

Post Crisis Financial Regulation: *From Bagehot, WickSELL to Minsky*

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22 October, 2010
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Re-thinking Analysis of Financial Crisis

- **Current crisis is now being identified as a Run on Shadow Banking System**
- **What are the implications of current reforms?**
- **Do they solve current problems at the theoretical, structural and incentive levels?**
- **This lecture tries to think out of the box and use three crisis thinkers (Bagehot, Wicksell and Minsky) to re-examine this crisis.**

Western Spending Increase/Tax decrease + Financial Engineering model is Leverage Machine

- **Leverage enabled funding of current consumption through future taxation**
- **Ponzi Financial Engineering based on complexity, “frictionless” markets, moral hazard + lower and lower interest rates**
- **Interest rates fall eventually to zero, creating massive asset bubble (ZIRP)**
- **ZIRP puts huge volatility on other asset prices, capital flows and exchange rates and underprice risks**
- **ZIRP creates huge Collective Action Dilemma - no country can increase interest rates, tax rates and regulation without huge capital flows and arbitrage.**

New Normal is not Neo-Classical Normal

Neo-Classical Normal

- Perfect information
- Rational Expectation
- Negative feedback (reversion to equilibrium)
- Positive real interest rates
- Fiduciary Principal/Agent relationship
- Generally low or zero distortion

New Normal

- High information asymmetry
- Crowd behaviour not same as individual behaviour
- Positive feedback (pro-cyclical)
- ZIRP
- Greed not checked by public good (capture)
- Distorted interest rate, wages and asset bubbles

Distorted Incentives: Excessive Leverage = Moral Hazard

- **Financial Sector is subsidized by under-priced Deposit Insurance**
- **Central Bank Investor of Last Resort = Quasi-fiscal Action**
- **You cannot solve Excess Leverage with more Leverage**
- **Excess Liquidity Hides Insolvency**
- **To get collective action agreement, you need to have proper incentive structure - reward plus taxation!**
- **Global turnover tax would fund Global Public Goods and would be an additional tool to deal with excess leverage, excess consumption and excess carry trade volatility.**

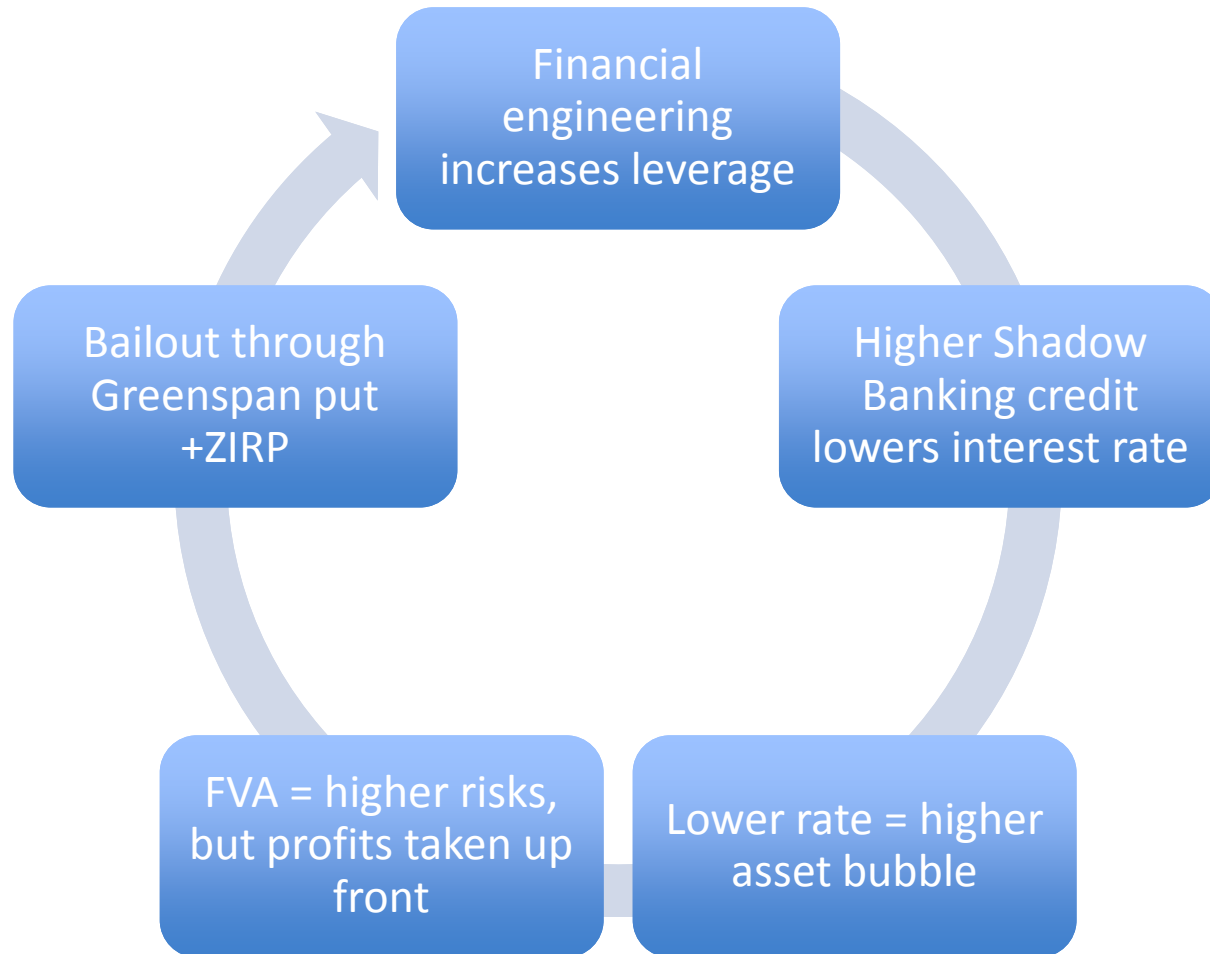
Minsky Financial Instability Hypothesis: “Stability is destabilizing”

- A hedge posture implies that the prospective cash flows are sufficient to fulfill contractual payment commitments on liabilities.
- A speculative posture means that the unit's cash flows are sufficient to pay interest but insufficient to pay the principle amounts fall due.
- A unit with a Ponzi financial structure insufficient cash flows from operations or contracts it to meet its interest payment commitment. The options for such a unit are either to increase its indebtedness or default.
- The financial instability hypothesis.. holds that over a run of good times the financial structure evolves from being robust to being fragile. This hypothesis rests upon the profitability of debt financing, given the term and risk class structures of interest rates in a robust financial structure and the way asset values can collapse whenever speculative and Ponzi financing units are forced to "make position by selling out positions”.

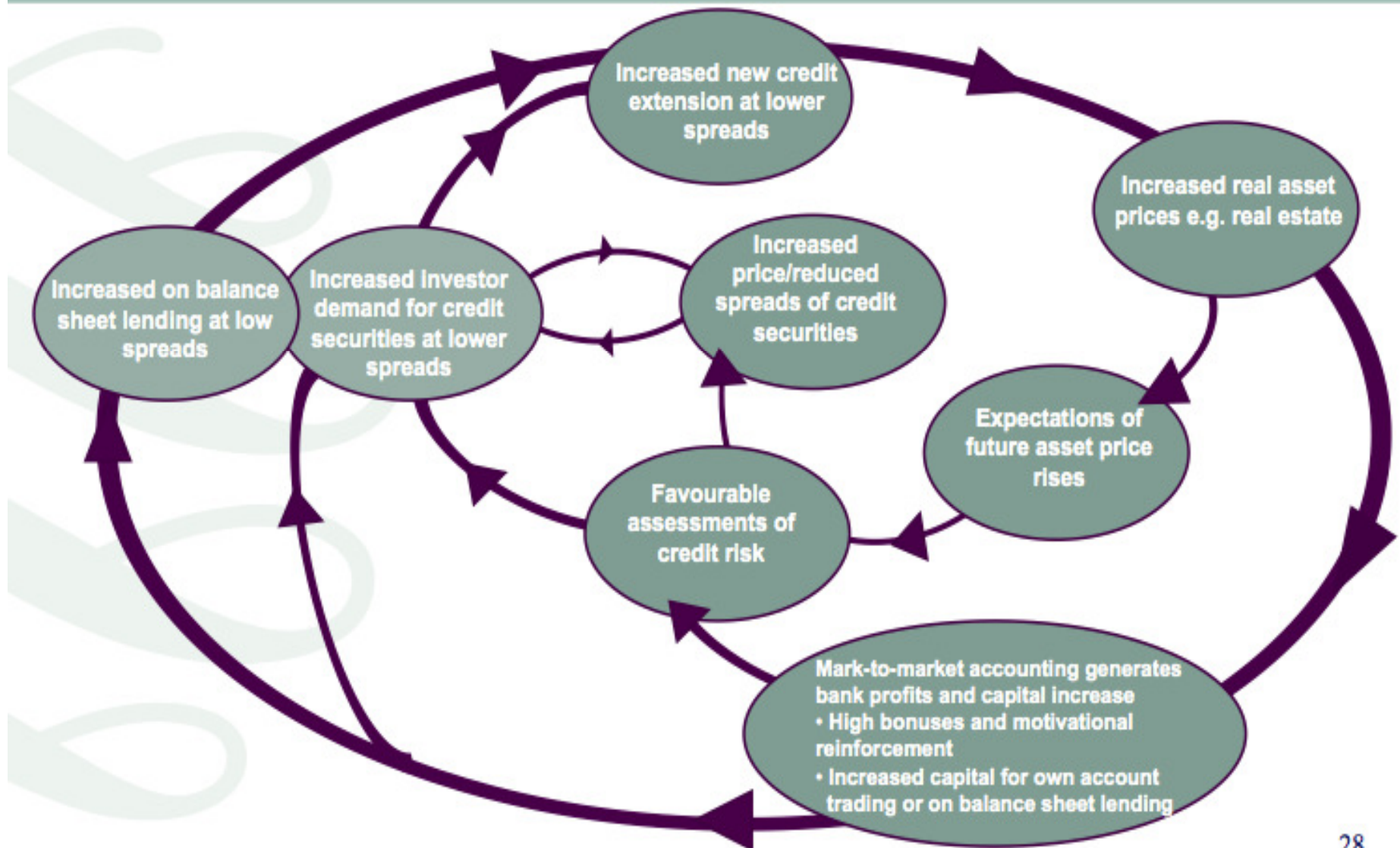
Financial Engineering Ponzi Schema

1. Financial Engineering creates excess leverage that funds excess consumption
2. Shadow banking credit (\$20 trillion) larger than traditional banking (\$11 trillion), but monetary creation not calculated in M2. Credit creation in West larger than savings growth in China and surplus economies [Blame on Savings Glut]
3. The higher micro financial engineering credit growth, the lower interest rates, the bigger macro asset bubble.
4. Accounting rules allow profits to be taken upfront, so incentives are to shift time horizon shorter, but rely wholly on LOLR by central banks [massive moral hazard]
5. Rescue of Shadow Banking through guarantee and ZIRP confirms moral hazard at cost of unsustainable fiscal debt.
6. Bubble creation starts anew in different markets.

Financing Engineering Ponzi



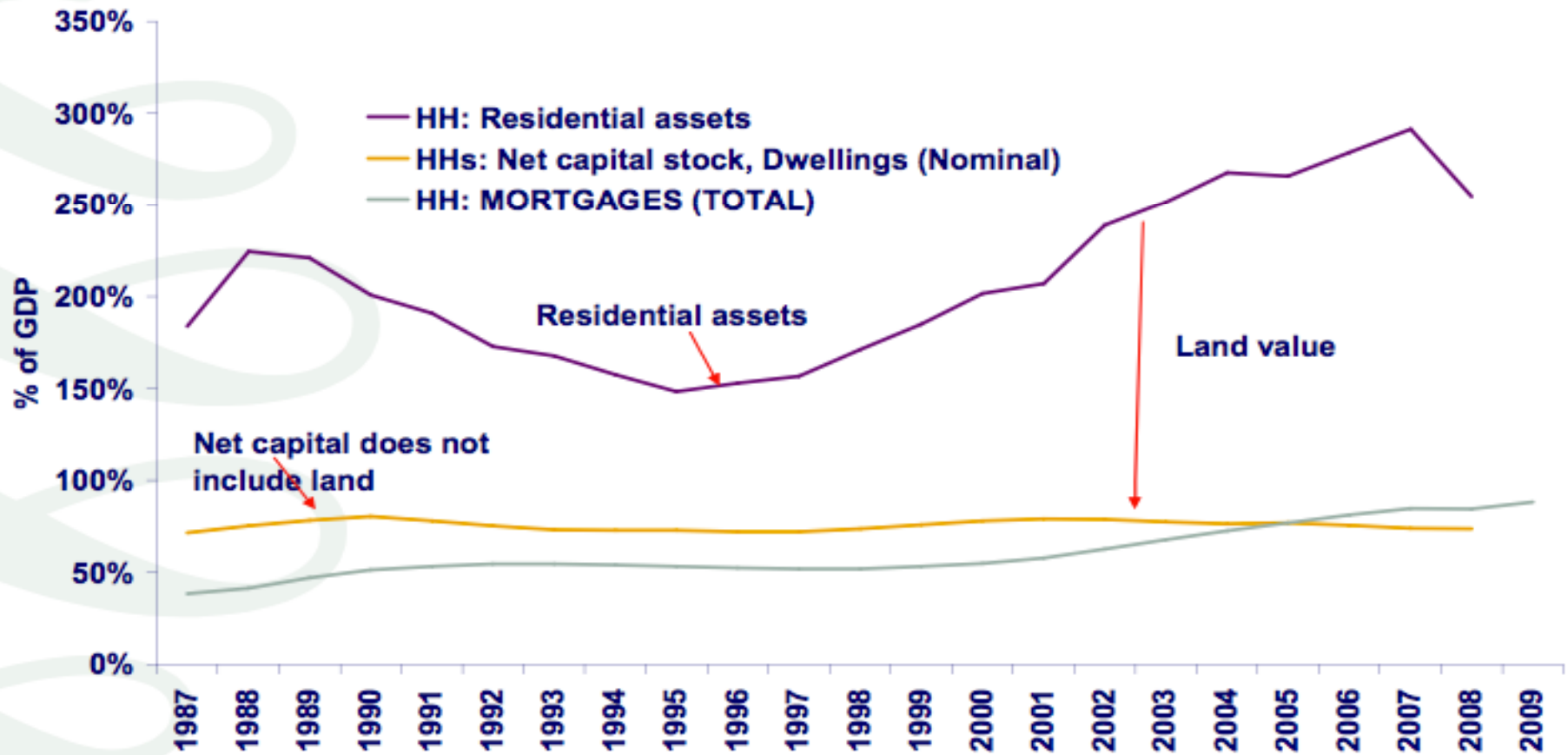
Credit and asset prices: with securitised credit and mark-to-market accounting



Property Bubble is fatal



Housing capital stock, market value and debt



3b. Fragmented Domestic financial architecture

- 1. Multiple domestic regulators cannot deal with one global highly interconnected financial market with universal banking**
- 2. Basic reforms have not deal with institutional segmentation of regulators [banks, securities, insurance] and conflicts with monetary policy and investor protection.**
- 3. Banking is Global in Life but National in Death (Mervyn King, 2009).**

3c: Global Imbalances are source of Potential Conflicts

Global Net Foreign Asset (NFA) and Liability Position 2008

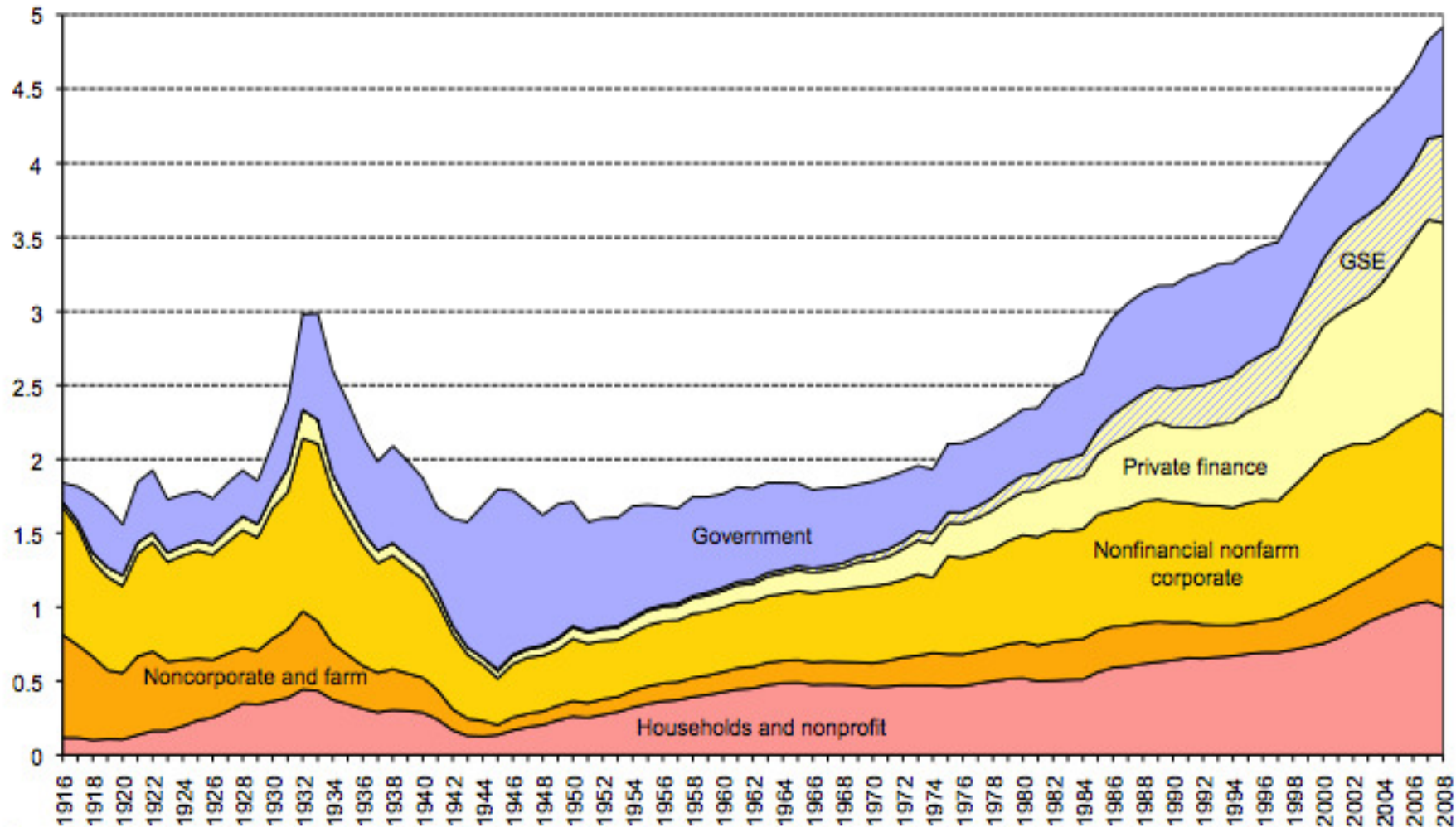
Region/Country	Net Foreign Asset (+), Deficit (-) US\$ bn	GDP 2008 US\$ bn	NFA/GDP %	Exchange rate impact due to 10% revaluation in domestic currency	Impact as % of GDP
Asian Surplus	+ 4,994	12,309	+ 40.6	- 499	- 4.1
Other Surplus	+ 2,863	3,706	+ 77.3	- 286	- 7.7
Total Surplus	+ 7,857	16,015	+ 49.1	- 786	- 4.9
Euro Area	- 2,584	13,631	- 16.9	+258	+ 1.9
USA	- 3,690	14,441	- 25.6	+369	+ 2.6
Australia	- 501	1,062	- 47.2	+ 50	+ 4.7
Subtotal Deficit	- 6,775	29,134	- 23.3	+ 678	+ 2.3
Other Countries	- 1,082	16,070	- 6.7	-108	+0.1
Global Total	0	61,219			

4. Power balance: Finance is more powerful than Real sector

- **Finance is no longer agent for the principal (real sector savers, borrowers)**
- **Proprietary trading and leverage means that finance is larger than real sector and more powerful.**
- **Superior trading volume, size, speed of transactions and information asymmetry enable Finance Sector to engage in Ponzi trading and huge moral hazard (private [management] gains at public costs)**
- **Finance lobby stronger than regulators.**

Financial Debt 5 times GDP

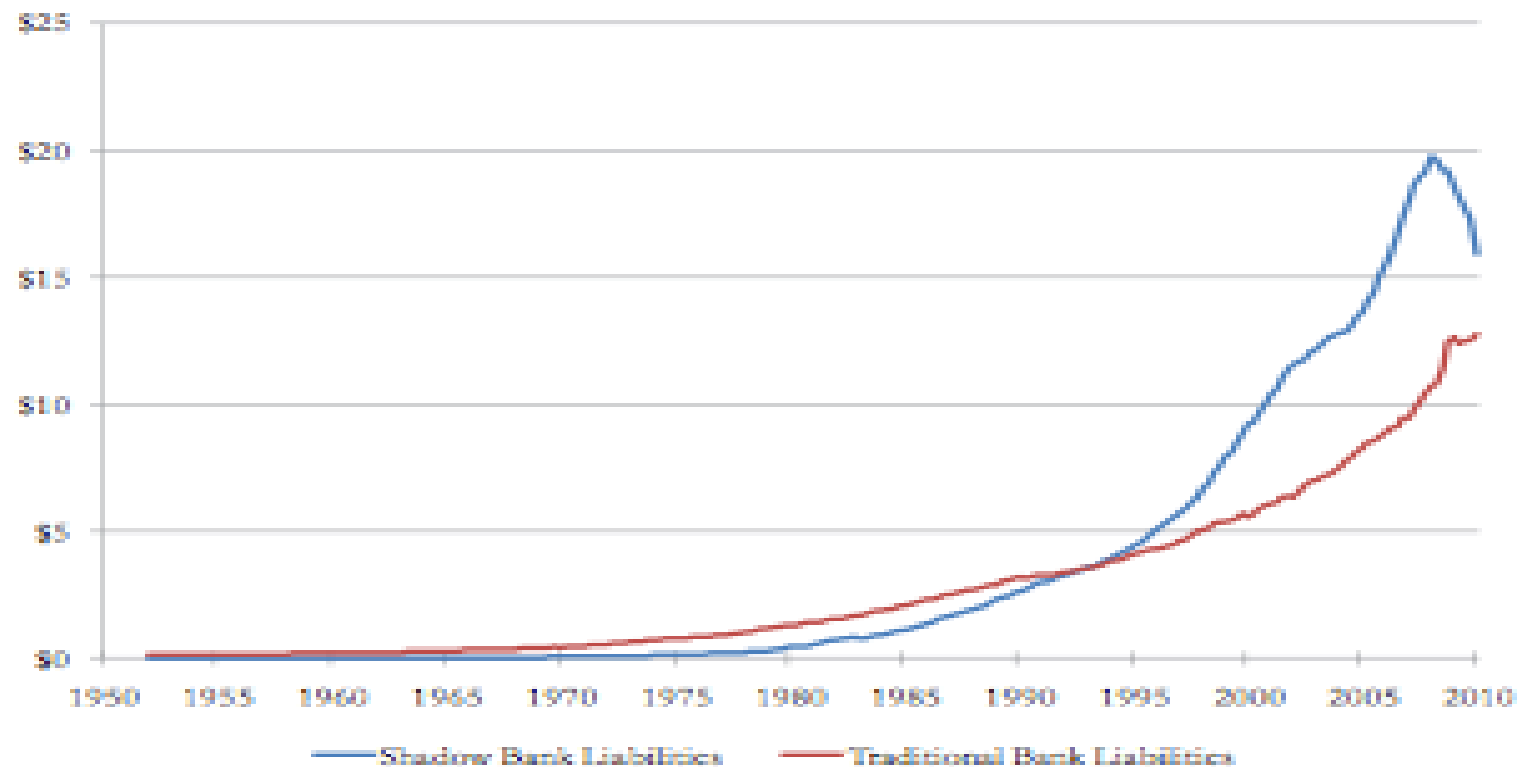
Total Financial Liabilities Relative to GDP



Sources: *Historical Statistics of the United States: Millennium Edition* (Tables Cj870-889, Ca9-19, Ce42-68, Cj787-796, Cj748-750, Cj389-397, Cj437-447, and Cj362-374), *Historical Statistics of the United States: Colonial Times to 1970* (Series X 689-697), NIPA, Flow of Funds (from 1945).

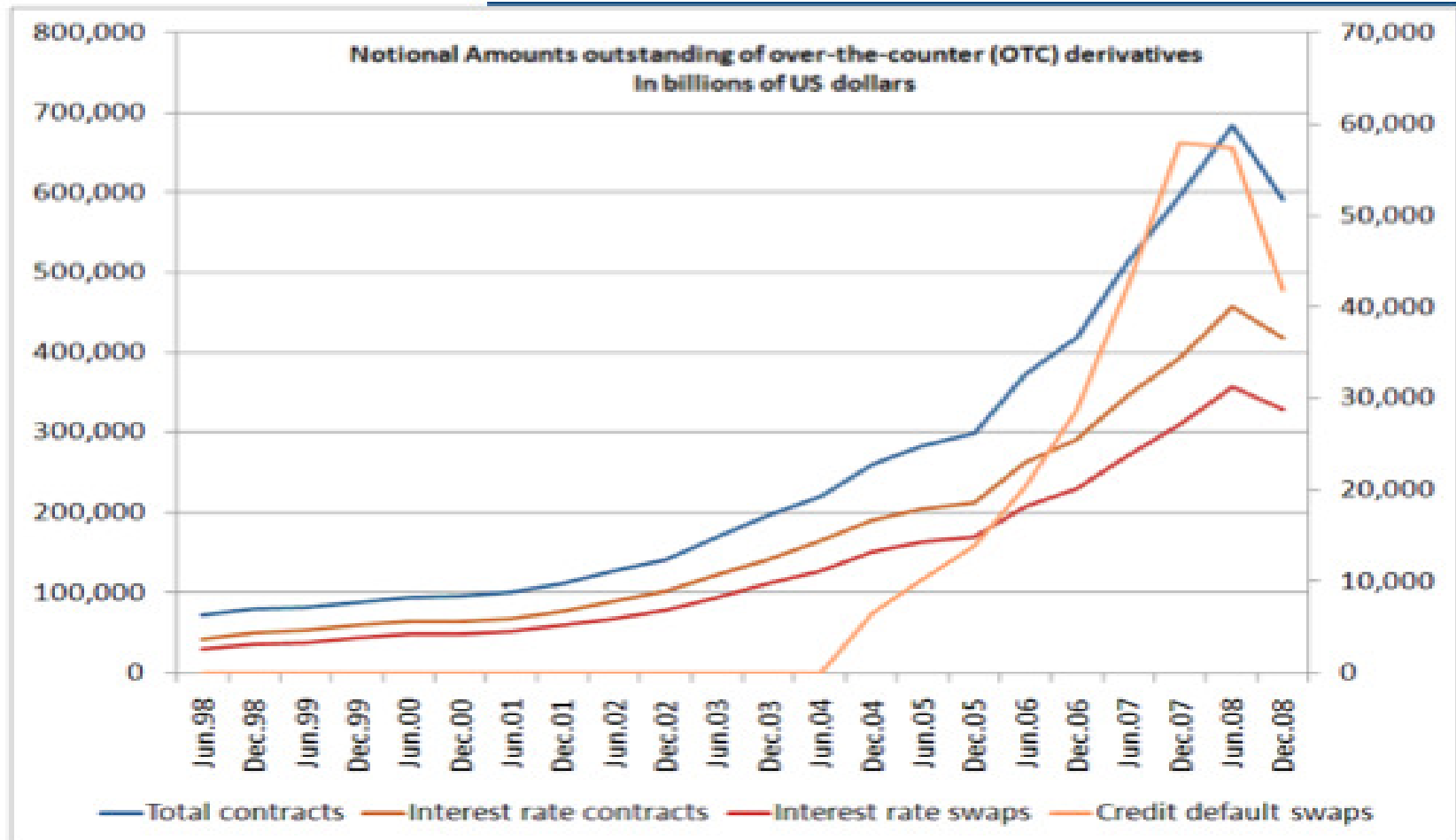
Under-regulated Shadow Banking larger than Traditional Banking

Figure 1: Shadow Bank Liabilities vs. Traditional Bank Liabilities, \$ trillion⁴



Source: Flow of Funds Accounts of the United States as of 2010:Q1 (FRB) and FRBNY.

Growth in OTC Derivatives



Source: BIS 2009

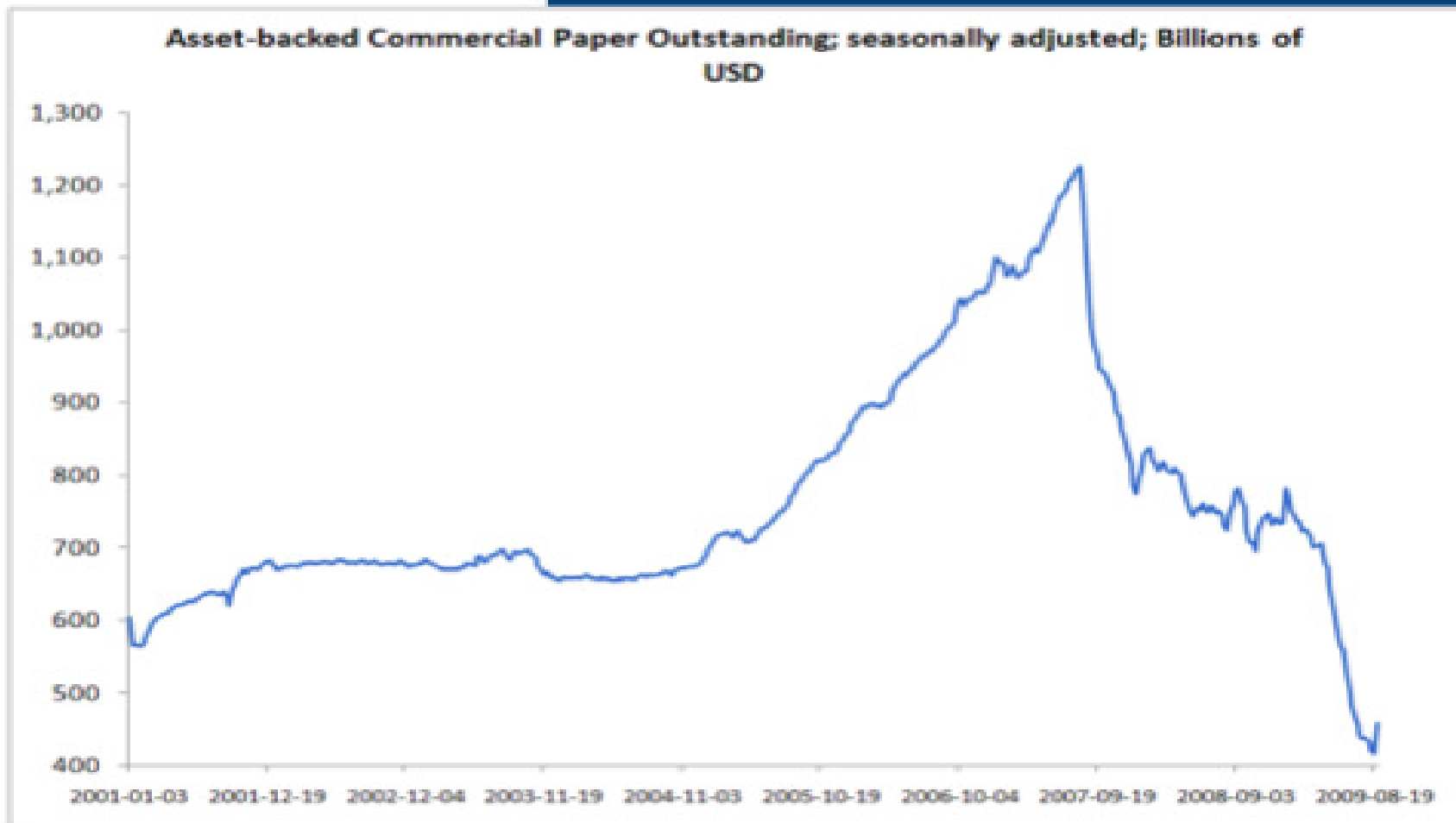
Monetary Policy is *Pro-Cyclical Relative* to Shadow Banks' Asset Growth

Federal funds rate and Taylor rule with and without response to risk premium shock, 2003-2008



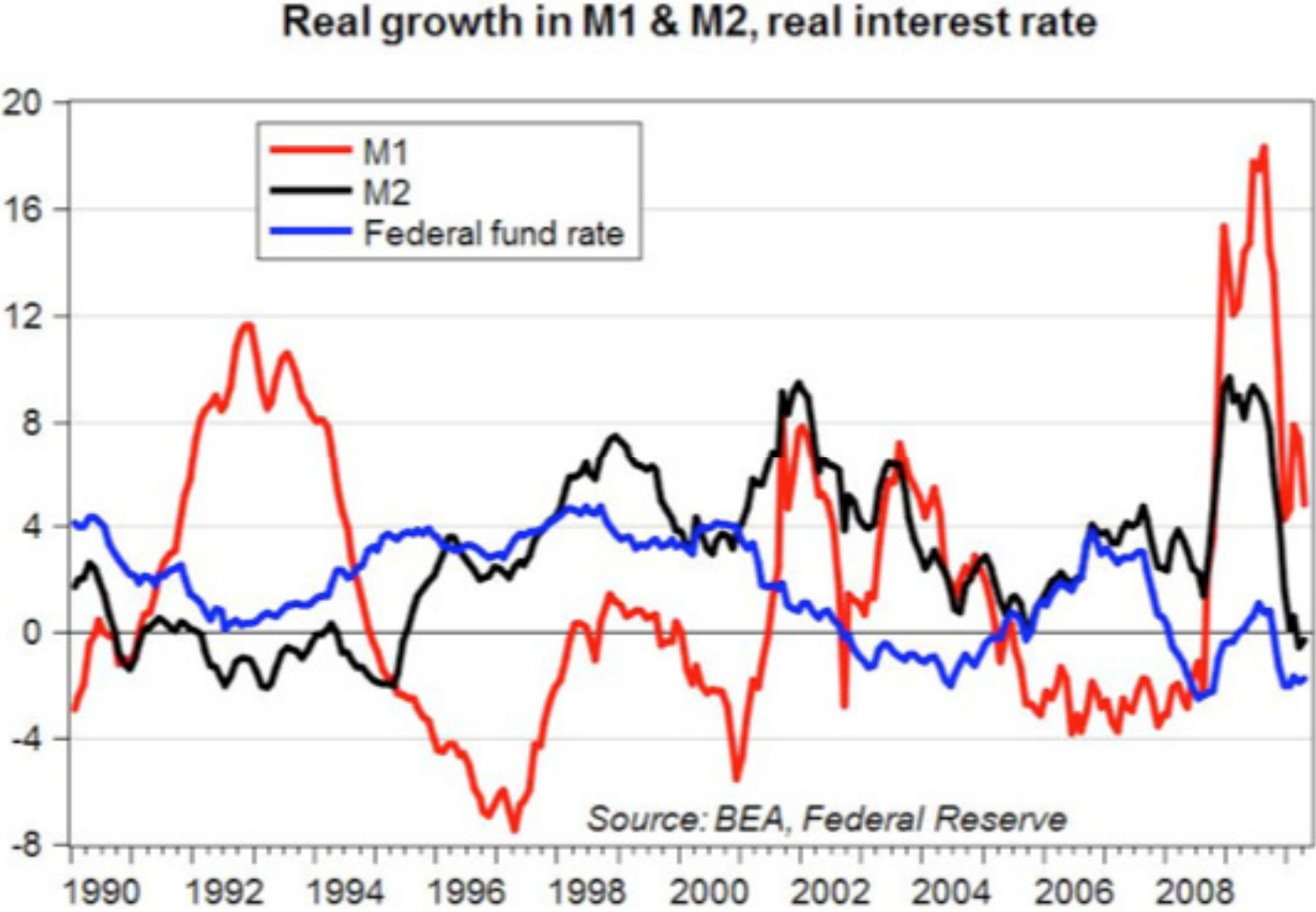
Source: Barbera and Weise, 2008:32

Collapse of ABS market cut Liquidity, but replaced by central bank funding



Source: Federal Reserve

Shadow Banking Credit does not figure in M2!



Excess Liquidity all due to Central Bank Put and Lender of Last Resort

- “Why should the banks bother with liquidity management when the Central Bank will do all that for them? The banks have been taking out a liquidity ‘put’ on the Central Bank; they are in effect putting the downside of liquidity risk to the Central Bank”..Goodhart (December 2007).
- One measure of the liquidity of a financial instrument is to ask how much a creditor would be willing to lend against it. But an instrument’s worth as collateral is intimately tied to its current valuation, and to the extent that valuation of collateral is increasingly tied to market prices, the stability of “collateralizing” financing is brought into question, particularly in moments of crisis when market prices are either not available or fluctuating wildly...
- **Forced liquidation in a predator market virtually guarantees insolvency.**
- It is now empirically clear that when market prices go down substantially, volatilities go up. How to deal with this “double whammy” scenario - a firm’s VAR doubling at exactly the moment that its capital is halved - continues to baffle firms and supervisors alike...

Gumerlock (2000)

Basic Regulatory Failures

1. Know your industry

2. Know your risks

**3. Know your
counterparty**

4. Know yourself

**1. Did not realize that
shadow banking larger
than regulated banking**

**2. Did not understand
systemic risk and rise of
unmonitored leverage**

**3. Industry is more powerful
than regulators through
capture and politics**

**4. Not willing to stand up
and be counted – Silo
approach to Systemic risks**

Linking Macro with the Micro

The role of accounting, regulatory standards and Rating Agencies

De-Regulation + Technology has speeded up Market Turnover

Source: NYSE

Basel II led to Securitization: Shadow Banking

- **Securitisations was the banking industry's response to new regulations (Basel II).**
- **The Basle Accord II pushed for Capital Efficiency, which incentivized banks to rely on Securitization to fund balance sheets.**
- **Banks responded by originating more debt on the basis of the capacity to shift assets off the balance sheet into the unregulated financial system.**
- **Securitisations is a product of the internal transformation of the financial industry itself (shadow banking and offshore finance)**

Total Return to Investment

- Total return is Operating Profit (Revenue – Costs) + capital gains.
- Operating profits and Capital Gains are both affected by the Interest Rate.
- The lower the interest rate (depending on leverage), the higher the operating profit and also the higher Capital Gains.
- Hence, the linkage between Bubble and Profits is Interest Rate.

Economic Impact of SFAS No. 157 on Fortune 500 Companies

Sak Bhamornsiri, Robert E. Guinn & Richard G. Schroeder

28 October 2009, International Atlantic Economic Society 2009

- Sample disclosed \$18.8 trillion in total assets, with 51%, or \$9.5 trillion, marked to market.
- Sample company liabilities totaled \$16.1 trillion with only \$3.7 trillion or 23%, marked to market.
- About 12% of mark-to-market assets and 2% of the liabilities occupied level 1, for widely traded securities with readily visible market prices.
- About 70% of the fair valued assets were measured by level 2 criteria, that is, their valuations were based on proxies with similar characteristics.
- Level 3, the most elusive valuation criteria, contained 7% of fair value assets and 2% of fair value liabilities.
- With respect to level 3 assets and liabilities, our study identified 81 companies where level 3 fair value assets make up less than 1% of total assets. However, it found 15 companies where level 3 assets exceeded 50% of book value.

Conclusion: In an Accounting System, where there is high level of value uncertainty depending on (volatile) interest rate, the system is liable to panic runs.

Bank Compensation and Incentives

Bank Compensation in 2009 ranging from 31.3% to 71.4% of 2009 revenue

- Societe General 71.4%**
- Morgan Stanley 61.5%**
- RBS 55.6%**
- Lloyds Bank 51.0%**
- Deutsche Bank 40.4%**
- Goldman Sachs 35.8%**

Source: Financial Times survey

Bagehot 1873 & Wicksell 1898

- Bagehot's well known "rule" is simple: *the Central Bank should extend loans at the start of a crisis, but at escalating interest rates.*
- Wicksell (Interest and Prices) considered three payments systems:
 - A) Pure Cash Economy;
 - B) Simple Credit; and
 - C) An Organized Credit Economy.
- What if we are now in (D) Highly Derivative Shadow Banking Economy?

Bagehot's Rule preserves Central Bank solvency

- **QE by buying toxic assets is “quasi-fiscal action”, transferring private sector losses to massive public debt**
- **ZIRP violates Bagehot's rule, by not allowing creative destruction of insolvent borrowers**
- **Hence, we have free-riding LCFIs, still paying massive bonuses at taxpayer expense**
- **Bonus-maximizing free riders will not lend at negative real interest rates to restore intermediation function [consider risks too high!] = liquidity trap.**



Wicksell's Policy Rule

"The procedure should rather be simply as follows: *So long as prices remain unaltered the banks' rate of interest is to remain unaltered. If prices rise, the rate of interest is to be raised; and if prices fall, the rate of interest is to be lowered; and the rate of interest is henceforth to be maintained at a new level until further movement of prices calls for a further change in one direction or the other.*" (189, emphasis in the original)

This policy rule, which we may call "Wicksell's rule," is aimed at the general public good; its implementation may contradict the private interests of the banks.

Real Interest Rate balances Supply and Demand for Funds in Real Economy

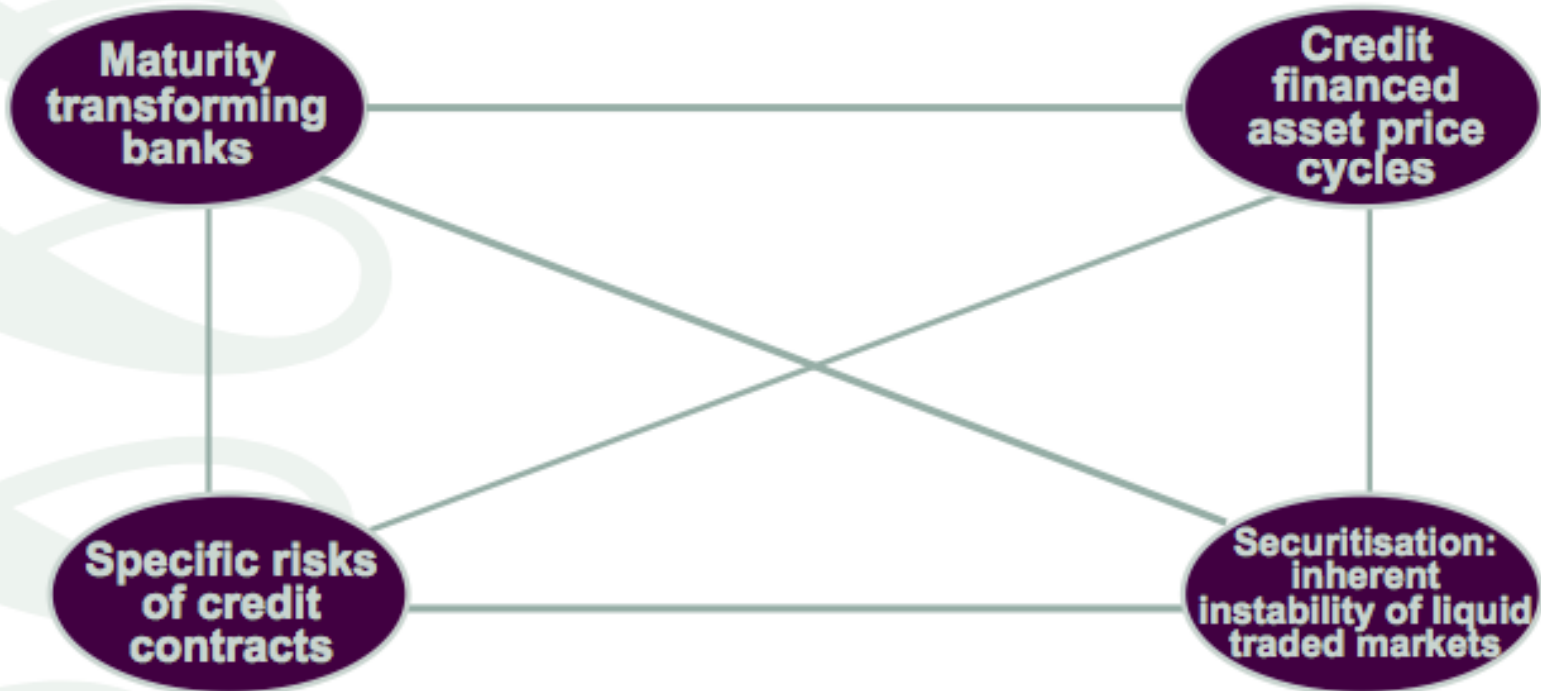
- Normal Market Economy requires positive real interest rates to reflect risks of credit.
- Insolvent borrowers (too highly leveraged) have to exit when real interest rate rises = CREATIVE DESTRUCTION
- ZIRP postpones creative destruction by replacing insolvency of private borrowers by public debt.
- But QE rescues INSOLVENT LCFI, and not the real sector borrowers.
- Hence, QE+ZIRP gives scarce resources not to PRINCIPAL, but the AGENT of real sector.
- The Agents are now larger and more powerful than the Principals! Welcome to Ponziland.

Adair Turner on What to Fix



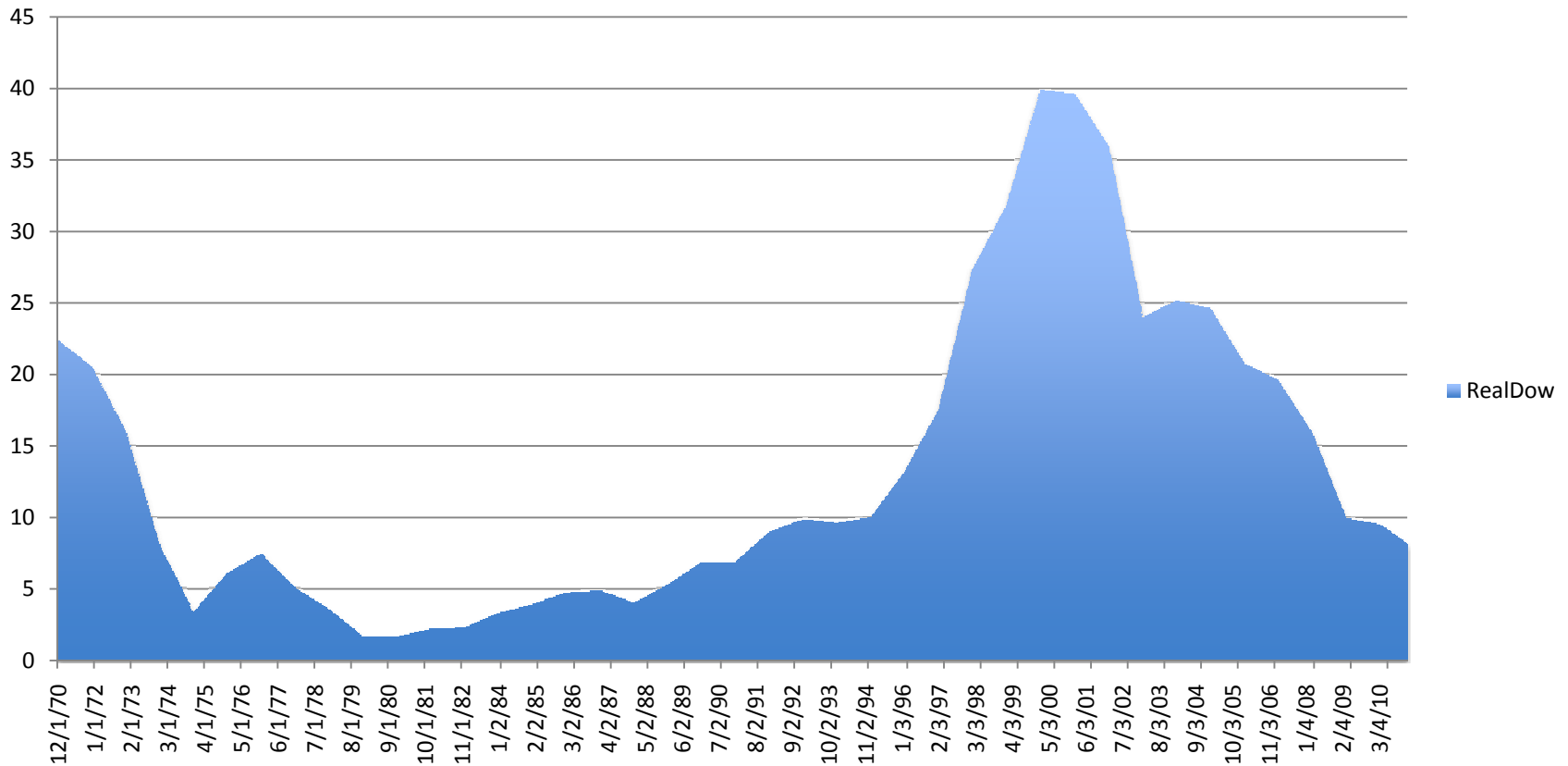
Overall conclusion

The Risky Interaction



'Real' DJIA peaked & 2000 and still falling

Dow Jones Industrial Average deflated by price of Gold, 1970-2010



Conclusions

- 1. We had Prognosis before Diagnosis**
- 2. Cure of shifting losses to public sector through QE, Guarantee and ZIRP totally distorted global economy**
- 3. We have not fixed theory, structure or incentives.**
- 4. The Great Crash has already occurred.**