Design Principles for a Monetary Tide Change

Conference *The Future of Money – CBDC and Beyond*

Stockholm, 15 June 2019

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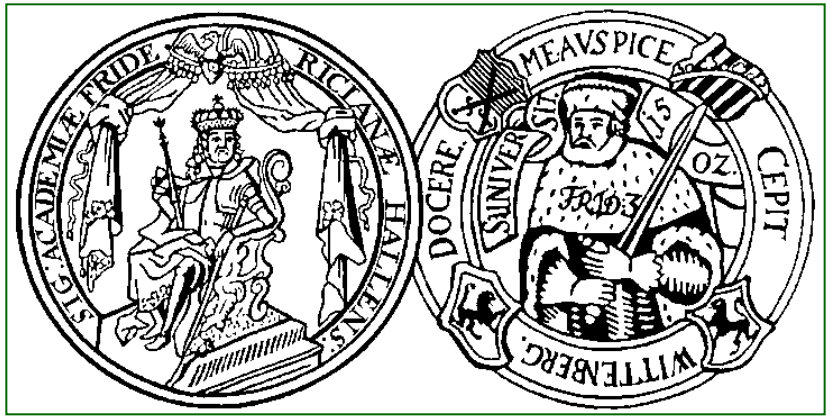


Explanation of Terms

Digital Currency (DC)
Electronic Currency
Digital Cash
Electronic Cash

In the present context the meaning of
any of these combinations is largely the same.

Will use Digital Currency (DC) hereafter.

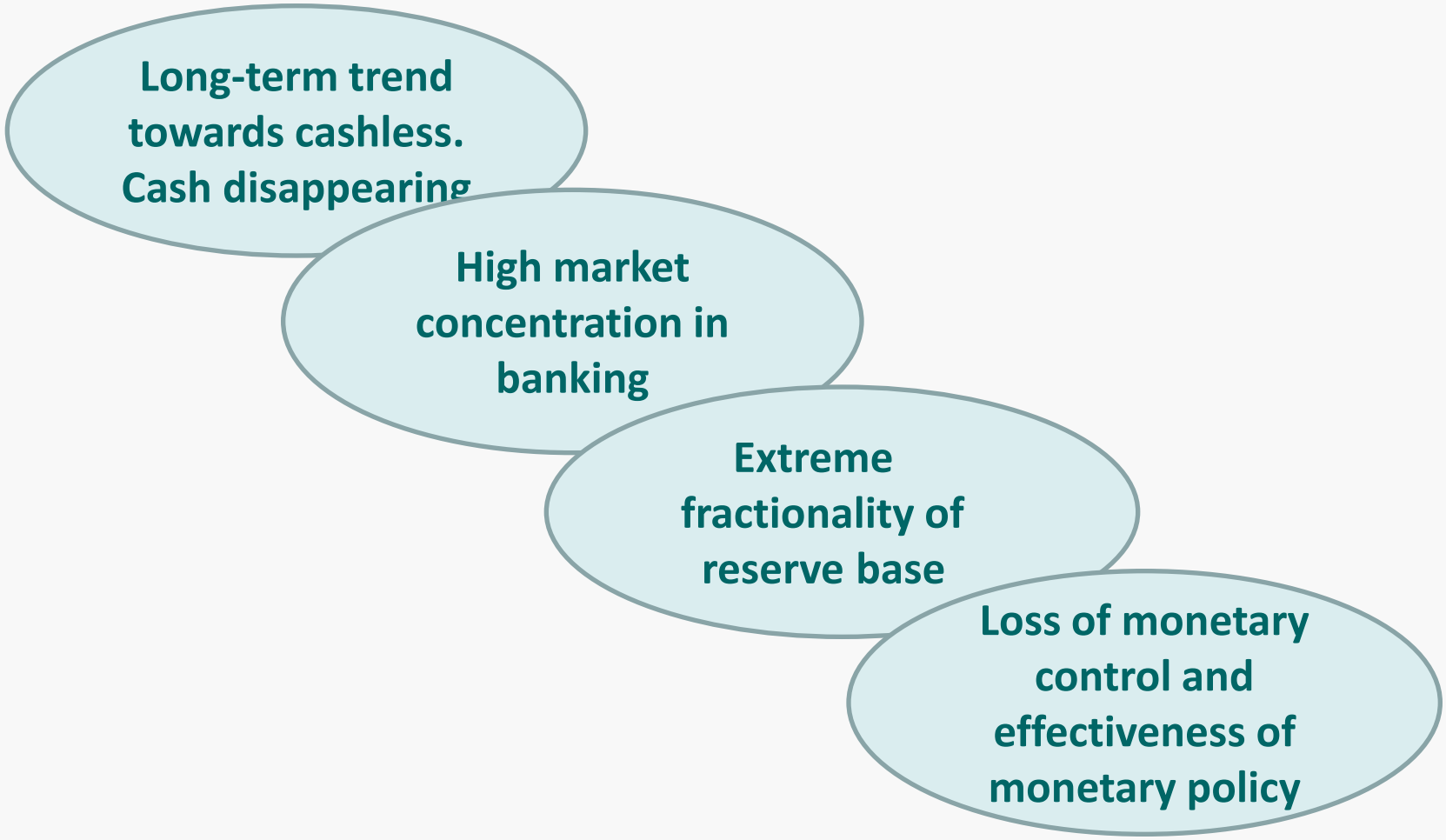
Explanation of Terms

Digital Currency (DC)

- central-bank issued fiat money
  = unrestricted legal tender = sovereign money
  like treasury coins and cbk notes and reserves
- money-on-account (deposit money)
  CBk crypto tokens perhaps at a later point in time.

DC like the E-Krona concept proposed by the Swedish Riksbank or the CBDC models by BoE staff represent varieties of DC.

Relevance of DC: Marginalisation of central-bank money in proportion to bankmoney



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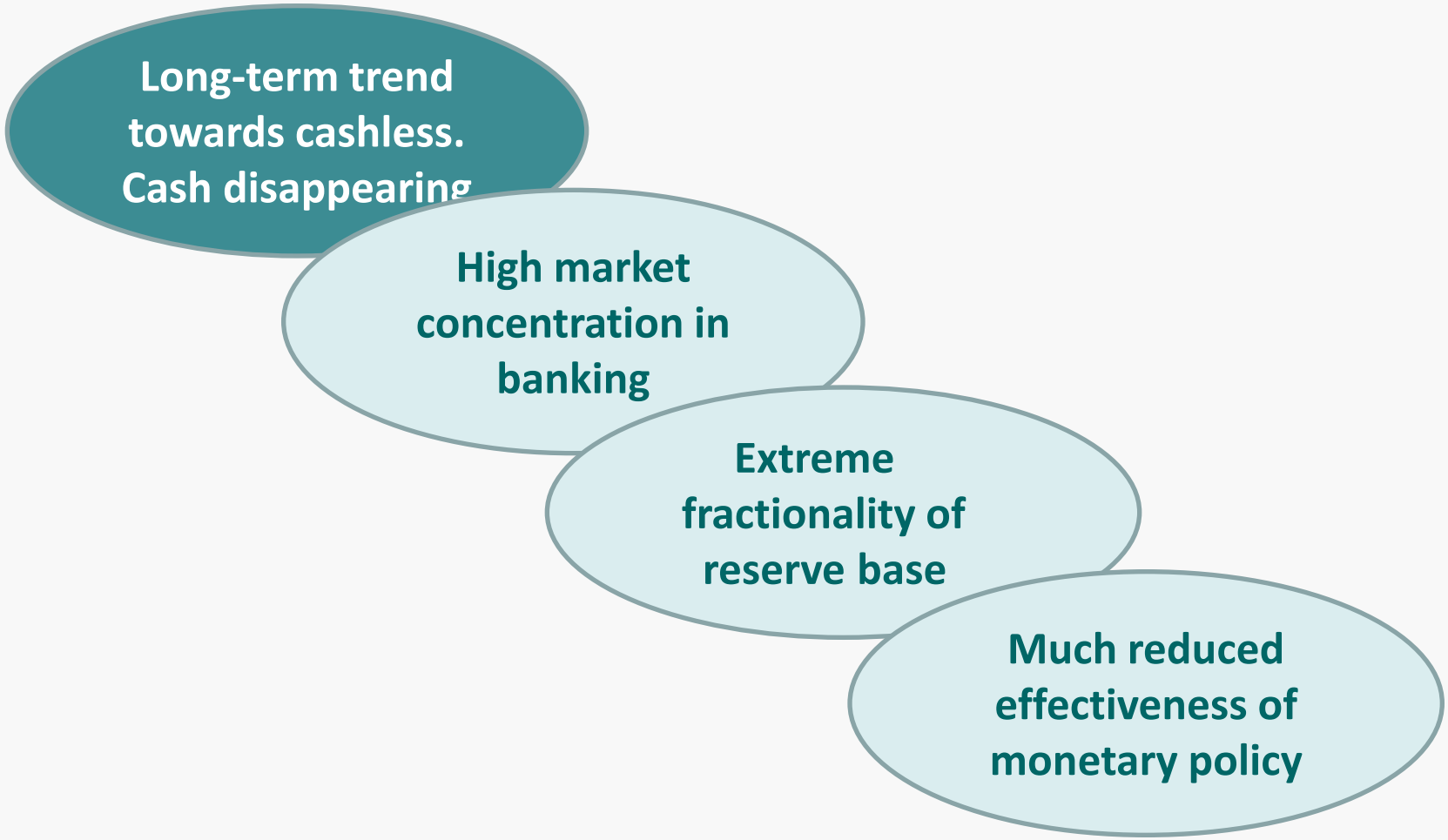
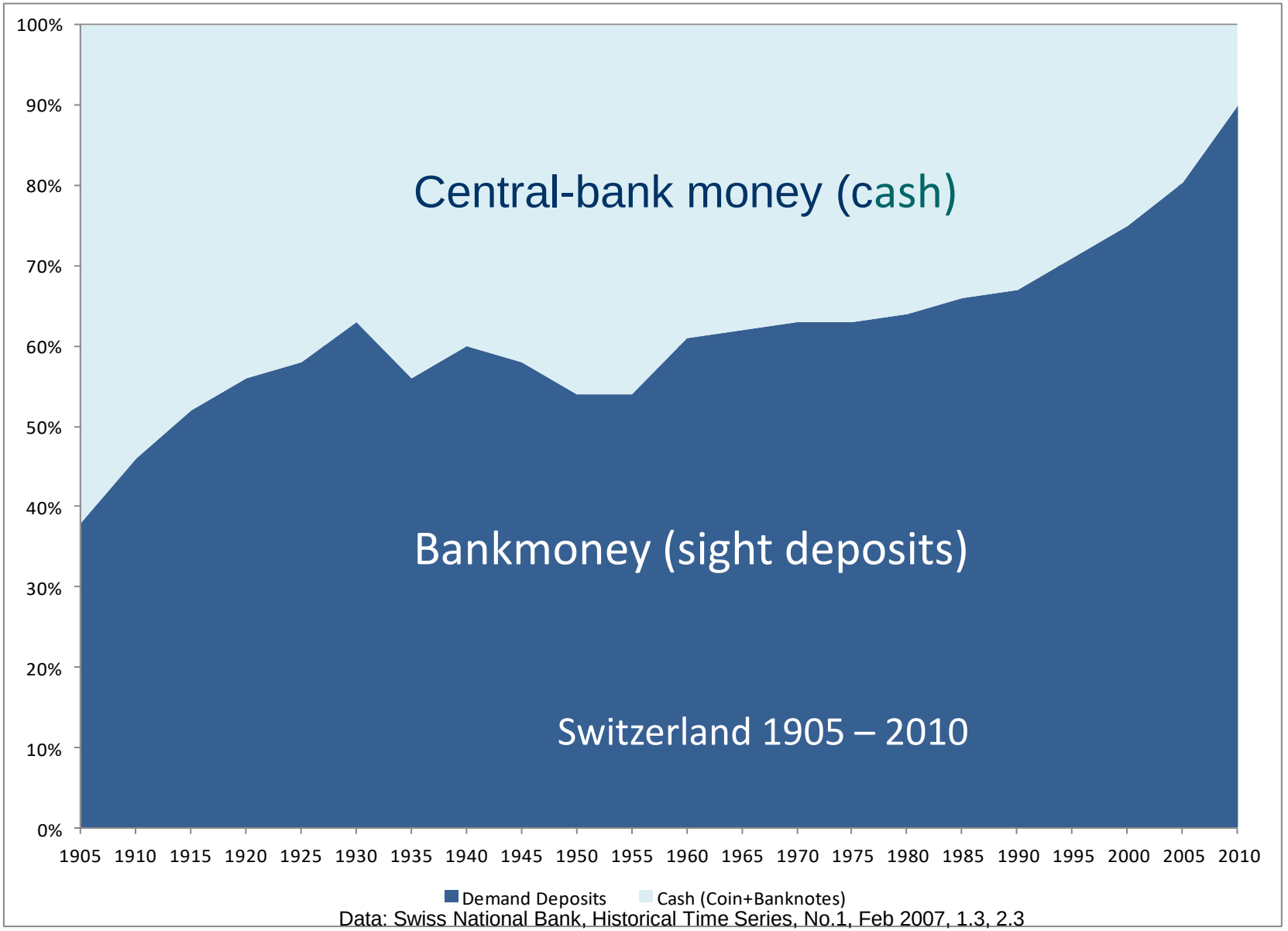


Rise of the bankmoney regime, marginalisation of central-bank money



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

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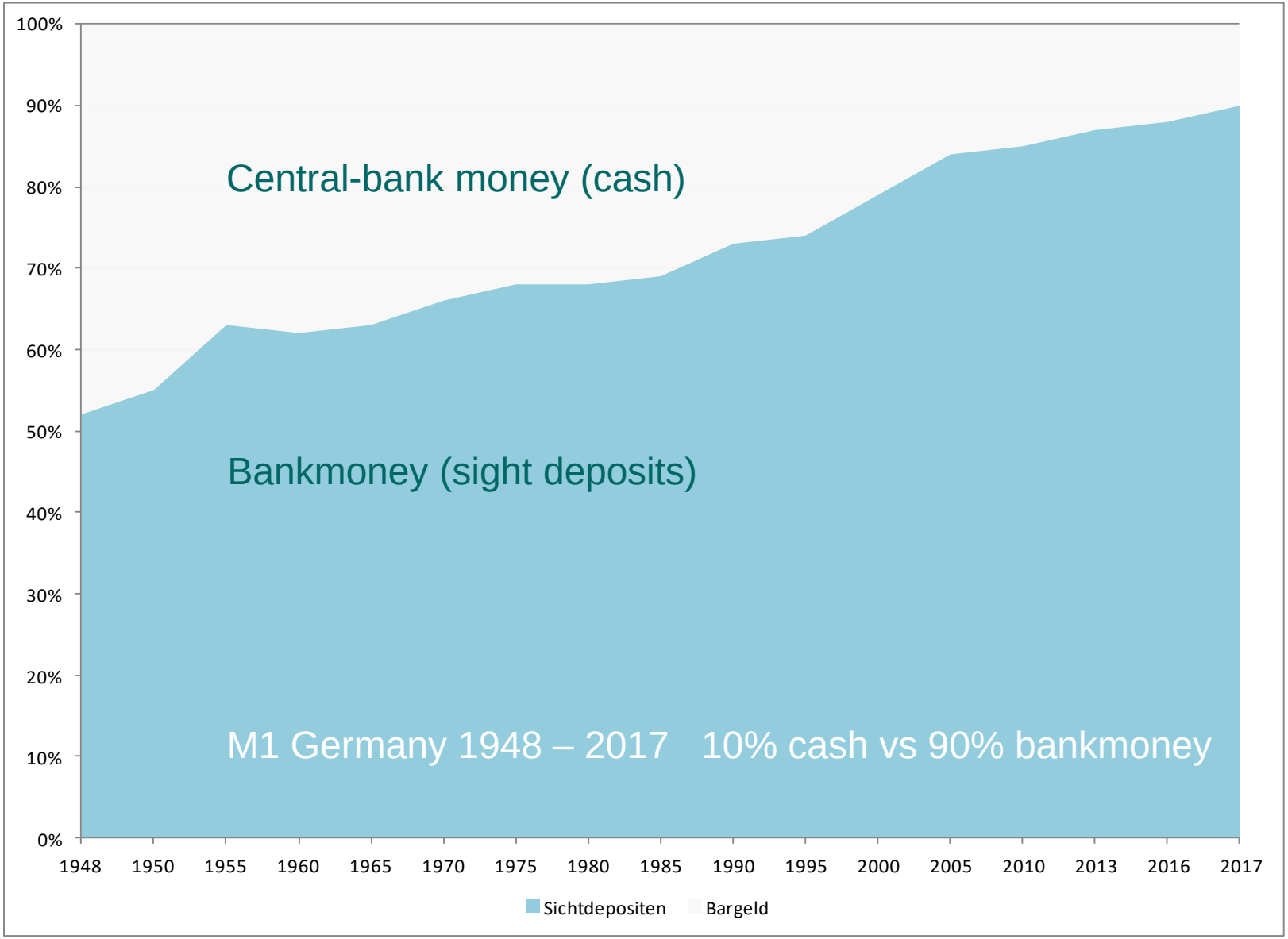
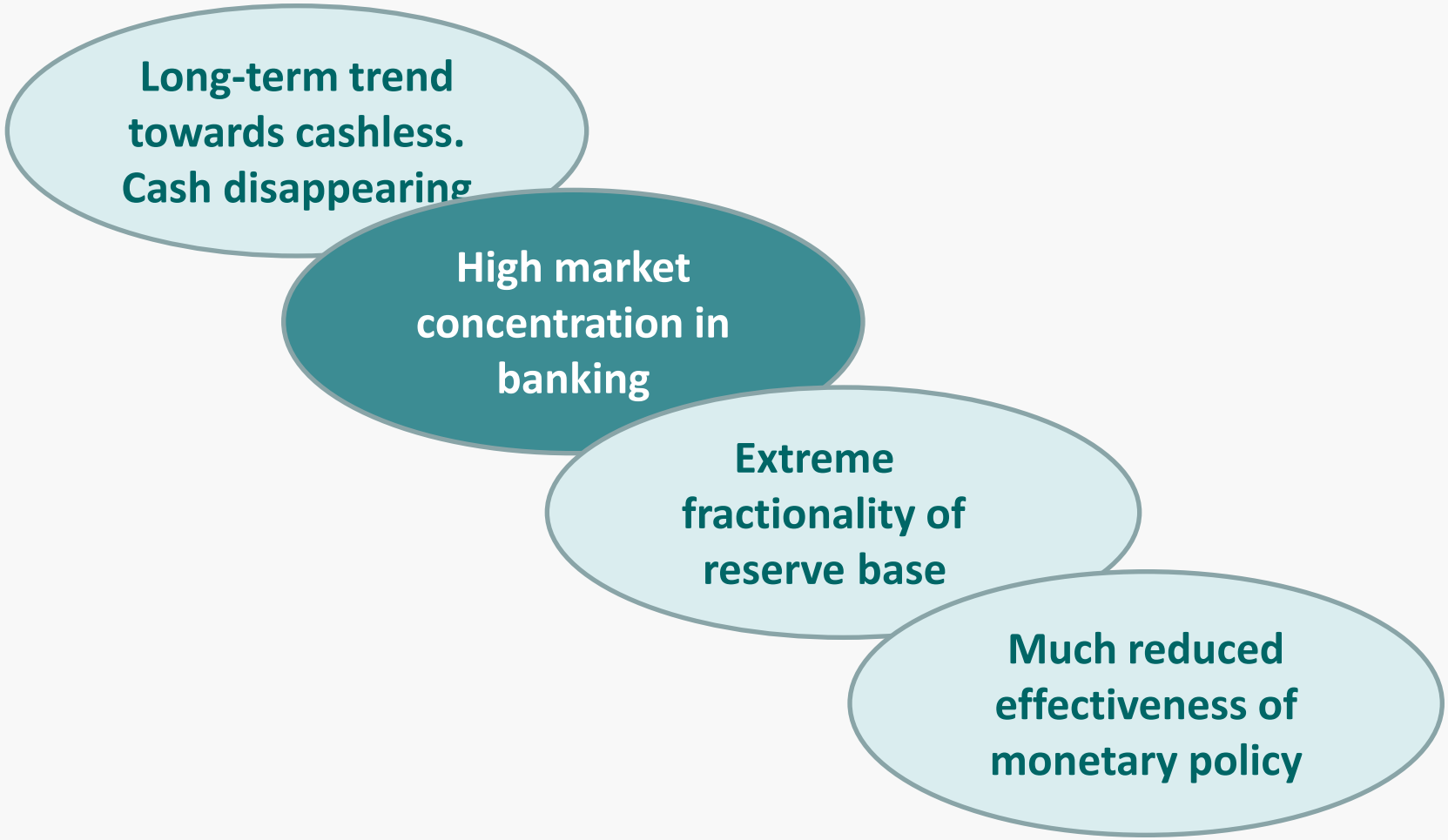


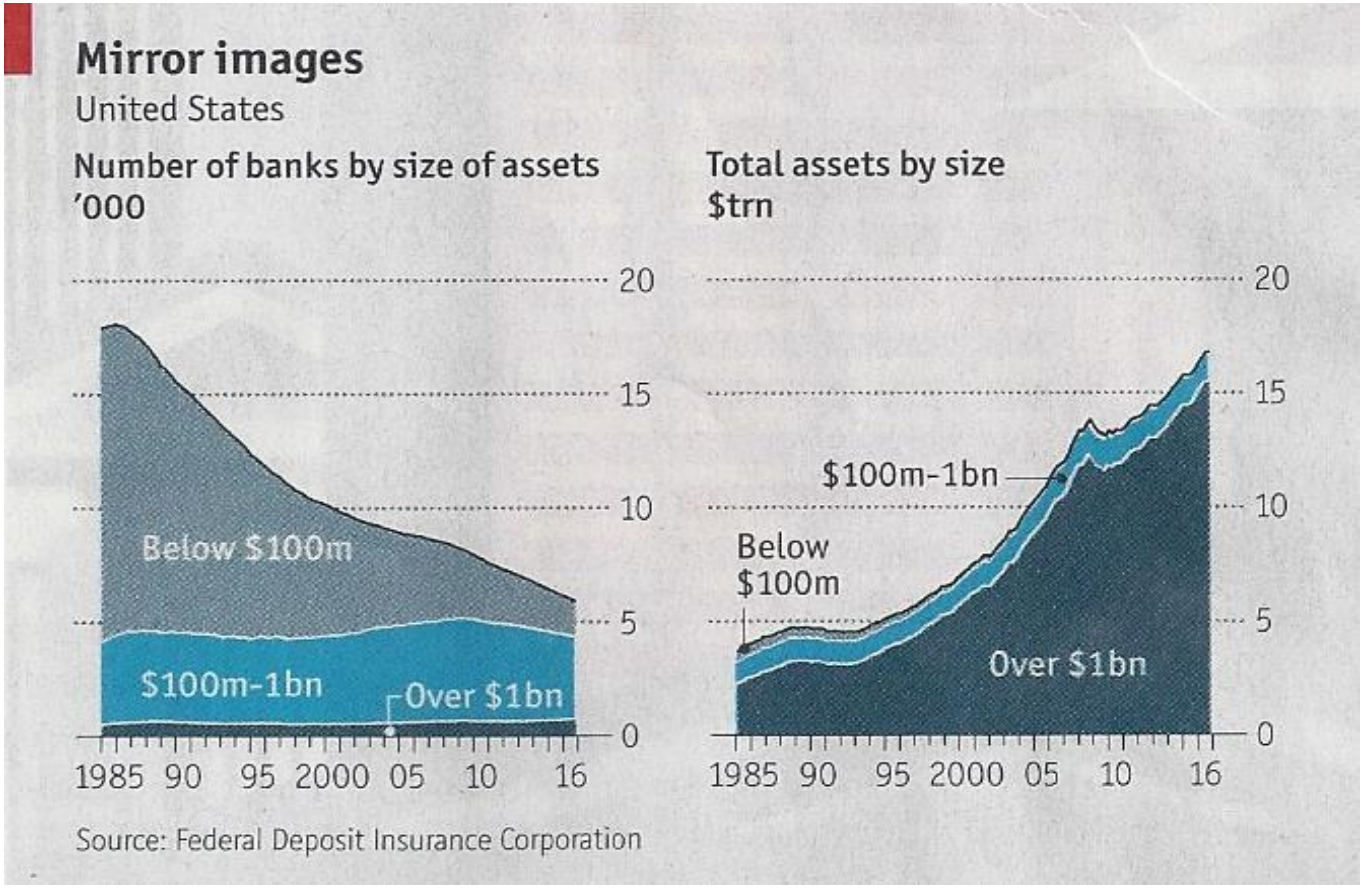
Daten: Deutsche Bundesbank, *Monatsberichte*, Tabellen zur bankstatistischen Gesamtrechnung, 1954-2017.

Relevance of DC: Marginalisation of central-bank money in proportion to bankmoney



Ongoing concentration in the banking sector

- much less banks growing ever bigger
- more customers per bank (many millions)
- still more cashless payments per bank
- resulting in an extremely low need for cbk reserves
- with technically accelerated payment traffic



Sources: ECB Press Release 21 Jan 2014, Decline in the number of MFI continued.– The Economist, Special Report on Banking, 6 July 2017, 8. – ILSR Banking Blog https://ilsr.org/vanishing-community-banks-national-crisis/

Extreme Fractionality of Reserves

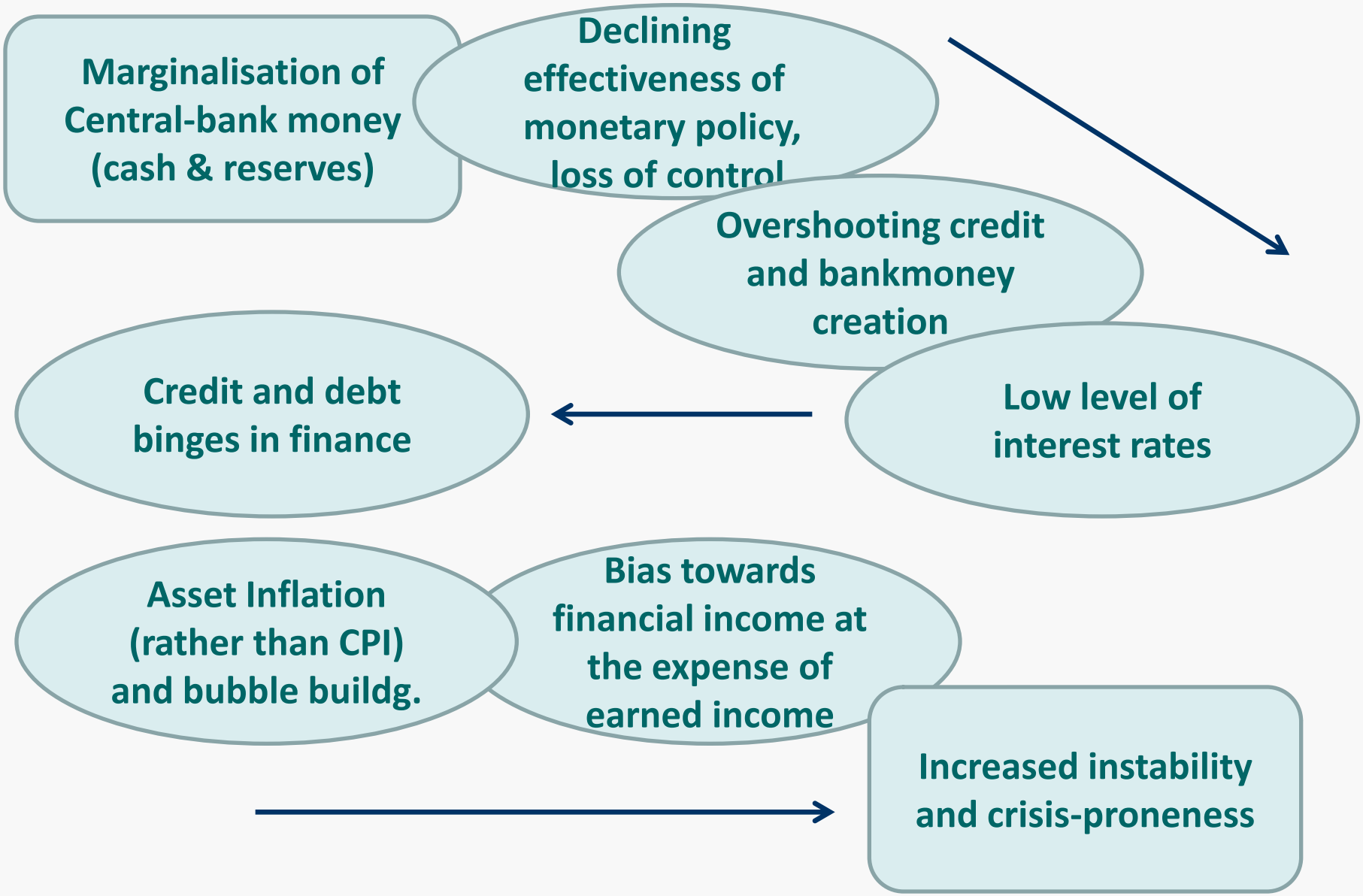
In order to create and maintain 100 units of demand deposits the euro banking sector needs fractional 'coverage' in central-bank money of about 2.5%, composed of

- 1.4% cash (coin and banknotes for the ATMs)
- 0.1% liquid reserves (excess res.) for final settlement
- 1.0% minimum reserve requirement

EU ~ 2.5%

UK ~ 1.5% (close to vault cash)
USA ~ 8% formally, 1.5% real (close to vault cash)

Money creation out of control. Increased instability and crisis-proneness



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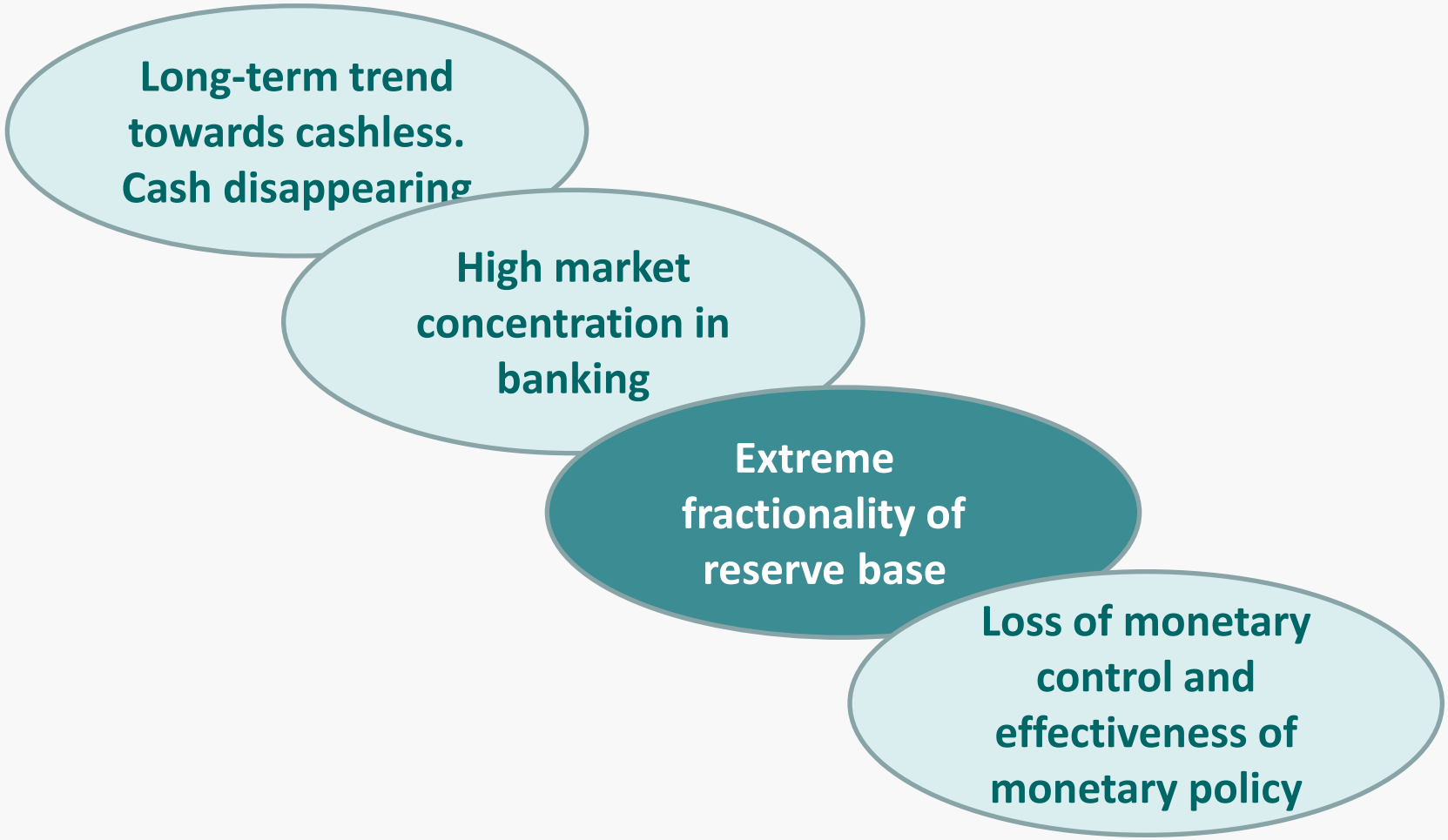

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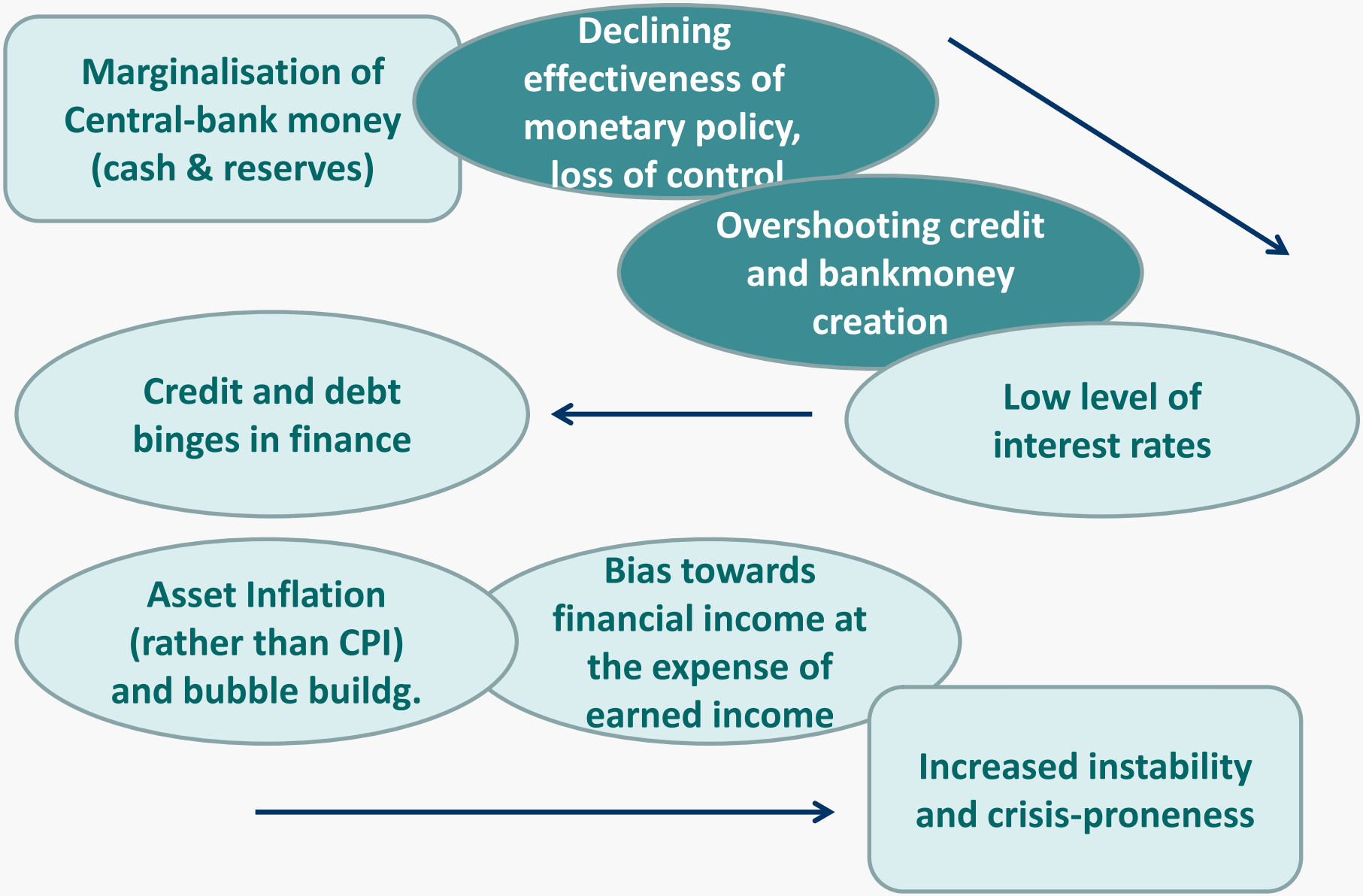
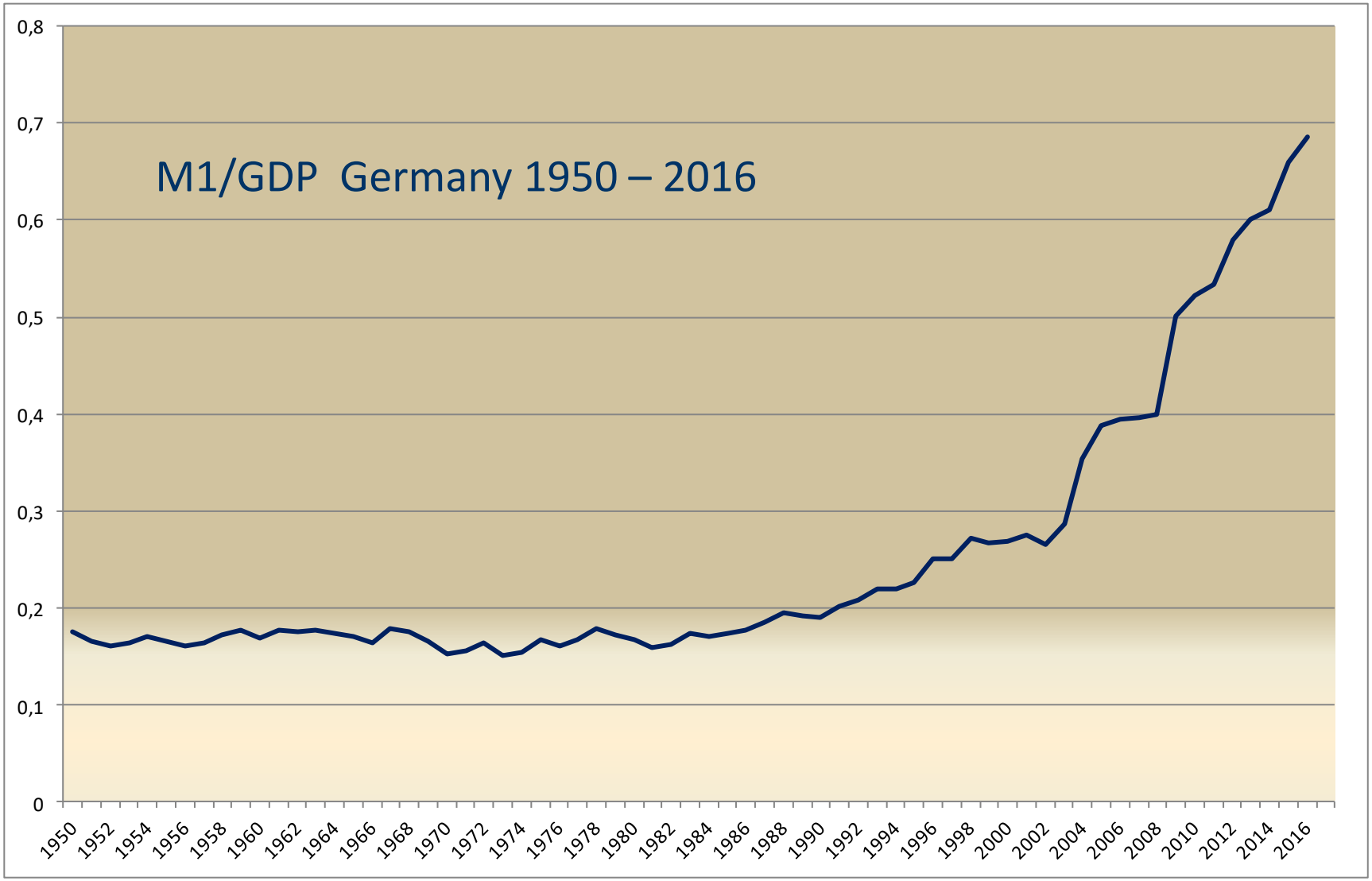
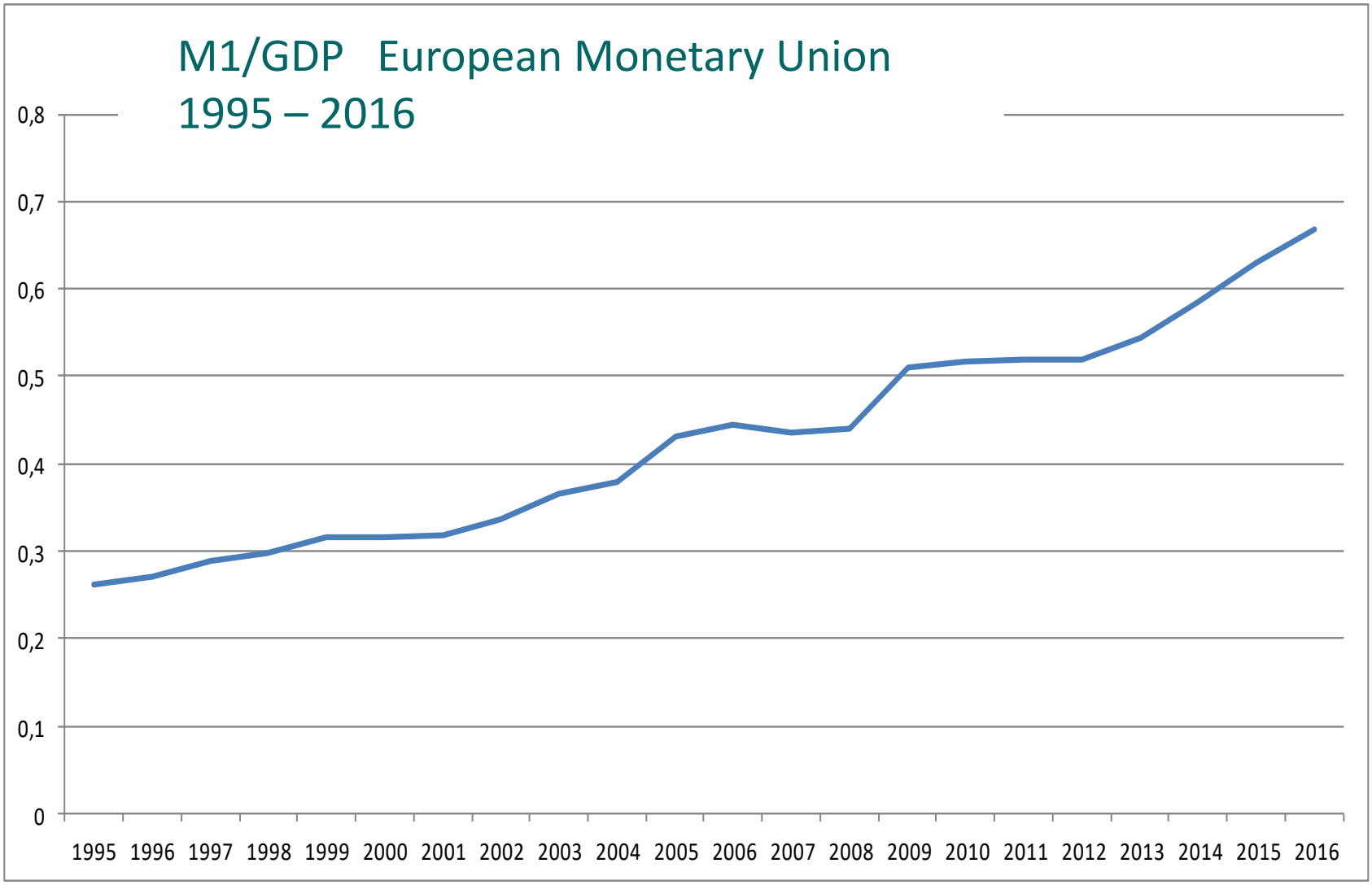


Bankmoney creation out of control.
Overshooting money supply disproportionate to GDP



Data: Bundesbank Monatsberichte, Tab. II.2, XI.1
http://www.bundesbank.de/statistik/statistik_wirtschaftsdaten_tabellen.php#wirtschaftsentwicklung

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



Data: ECB Monthly Bulletins, Statistics, Tab. 2.3.1, 5.2.1. ECB Economic Bulletins, Statistics, Tab. 3.1 , 5.1.
http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/database

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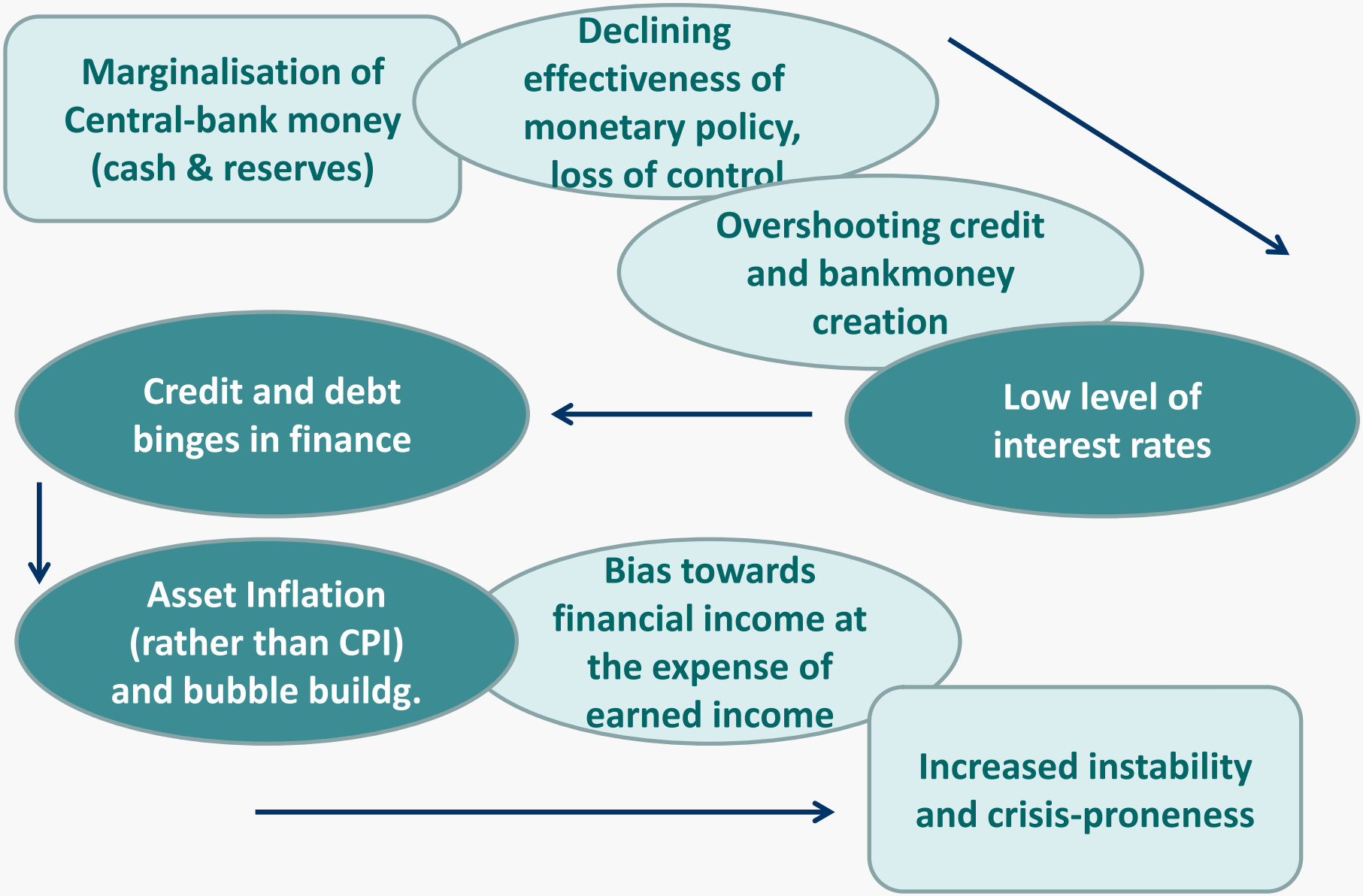
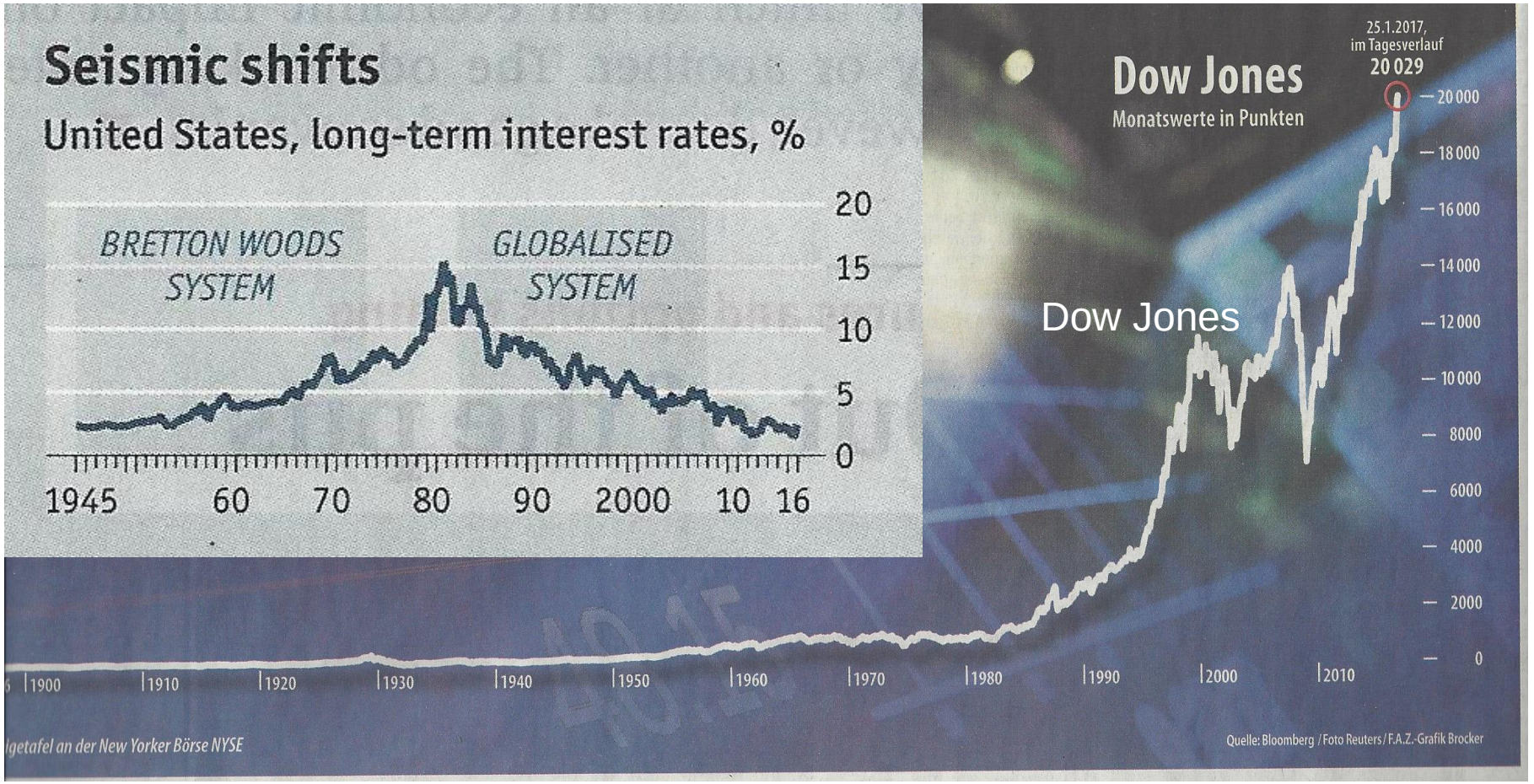
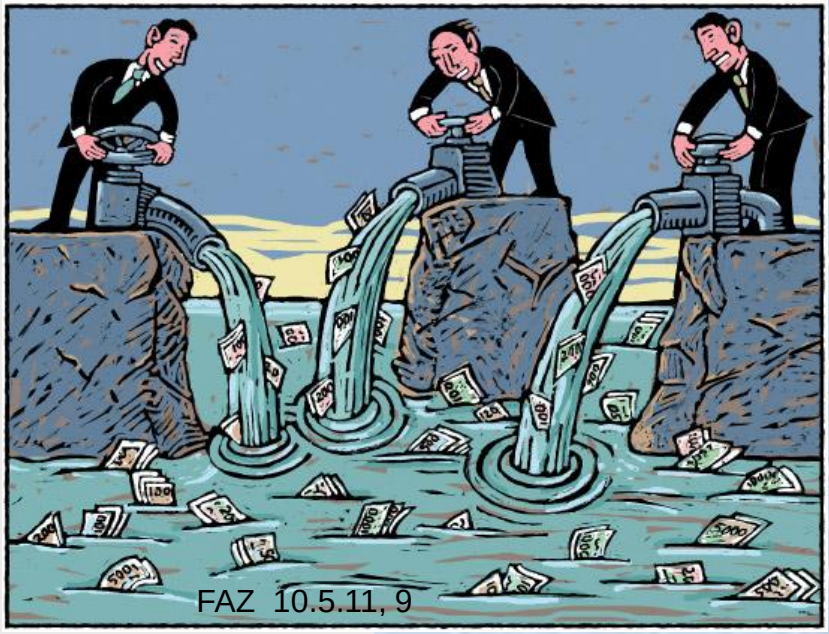


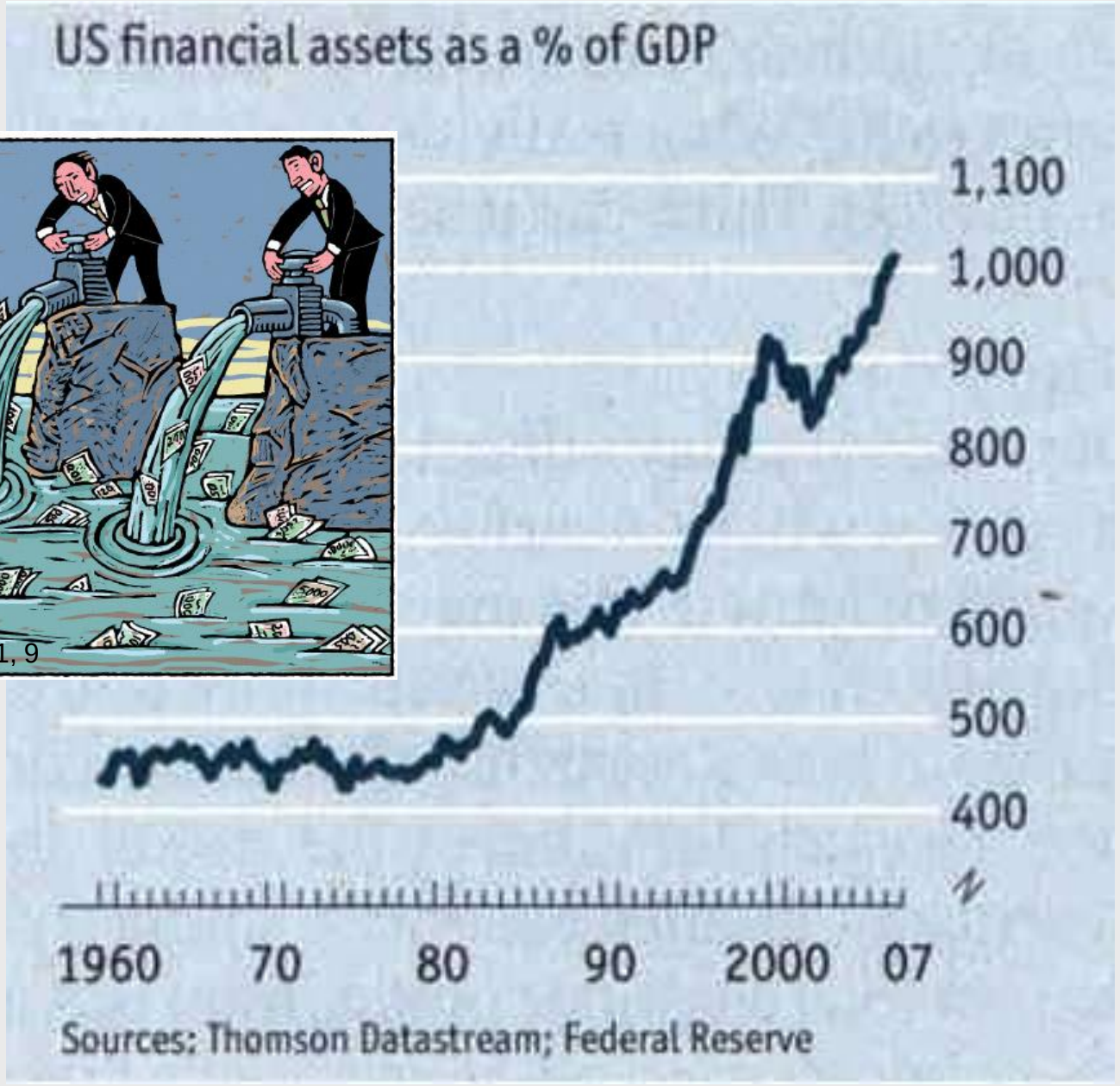
Overshooting money supply = money on the cheap (interest rates going down) = credit and debt binges in housing and real estate, investment banking, wealth management, all of these increasingly leveraged = disprop. growth of non-GDP-contributing finance.



Found: *The Economist 7* Jan 17,55; 10 Jun 17,20; *FAZ* 4 Jun 16, 32

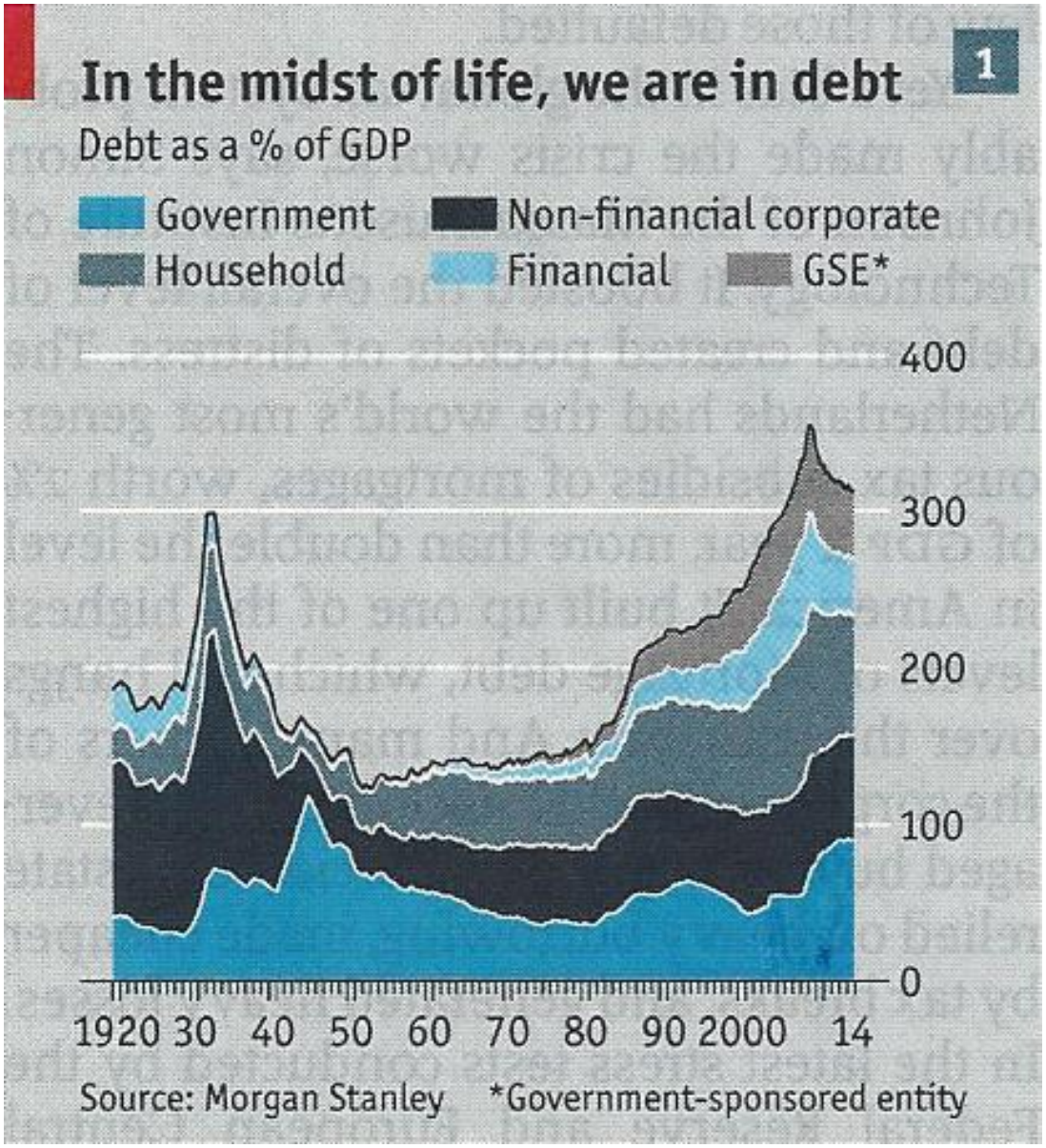
GDP-disproportionate expansion of financial assets

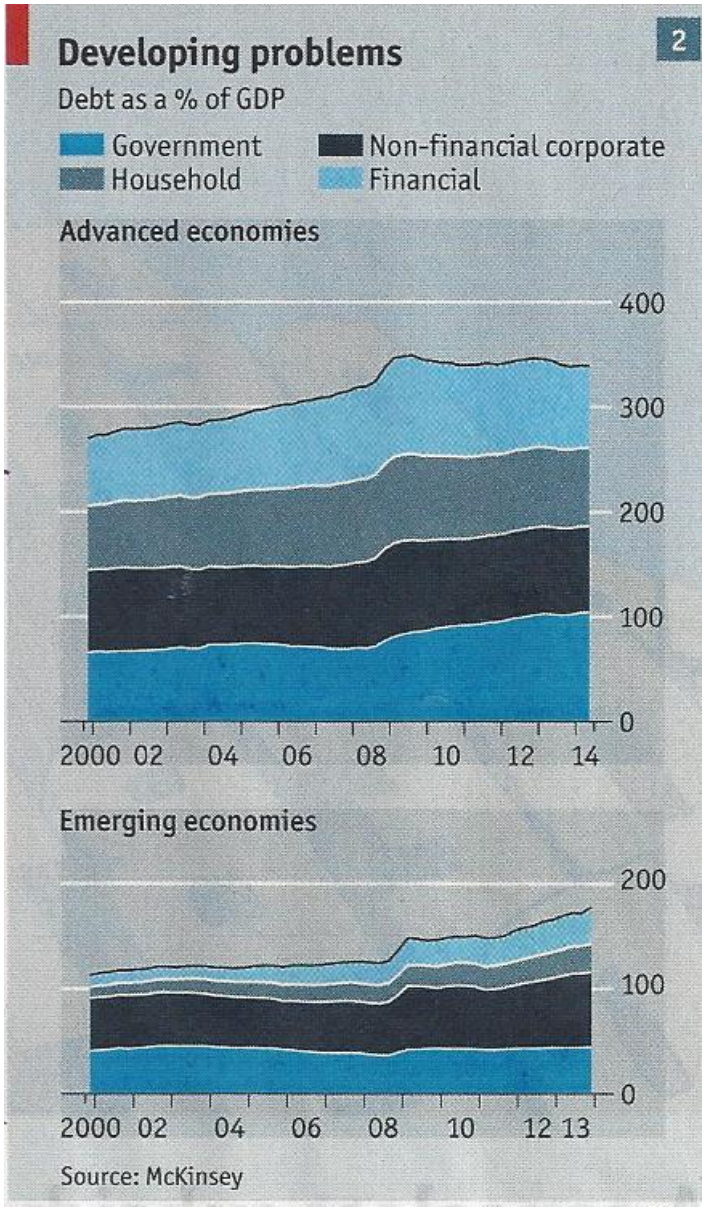




Sources: Trader's Narrative, November 7th, 2009. The Economist, March 22, 2008. Andere Abgrenzungen erbringen ein niedrigeres Niveau, aber gleiche Proportionen, z.B. bei Ashok Vir Bhatia 2011: Consolidated Regulation and Supervision in the United States, IMF Working Paper, No.23, 2011, p.8.

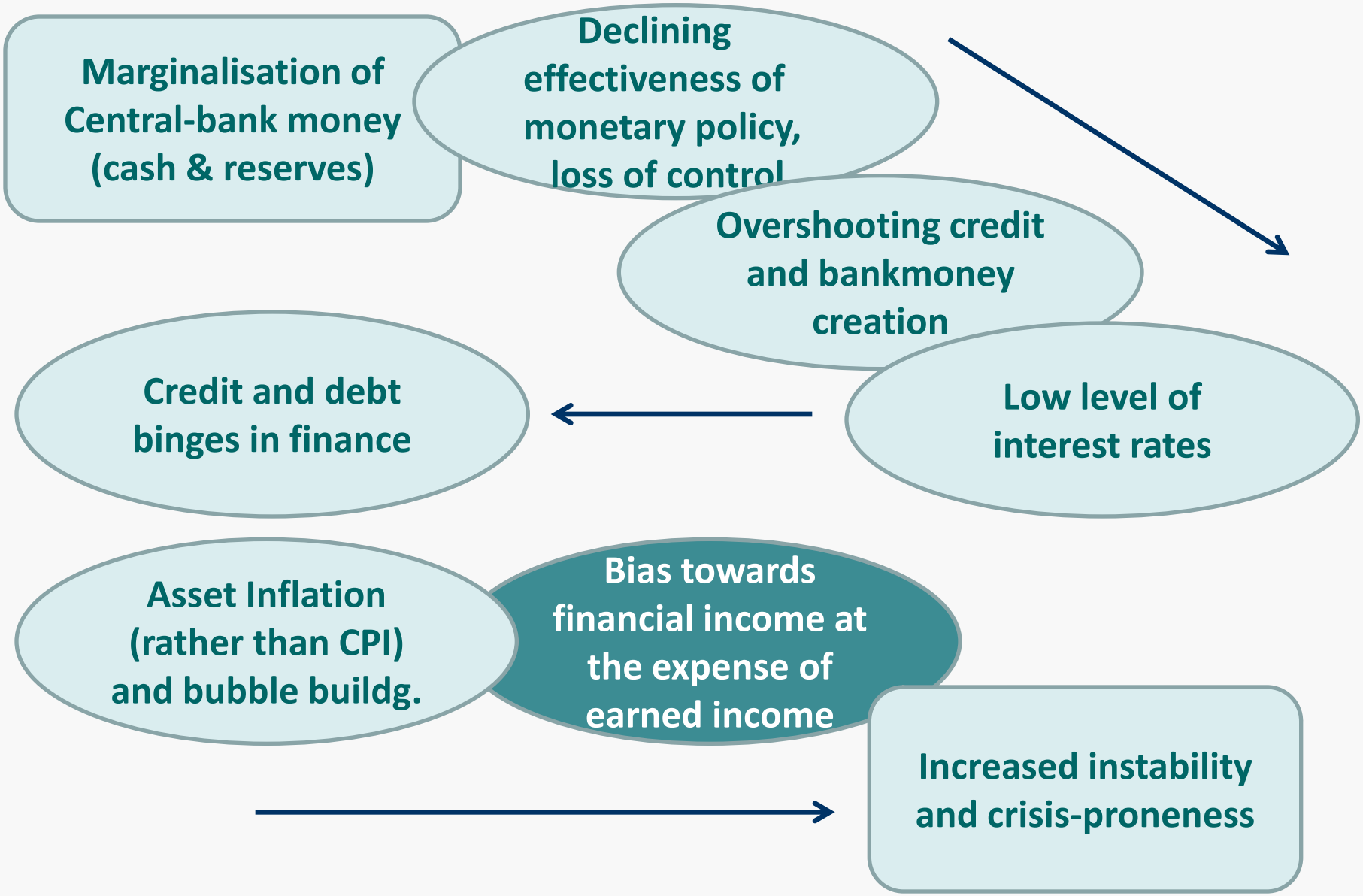
Supercycle of Total Debt





Found: The Economist, 16 May 2015, 20

Money creation out of control. Increased instability and crisis-proneness

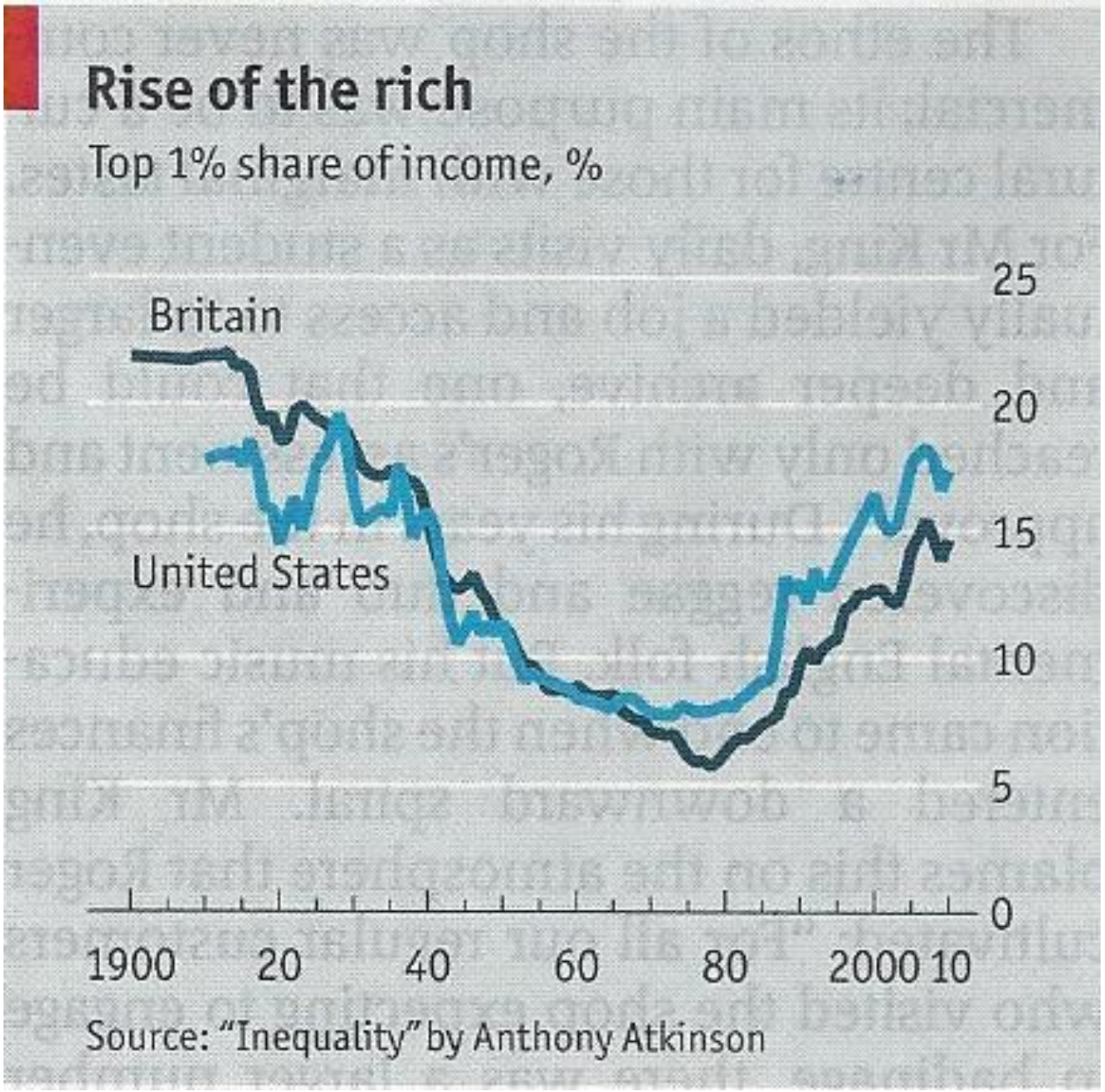


GDP-disproportionate growth in financial assets and debt causes a shift in income distribution – to the benefit of financial income at the expense of earned income

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

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

Unequal distribution of income) and wealth) on the rise again



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

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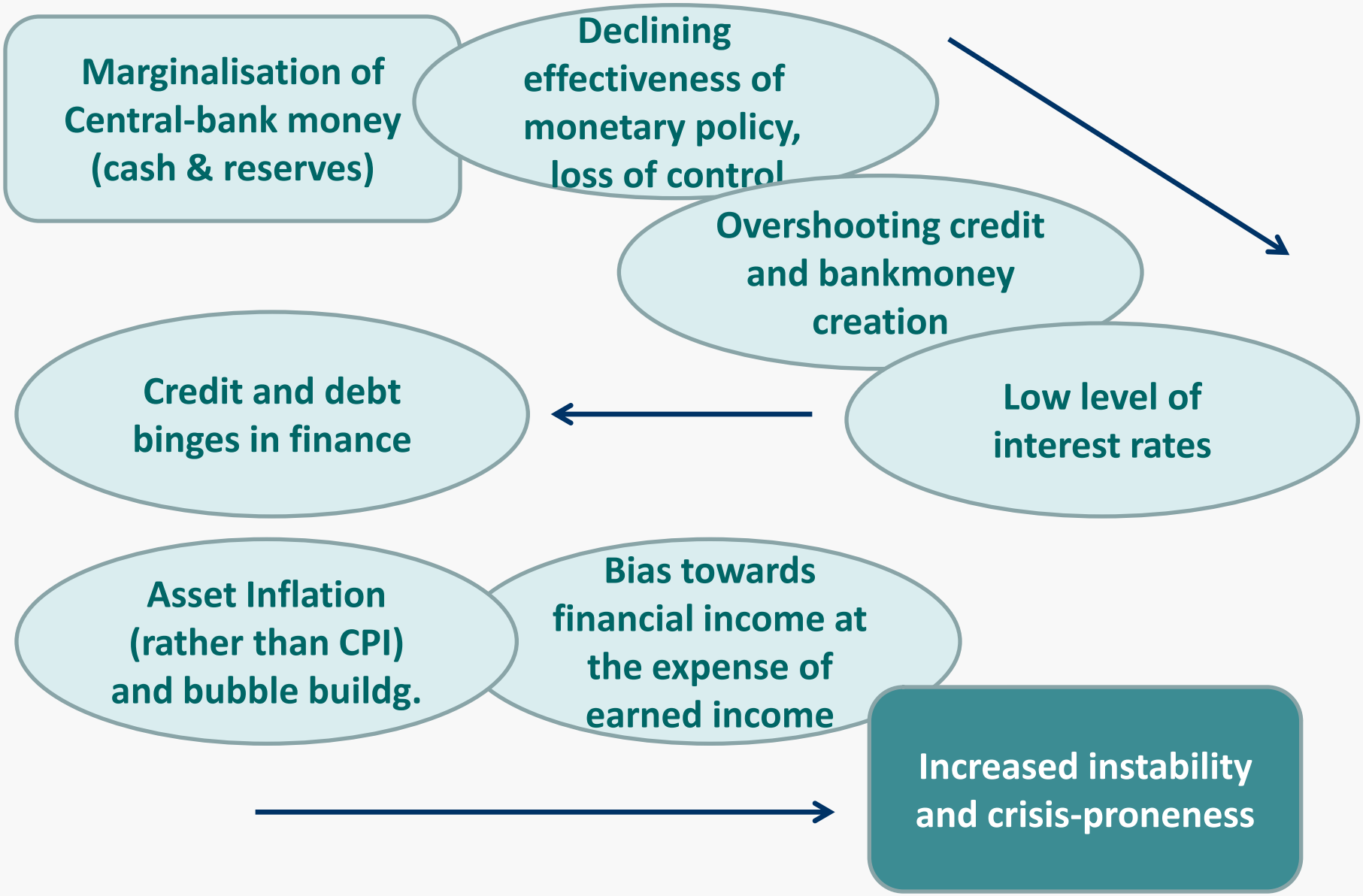
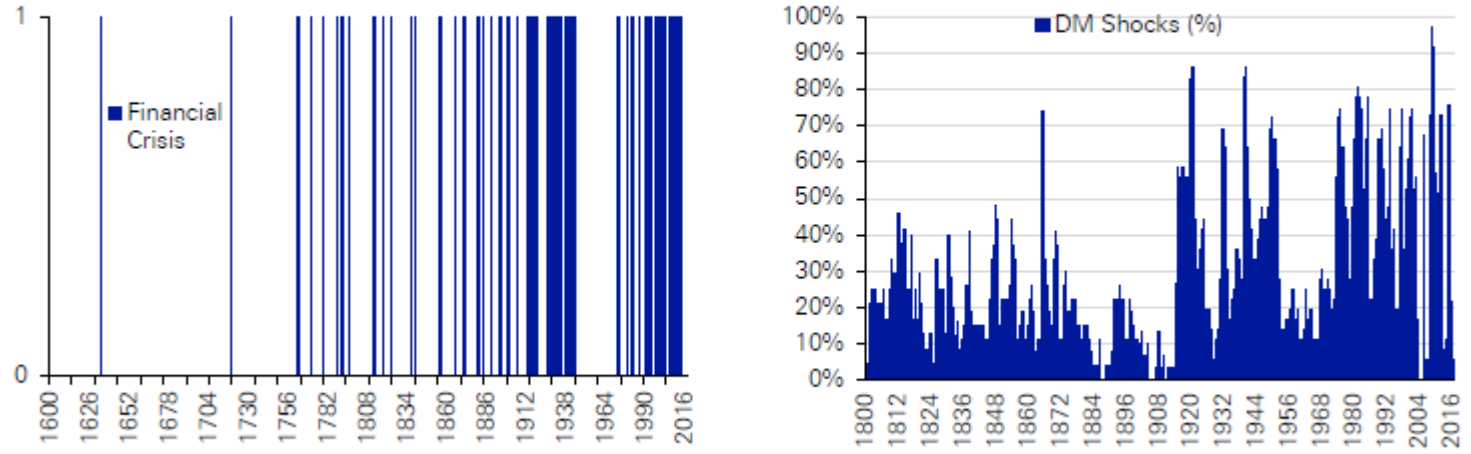


The money system - the misjudged cause of financial crises

The present bankmoney regime on a fractional base of reserves is unstable and crisis-ridden.
Crises from 1970 to 2007 worldwide

145 sector-wide banking crises
208 currency crises
72 sovereign debt crises
425 systemic financial crises

Figure 1: Occurrence of Financial Crises through history (binary variable: 1 = Crisis, left) & % of DM countries facing a Financial Shock equally weighted (right)



Source: Deutsche Bank, Global Financial Data, Author's calculations

Quellen: Dt Bank Research, Long-Term Asset Return Study, 18 Jul 2017, 3. Laeven/Valencia 2008. Reinhart/Rogoff 2009, Lietaer et al 2012 49–52.

So the question is

how to achieve monetary safety and higher levels of financial stability?

The answer is, first and foremost, by

- regaining control of the creation and continual re-adjustment of the stock of money
- thus enabling effective monetary policy, be it interest-rate or quantity policy

… and the means to that end is
a tide change in the composition of the money supply

- by introducing digital currency,
  for example, e-krona side by side with bankmoney
- expecting the share of e-krona to rise over time
  and the share of bankmoney to decrease correspondingly.

The wider historical perspective of DC

… a tide change in the composition of the money supply

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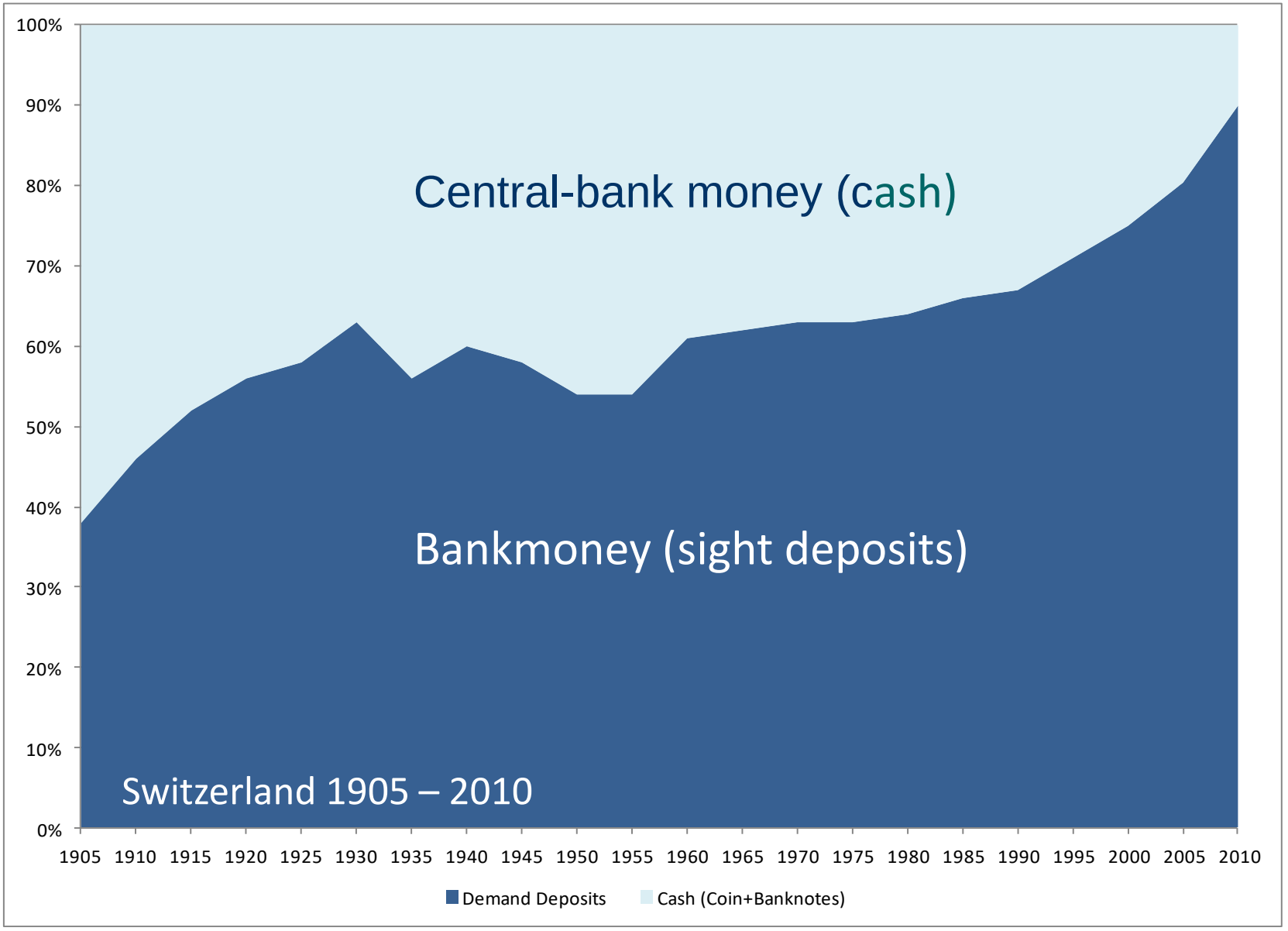

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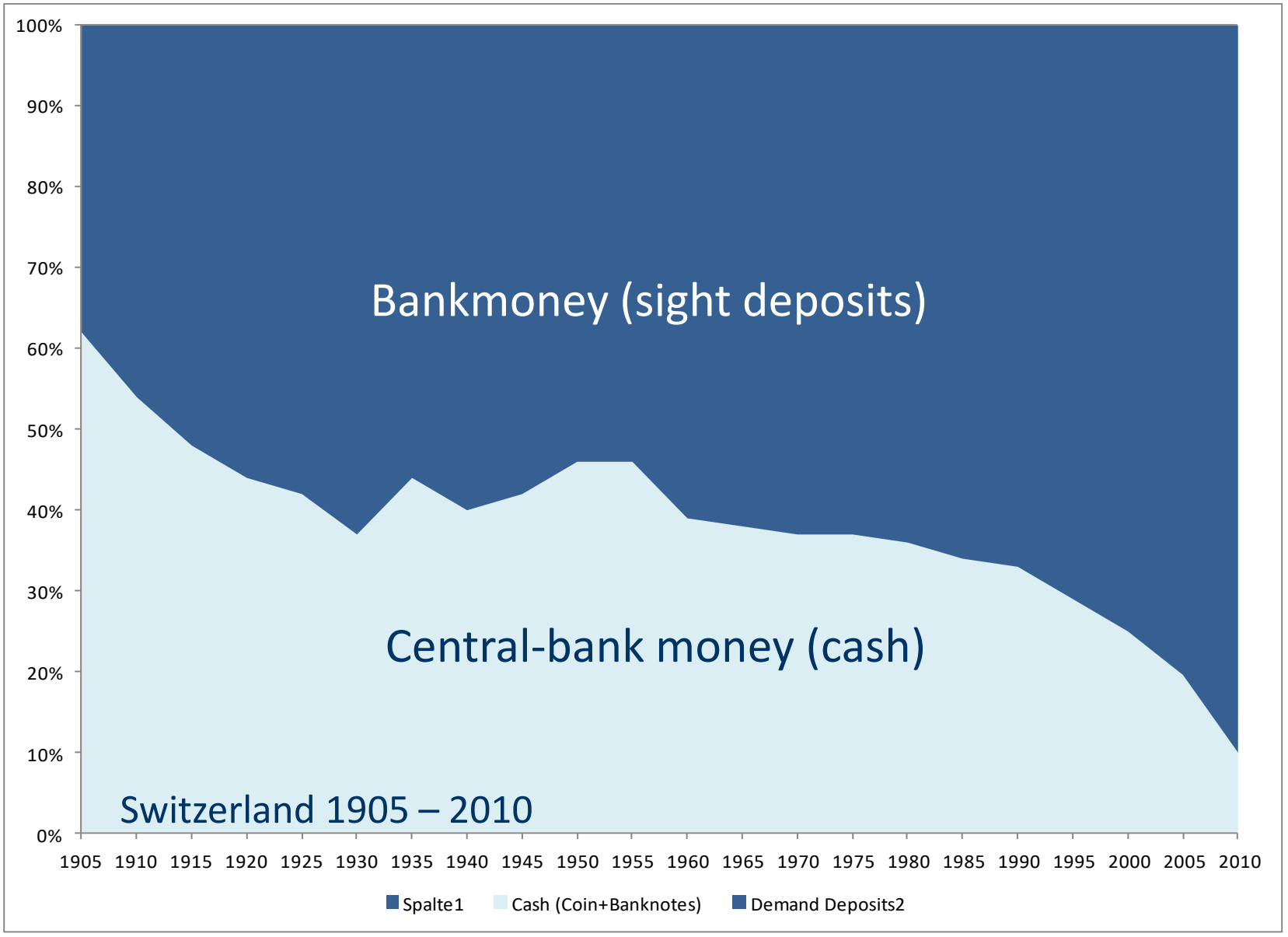

Data: Swiss National Bank, Historical Time Series, No.1, Feb 2007, 1.3, 2.3

Tide changes in the composition of the money supply

~ mid-1600s until mid-1800s

↘ ebb tide for **sovereign coin**

↗ rising tide of **banknotes** (mostly licensed but **private**)

~ mid-1800s until early 1900s

↘ ebb tide for **private banknotes**

↗ rising tide of **central-bank legal tender notes**

late 1800s until early 2000s

↘ ebb tide for **central-bank cash**

↗ rising tide of **bank deposit money**

upcoming from the 2020s

↘ ebb tide for **bankmoney**

↗ rising tide of **CBDC**

Tide changes in the composition of the money supply

The envisaged coexistence of DC side by side with bankmoney is dynamic rather than static,

the overall dynamics pointing in the direction from bankmoney to sovereign money in the form of DC.

The more the rising tide of DC will make headway…

… the more the problems of the bankmoney regime (fractional reserve banking) will recede

… and the more the advantages of a sovereign DC system will be experienced.

Banknotes – historical predecessor of substituting central-bank currency for bankmoney

… the paper money reforms of the 19th century, when private banknotes were phased out and central-bank notes phased in, thus over time establishing the note monopoly of central banks.

This was the reversal of the preceding historical tide change from sovereign coin to private banknotes.

Today, there has been a secular tide change from sovereign cash (coin and central-bank notes) to bankmoney

… which now again needs to be reversed by introducing DC.

DC continues with the advantages of bankmoney

- Availability – or say, creatability – of money
- Comfort of handling and using money-on-account
- Costs of handling DC equal to bankmoney

Advantages of Digital Currency. The more DC…

- Regaining control over money creation. Improved effectiveness of monetary policy by enhanced transmission. More stability.
- Safe and secure money.
- No more counterparty risk in bank payments. In a crisis, decreasing need to save banks for saving the bankmoney.
- Costs of financing DC for banks about the same as with cash.
- Increased seigniorage (gain from money creation) to the benefit of the public purse.

Tide change from bankmoney to DC not self-evident

However, DC may not in fact be a fast-selling proposition, and its advantages may not materialise automatically. For example,

- under conditions of business-as-usual when there is no sense of heightened uncertainty,
- if banks pay some deposit interest on bankmoney, while none or less is paid on DC,
- while central banks and governments maintain far-reaching state guarantees for bankmoney,

under such conditions one would not expect firms and people to feel urged to switch accounts; so it remains unclear whether a significant shift from bankmoney to DC would occur at all.

Moreover, possibly new challenges such as MMF shares

Design principles conducive to a shift towards DC

No restrictions 1. on access to and 2. quantities of DC

3. Merging DC and interbank reserves into one circuit
4. Full convertibility between bankmoney and DC …
5. … including a conversion guarantee by the central bank, particularly in a bankrun situation
6. Gradually reducing and ultimately removing state warranties of bankmoney
7. Public bodies gradually increasing the use of DC
8. Central-bank deposit interest on DC equal to deposit interest on bankmoney
9. Credit to banks not the only channel of issuance of DC
10. Ruling out negative interest.

Design principles conducive to a shift towards DC

1. **No restrictions on access to DC-accounts**

   DC-accounts or mobile DC-media ought to be provided according to market demand.

   That is, no restrictions regarding access of actor groups.

   Should, e.g., retail banking be excluded (i.e. most small businesses and households), the entire enterprise would be pointless.

2. Merging DC and interbank reserves into one circuit

Conventional interbank-circuit reserves and DC in public use represent money of the same type with the same properties,

even if DC is managed in a separate or extended infrastructure of accounts and payments, the DC is no longer part of bankmoney circulation.

Central-bank reserves and DC belong quite naturally in one and the same money circuit.

Design principles supportive of a shift towards DC

3. Full convertibility between bankmoney and DC

Bankmoney and DC must freely be convertible at any time and in any amount.

Otherwise, the 1:1 parity might come under pressure and/or
the much-feared bankrun scenario might be triggered.

Design principles conducive to a shift towards DC

4. No restrictions on quantities of DC …

Not only accounts but also amounts of DC ought to be provided according to market demand for it.

That is, no restrictions regarding amounts available, or convertible, respectively, from bankmoney into DC.

Otherwise, again, the 1:1 parity might come under pressure and/or
the much-feared bankrun scenario might be triggered.

The e-krona does not put a ceiling on its quantity, but applies current cash payment limits to the e-krona – which is tantamount to a ceiling on e-kronas available. Such limitations should over time be overcome.

Design principles supportive of a shift towards DC

5. … including a conversion guarantee by the central bank, particularly in a bankrun situation

In the present bankmoney regime the bankrun problem is much played down, while when discussing DC it is much exaggerated. Under conditions of business-as-usual there is no bankrun; only in a banking crisis.

Important note: The bankrun problem – more precisely, the problem of bank liquidity under fractional reserve banking – is inherent to the present bankmoney regime. This is ***not a problem of DC!***

In a side-by-side constellation, the problem can easily be precluded by the central bank giving a conversion guarantee – which in fact is the ultimate answer to the bankrun question, largely pre-empting any bankrun.

6. Gradually reducing and ultimately removing state warranty of bankmoney

The bankmoney regime would have long since collapsed without ready central-bank support, state guarantees for bankmoney and government bail for banks (now also including forced customer bail-in).

State warranties for bankmoney induce moral hazard, are inequitable and of questionable legitimacy.

They can and ought to be gradually withdrawn to the degree to which the share of DC would increase and that of bankmoney decrease.

7. Public bodies gradually increasing the use of DC

Today, public bodies require payment in bankmoney while denying to be paid in cash (= sovereign money).

This is a monetary world turned upside down.

Public bodies should thus gradually increase the use of DC from the beginning.

8. Central-bank deposit interest on DC equal to deposit interest on bankmoney

Basically, money (the means of payment) is not interest-bearing. Assuming money to be interest-bearing rests on the tie between modern money and credit, if not outright confusion of money and credit.

However, banks are likely to offer some deposit interest on bankmoney. So, pragmatically, the central bank should do likewise to create a level playing field.

Otherwise there would be an undesirable pro-cyclical shifting of account balances between bankmoney and DC (into bankmoney when there is business-as-usual; into DC in times of heightened uncertainty or even crisis)

9. Credit to banks not the only channel to issue DC

Present approaches to DC presuppose prior pro-active bank credit creation. (Issuance of DC either by con-version of bankmoney, or by open-market purchases of securities).

DC can also be issued by way of genuine seigniorage to the public purse or for a citizens' dividend.

This is not about monetary financing according to fiscal demand, but about genuine seigniorage from central-bank money creation according to criteria of monetary and financial stability.

10. Ruling out negative interest (NI)

NI is not specifically related to DC, but quite some policy makers support DC to clear the way for imposing NI. However …

… if there is sufficient control of the stock of money, there will be positive interest rates (say, around 3–6%) and thus no need for fiddling with 'negative rates'.

→

9. Ruling out negative interest (NI)

NI is a technocratic folly because

- it is mislabeled and ill-conceived in that NI is neither about 'interest' nor about a service 'fee', but about a money tax of questionable utility (and illegal if levied and retained by the banks).
- NI triggers evasion by short-term investment in near-money deposits and securities.
- NI produces counter-intentional behaviour (more compensatory saving rather than more expenditure).
- NI rests on outdated economic premises (under-consumption theory; irrelevance of 'hoarding' with fiat money; or say, overstated relevance of 'liquidity preference' and the alleged 'liquidity trap').

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Concluding Remark

The modern world has been living for over 300 years with the conflicting situation of sovereign money and bankmoney coexisting side-by-side.
DC side-by-side with bankmoney will basically not be too different from that.

At all events, it is a step forward, coming to a degree with the advantages mentioned above.

By comparison, the problems inherent to the present near-complete rule of bankmoney are still much bigger than problems related to DC ever might be.

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Stockholm, 15 June 2019

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