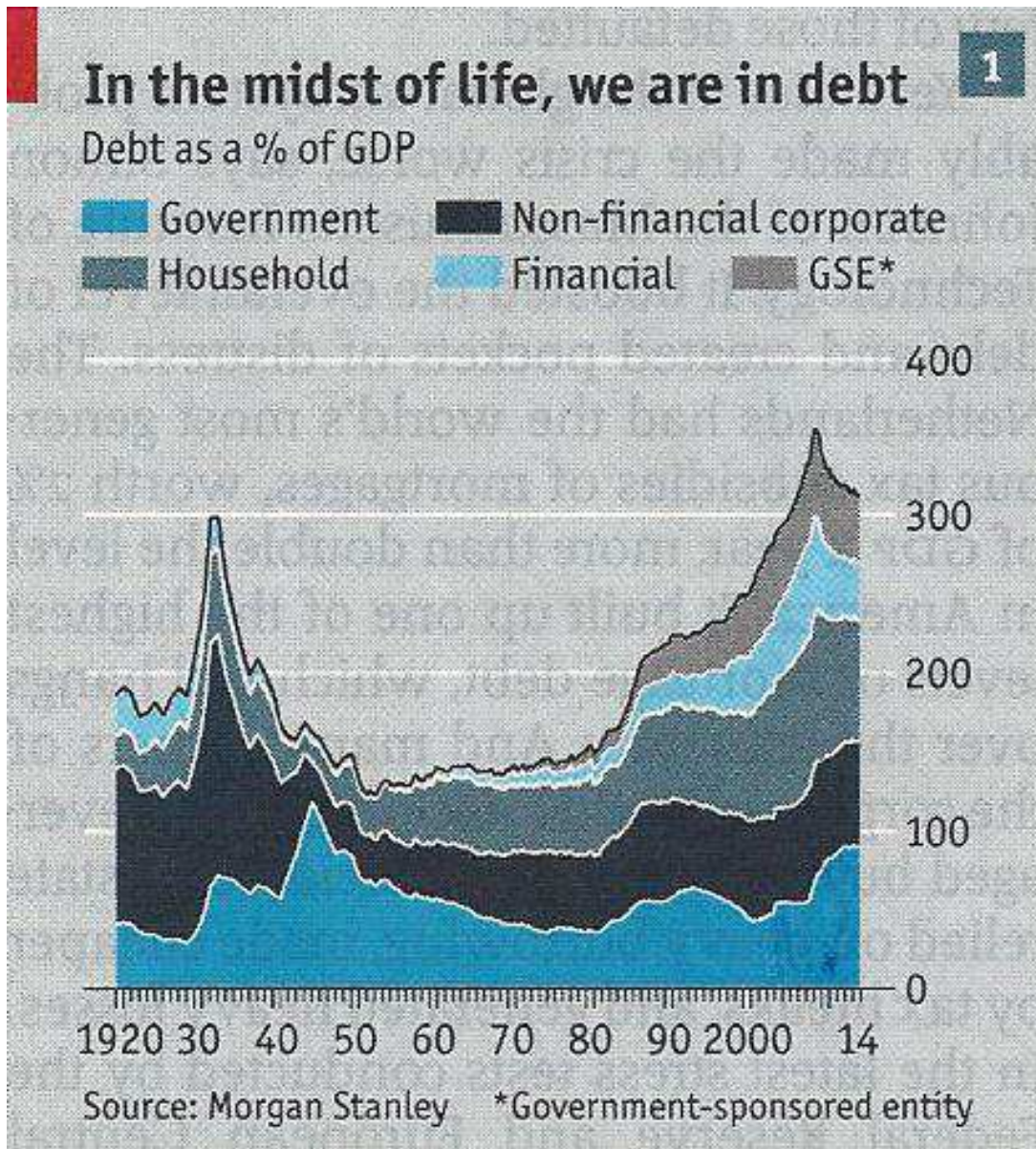
Banks	50 – 60 %
Funds and Insurance Companies (in UK and elsewhere also pension funds)	30 – 35 %
Private Households (Italy, Japan more than elsewhere)	7 – 16 %

Ownership of Public Debt in Europe



Source: ECB, *Monthly Bulletins*, Table 6.2.1

Supercycle of Total Debt



Found: The Economist, 16 May 2015, 20

Overshooting money supply, over-investment and over-indebtedness recurrently result in financial crises

Current banking and debt crises are no single events, but latest links in a continued chain.

From 1970 to 2007 many crises happened on migratory hot spots around the world, intensifying in number and gravity:

145 sector-wide banking crises

208 currency crises

72 sovereign debt crises

425 systemic financial crises

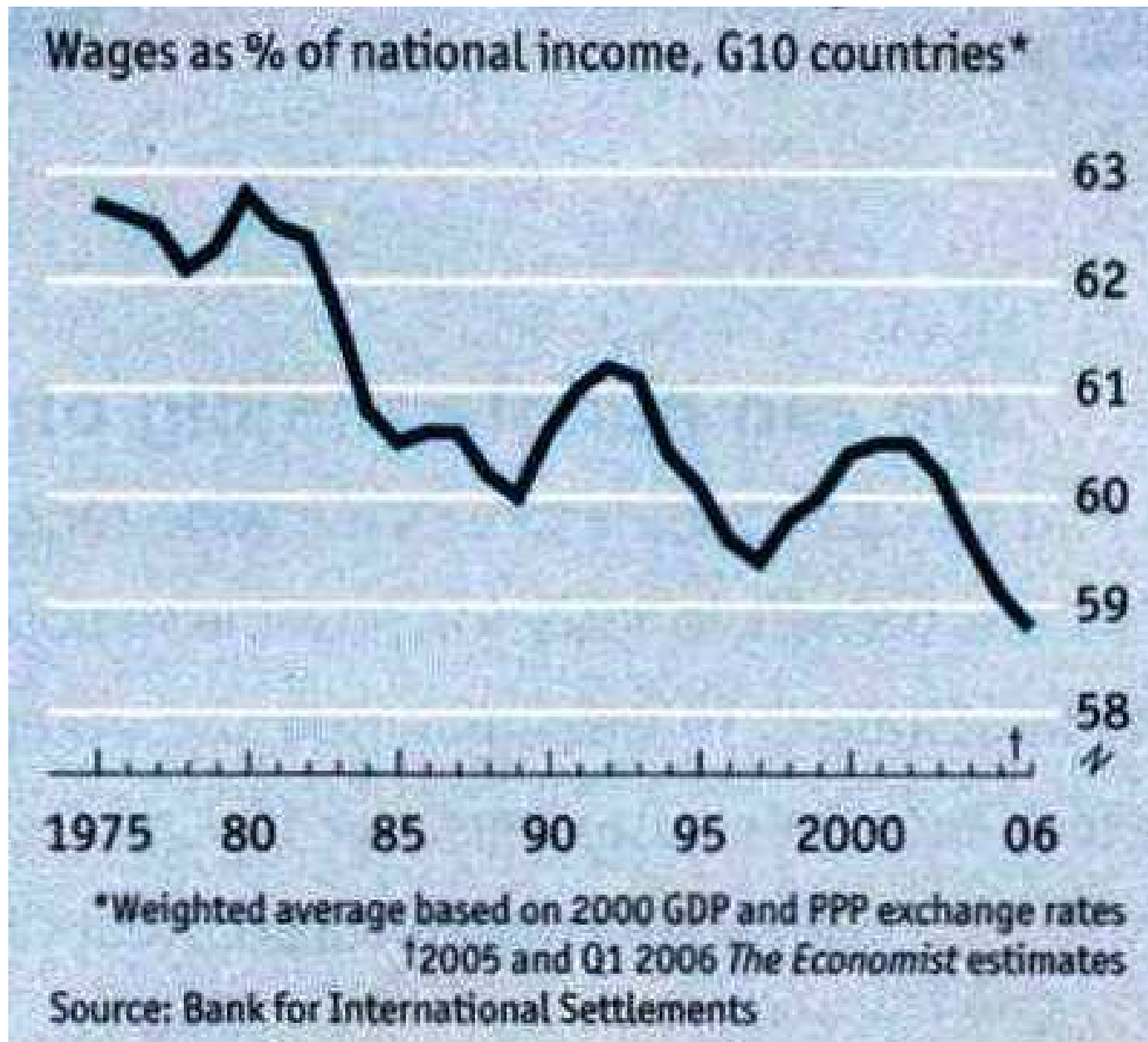
in addition now also including the subprime crisis, the US-EU banking crisis, and the euro's sovereign debt crisis. Further such mess upcoming.

Asset Inflation causes a Shift in Income Distribution – to the Benefit of Financial Income at the Expense of Earned Income

Any current income (taxes, labour, interest and payback of principal) has to be paid out of current proceeds from GDP – or additional debt.

If interest-bearing monetary and financial assets grow disproportionately higher than GDP, this will lead to a disproportionately growing share of capital revenue, or interest respectively, and correspondingly a declining share of earned income.

Decline of Earned Income = Growing Share of Financial Income



Increase of Financial Income to the Detriment of Earned Income

Rise of the rich

Top 1% share of income, %



Source: "Inequality" by Anthony Atkinson

Found: The Economist, 6 June 2015, 7. Based on Atkinson, Inequality, 2015, pp.17.



Why do markets fail to limit the money supply?

Why do money and capital markets fail rather than reaching a point of self-limiting 'equilibrium' as banking teaching has it (real bills doctrine, efficient market hypothesis)?

Very simply, because banks have a strong incentive for extending their balance sheets, i.e. extend their business.

For the banks it appears to be an irresistible temptation, often against better knowledge, to create a GDP-disproportionate excess of bankmoney because the creator and first user of new money enjoys the immediate benefit of it here and now, while expecting the disadvantages (inflation, asset Inflation, bubbles, crises) to hit everybody at a later point in time.

→ Cantillon Effect (after Richard Cantillon 1730)

Why do central banks fail to control the banking sector?

... because quantity possible is ineffective, and base-rate policy largely so.

→ **Monetary quantity policy** is impossible to implement in the bank-led reserve system. That's why monetarist policies of the 1970–80s were doomed to fail.

If central banks refused to accommodate the banks' demand for cash and reserves, the flow of payments came to a standstill, which can induce a standstill in the financial and real economy. No one will voluntarily want to pull that card.

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→ **Interest-rate policy** is a largely ineffective substitute for quantity policy.

Why do central banks fail to control the banking sector?

- **Interest-rate policy** is largely ineffective, because
- On the short term, the banks' demand for additional cash and reserves is price-*inelastic*
 - Refinancing costs on only 2.5% of the bankmoney have no decisive transmission effect on the entire 100%
 - Higher base rates will not deter banks from creating additional bankmoney, because the lending interest and expected capital gains are normally much higher than central-bank rates, interbank rates and deposit rates
 - The general level of interest does not depend on central-bank and interbank rates, but on the asset markets (capital markets). Central banks follow the general trend in interest rates rather than having the lead in setting them.
 - This the more true with regard to the inflation rate.

The dysfunctions of fractional reserve banking

The bankmoney regime

- is unnecessarily complicated and opaque
- fosters financial instability. The credit/debt creation, thus creation of bankmoney, is out of control. The money supply is pro-cyclically overshooting, resulting in
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Monetary Reform

Transition from bankmoney to
sovereign money

i.e. from split-circuit reserve banking
to a single-circuit sovereign money
system

Bankmoney (demand deposits) to sovereign money

Sovereign money = legal tender issued by a government body such as the national central bank.

Coins (issued by the treasury) and banknotes (issued by the central bank) are sovereign money.

Demand deposits, as well as e-cash, are private bankmoney, no legal tender, but a money surrogate that has developed into the most important means of payment – and has thereby captured the sovereign money prerogatives.

Key measures of a sovereign money reform

1. **Full money monopoly**

Extending the existing sovereign money monopolies on coins and banknotes to money on account, i.e. full nationalisation of the official and regular stock of money (in no way, however, nationalisation of banking).

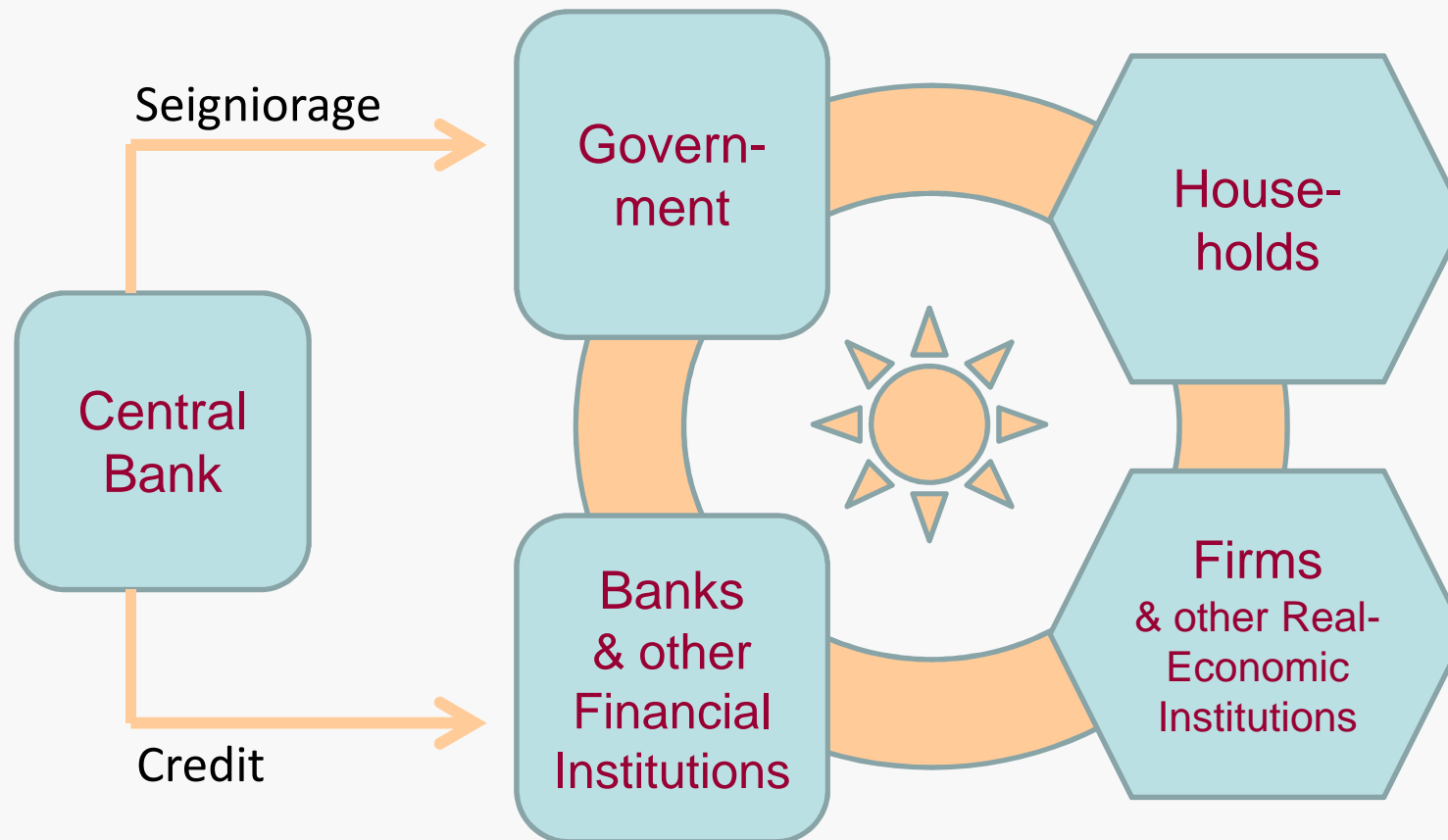
2. **Monetary authority**

Conferring responsibility for the entire stock of money to an independent and impartial monetary authority, in Europe the central banks, or the ECB respectively.

3. **Phasing out bankmoney**

A money reform today does with private bankmoney on account the same as was done with private banknotes in the 19th century: private banknotes were phased out and replaced with the central-bank monopoly on banknotes. Today, in an analogous way, it is about replacing bank money (demand deposits) with sovereign central-bank money.

Single-Circuit System



All money is sovereign money, issued by the central bank, cash and non-cash, circulating as a liquid asset only. No more bank money and reserves (liabilities).

Difference between banks and nonbanks of financial, not monetary relevance.

Advantages of single-circuit sovereign money

- A pure sovereign money system is transparent and robust. It works like most people today think that the system works, but does not.
- Money on account cannot disappear and is thus safe. In a banking crisis, the payment system is no longer at stake. In so far, no more need for governments to bail out banks.
- On the grounds of GDP-proportionate effective control of the quantity of M
 - ... no inflation for monetary reasons
 - ... no artificially leveraged asset inflation and bubble building.More steady flow of money and capital. Business and financial cycles more moderate.

Advantages of single-circuit sovereign money

- No more GDP-disproportionate build-up of financial assets which would benefit capital revenue at the expense of earned income.
- Full regular seigniorage to the benefit of the public purse (annually about 1–4 % of total public households, depending on country and growth).
Banks' privileges from credit creation abolished.
- One-off transition seigniorage. Allows for a 30–70% redemption of public debt within a number of years in most countries.

vollgeld-initiative.ch



INITIATIVE
**MONNAIE
PLEINE**

POUR UNE MONNAIE À L'ABRI DES CRISES :
ÉMISSION MONÉTAIRE UNIQUEMENT
PAR LA BANQUE NATIONALE !



International Movement
for Monetary Reform

internationalmoneyreform.org
(ca. 30 Initiatives)

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Em Chair of
Economic Sociology

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