# Credit, Rent and the Costs of Crisis

*Dr Dirk Bezemer*

university of groningen

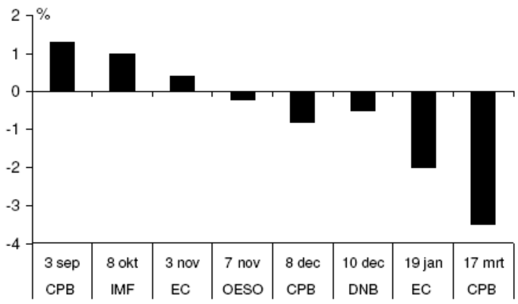
## In this talk:

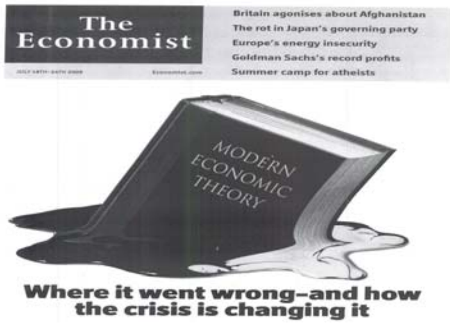
- Why did mainstream models miss the crisis?
- What is happening to incorporate the financial sector into macro models?
- What are necessary elements of models which can?
- Towards modeling financial boom and bust

university of groningen

## Why did mainstream models miss the crisis?

*2009 growth predictions catching up with reality*




Bezemer, DJ (2010) The Credit Crisis and Recession as a Paradigm Test. *Journal of Economic Issues*, forthcoming

Bezemer, DJ (2010) 'Who Predicted the Crisis and What Can We Learn from Them?'. In: Dejuán, O, E Febrero and C Marcuzzo (eds.) The First Great Recession Of The 21st Century: Competing Explanations. Edward Elgar (2010)

## What is happening to incorporate the financial sector into macro models?

university of groningen

**The Financial Sector in Models For Policy Use: A Progress Workshop**

Friday June 18
University of Groningen

Since the 2008 credit crisis and ongoing financial turmoil, macroeconomic policy institutions have been reconsidering how their models and research reflect and anticipate finance-driven change in the economy. This workshop brings together representatives from the European Central Bank, the Nederlandsche Bank, the Netherlands Bureau for Policy Analysis and the European Commission's DG for Economic and Financial Affairs to exchange views and progress.

**Program**

12:30 Arrival
13:00 Welcome and Introduction

13:30 – 15:30 Four presentations plus discussion by representatives from the European Central Bank, De Nederlandsche Bank, the Netherlands Bureau for Policy Analysis and the European Commission's DG for Economic and Financial Affairs

15:30 Tea Break
16:00 Panel Discussion
17:30 Concluding Remarks
Drinks

Economics textbooks: Revise and resubmit | The Economist

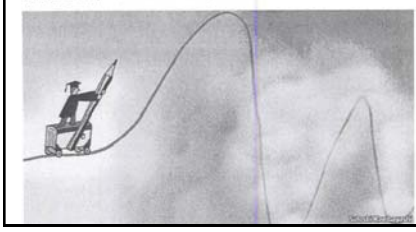
The Economist

Finance and Economics

**Revise and resubmit**

**The crisis is changing how macroeconomics is taught**

Mar 31st 2010 | From *The Economist* print edition




| | Households | Firms current | Firms capital | Banks current | Banks capital | Govt. | Row sum |
|---|---|---|---|---|---|---|---|
| Consumption | $-C$ | $+C$ | | | | | 0 |
| Govt. expenditure | | $+G$ | | | | $-G$ | 0 |
| [Sales] | | $[S]$ | | | | | |
| Change in the value of inventories | | $+\Delta I$ | $-\Delta I$ | | | | 0 |
| Tax | | $-T$ | | | | $+T$ | 0 |
| Wages | $+WB$ | $-WB$ | | | | | 0 |
| Profits | $+F$ | $-Ff$ | | $-Fb$ | | | 0 |
| Interest on loans | | $-rl.L_{-1}$ | | $+rl.L_{-1}$ | | | 0 |
| Interest on money | $+rm.M_{-1}$ | | | $-rm.M_{-1}$ | | | 0 |
| Interest on bills | $+rb.Bsp_{-1}$ | | | $+rb.Bsb_{-1}$ | | $-rb.Bs_{-1}$ | 0 |
| Interest on bonds | $+B_{-1}$ | | | | | $-B_{-1}$ | 0 |
| Stock of cash | $-\Delta Hp$ | | | | $-\Delta Hb$ | $+\Delta H$ | 0 |
| Stock of current deposits | $-\Delta Mn$ | | | | $+\Delta Mn$ | | 0 |
| Stock of demand deposits | $-\Delta M$ | | | | $+\Delta M$ | | 0 |
| Stock of bills | $-\Delta Bsp$ | | | | $-\Delta Bsb$ | $+\Delta Bs$ | 0 |
| Stock of bonds | $-\Delta B.pb$ | | | | | $+\Delta B.pb$ | 0 |
| Stock of loans | | | $+\Delta L$ | | $-\Delta L$ | | 0 |
| Column sum | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*(Godley, 1999)*

Bezemer, DJ (2010) Understanding Financial Crisis Through Accounting Models. *Accounting, Organizations and Society*, forthcoming

Bezemer, DJ (2010) Do we Need an Accounting of Economics? *Fiducie* 17(2): 28-33

## What is happening to incorporate the financial sector into macro models?

- (DS)GE models with information asymmetries, sticky prices, bounded rationality (Smets, De Haan).

*challenge: rational equilibrium maintained; no independent financial dynamics, no systemic risk*

- ABM, connectivity, cascades and systemic risk (Della Gatti).

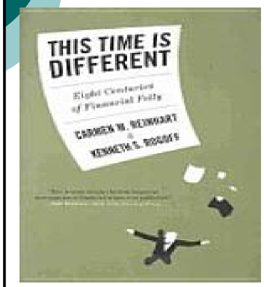
*Challenge: to link real-financial sectors, to take macro-constraints into account*

- flow of fund macro models (Godley, Zezza).

*Challenge: behavioural assumptions*

=> mix 'n' match or choose?

## Can we generalize over crises?




- 'black swans' =>no generalizing
- Repeated events (Reinhart & Rogoff)
- Structural tendencies with unique crisis materializations (Minsky)

=> 'Simple, but not too simple'

## Puzzles to be solved for a realistic model of finance & the economy

- Why so much 'non-productive' asset investment when real-sector productivity is high?
- How does the financial system generate (not just propagate) risk?
- Why do credit booms crunches have real-sector consequences?
- Why do credit booms polarize income and wealth?
- When is stability destabilizing?

## Elements of an alternative framework - building on credit cycle theory

- Wicksell: natural versus real rates; overinvestment
- Mises/Hayek: time preferences, fractional reserve banking & lax monetary policy
- Schumpeter: innovation and credit creation
- Keynes/Minsky/Godley: euphoria leads to misaligned flow of funds (debt)
- Marx, Hilferding, Pollin: financialization; finance capital engineers real-sector recessions
- *('Credit View' research a la Kiyotaki & Moore; Bernanke & Gertler?)*

Bezemer, DJ (2010) 'Credit Cycles'. In J Toporowski and J Michell (eds.) The Handbook of Critical Issues in Finance. Edward Elgar

## Common critical elements

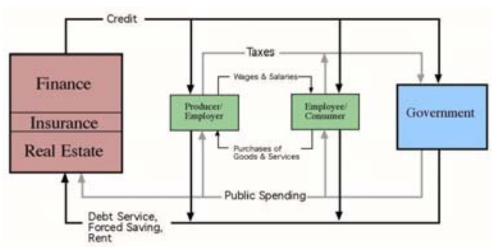
1. ‘free’ credit flows not linked to real-sector growth to inflate asset prices,
2. assets distinguished from money
3. debt as the counterpart of credit
4. financial-sector disequilibrium

*(different from e.g. policy DSGE models with ‘the’ money stock, no asset markets, no debt, ‘passive’ finance)*

## Financial assets distinguished from money

- *Keynes:* ‘financial vs. real circulations’
- *Schumpeter*:“Debt arising from credit created to finance the innovations and business expansions that increase productivity is ‘productive’ debt. But credit created in the secondary wave for consumers, speculative businesses and financial speculators, results in a build-up of ‘unproductive’ debt…
- *Marx:* ‘ productive credit, whose volume grows with the growing volume of production’, as different from ‘the plethora of moneyed capital- a separate phenomenon alongside industrial production’

## Financial instability models must have financial AND real sectors.




## Income from investment = profit, income from assets = rent

| Classical rent theory | *Neoclassical GE models* |
|---|---|
| | |
| The economy’s surplus = profit + rent | *Productivity creates a surplus to labour, zero profit* |
| Rent is neither wage nor profit | *Rent is nonexistent* |
| Assets are used for production and speculation | *Only productive assets* |
| Rent =income stream from asset ownership, not from investment or production. Rents on assets are caused by productivity of real assets | *Only investment or work provides income* |
| Rents exist only under (part) monolopies | *Monopolies assumed absent* |
| Rents a financial burden but not a cost - a free lunch to asset owners but an ‘unnecessary cost’ to producers (Henry George; Arnott and Stiglitz) | *All costs are necessary or they would not exist* |
| Rents and asset values to person *i* increase because of person *j*’s (or the state’s) investment | *Individual incomes can only exist due to individual investment or work.* |

## Income from investment = profit, income from assets = rent

| Contemporary application of Classical rent theory | |
|---|---|
| | |
| The credit system transfers profit (and wages) to rent by capitalizing them into debt commitments | |
| FIRE income is neither wage nor profit | |
| Financial assets are used for production and speculation | |
| Rents on financial assets are motivated by productivity of real assets (initially) | |
| Financial rents exist because of credit creation monopolies / privileges | |
| Debt servicing with compound interest is not linekd to ongoing investment.<br>=> it is a ‘free lunch’ to creditors but an ‘unnecessary cost’ to producers and workers | |
| Rents and asset values to rentiers increase because of gvt deregulation and a private ‘debt culture’ | |

## Can we distinguish rent-creating from other financial development?

From debt/GDP to *non-amortizing debt* /GDP

Financial-sector development ultimately depends on bank credit creation and HPM (Minsky’s ‘hierarchy of moneys’)

- The $64K question - when is credit creation harmful, when helpful?
- Bank credit flows to the real sector create debt and the means to repay it (profit + wages)
- Bank credit flows to the financial sector create non-amortizing debt (zero sum game) and rents. This may serve risk diversification, but it must increase debt/GDP and fragility.

## Puzzles to be solved for a realistic model of finance & the economy

Why so much ‘non-productive’ asset investment when real-sector productivity is high?

- How does the financial system generate (not just propagate) risk?
- Why do credit booms crunches have real-sector consequences?
- Why do credit booms polarize income and wealth?
- When is stability destabilizing?

## Puzzles to be solved for a realistic model of finance & the economy

Why so much ‘non-productive’ asset investment when real-sector productivity is high?
⇒ *Rents on financial assets are caused by productivity of real assets*

How does the financial system generate (not just propagate) risk?
⇒ *Rising asset values draw in more CF at the cost of CR*

Why do credit booms crunches have real-sector consequences?
⇒ *Rent is a free lunch to asset owners but a burden to production – already during the boom (Rajan)*

- Why do credit booms polarize income and wealth?

⇒ *Only asset owners reap rents*

- When is stability destabilizing?

⇒ *When rent-driven debt formation outgrows the economy’s ability to pay.*

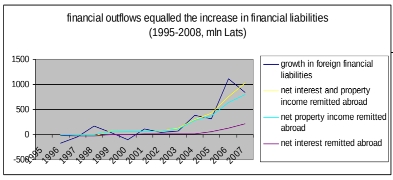
## Application I, the US crisis: forecasts of hitting the debt wall

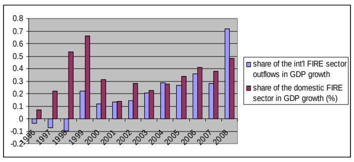
With a government surplus and current account deficit, US economic growth *had* to be predicated on private debt growth:‘Goldilocks was doomed.’ *Godley and Wray (2000)*

“the small slowdown in the rate at which US household debt levels were rising, resulting form the house price decline, would immediately lead to a “sustained growth recession … somewhere before 2010”

*Godley (2006)*

## Application II, Latvia: domestic value-added growth overtaken by rent outflows




Bezemer, DJ, Hudson MJ, Sommers, J (2010) The Human Costs of Financial Instability in Latvia.

## Ongoing research

Implication: separate bank credit flows to the real sector (CR) from financial-sector credit (CF) (Werner, 1997)

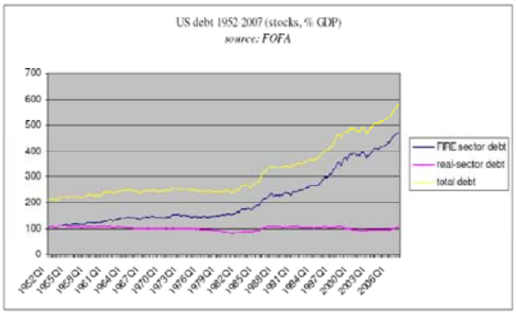
- Both credit flows create debt, but CF is non-amortizing
- Hypotheses:
  - All growth is predicated on credit.
  - CR/GDP is stable by definition.
  - The ratio CF/CR is a measure for financial fragility.
- Application: US flow of fund data

## Ongoing research

US FoFA table D1, debt in the US domestic **real economy** is equal to the value of all credit and equity market instruments held as liability by the US domestic nonfinancial sector (firms, non-profit organizations, households and local, state and federal government).

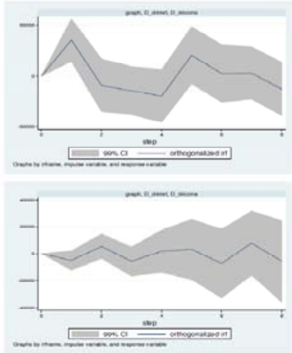
- debt in the US domestic **financial** sector: interbank credit and credit to savings institutions, credit unions, funding corporations, property-casualty and life insurance companies, mortgage pools, closed-end funds, exchange traded finds, private pension funds, money market mutual funds, real estate investment trusts, and security brokers and dealer. (Minsky’s ‘money managers’, or the’ FIRE’ sector)
- US domestic ‘FIRE’-sector debt is 95 % credit market instruments (bank debt and some bonds, 5 % equities and currency )
- Real-sector growth = bank credit + trade credit. Correct for inter-firm trade credit (account FL383170005 in table Z.1): a quarter of GDP (24.4 % in 2007Q4), up from 12 % in 1952Q1.

## A Minskyian story?



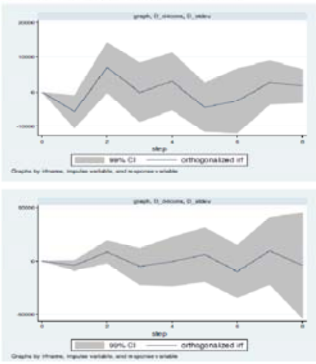

## Is Stability Destabilizing?
## During the ' Great Moderation', mortgage shocks increased consumption…

*Figure 2: Effect of a shock in mortgage credit growth on consumption growth dur Great Moderation (1984-2007, top) and before (1960-1983, bottom).*



## …and consumption shocks dampened volatility

*Figure 3: Effect of a shock in consumption growth on GDP volatility during the Grea Moderation (1984-2007, top) and before (1960 - 1983, bottom).*



## Open questions, further work

- So does fragility cause short-term stability?
- A dichotomy between CF and CR or more fine grained distinctions? (trading off simplicity – realism)
- Does the distribution of CF matter? Does it matter who holds the debt (private/public)? What can microfoundations add?
- Are rents on financial assets initially caused by productivity of real assets, then self-propelled?
- Can turning points be pinned down? (Godley could). Causality analysis – when is growth finance-driven?
- How does interest policy affect the sustainability of CF/CR?
- Productivity and financialization (the Stockhammer/Rajan conjecture - GGDC.net data)
- data set on OECD countries

## What can microfoundations add?

- Representative-agent-with- externality model (Hoff & Stiglitz 2005)
- A black/white ball ABM model with e.g 'green/red' (real sector) balls:
- determining the *initial* black/white ball distribution
- Determining how *sustainable* black/white ball ratios are
- Feedback: influencing the green/red distribution

## *Questions & discussion*

*http://www.rug.nl/staff/d.j.bezemer/research*


- (2010) The Credit Crisis and Recession as a Paradigm Test. *Journal of Economic Issues*, forthcoming
- (2010) Understanding Financial Crisis Through Accounting Models. *Accounting, Organizations and Society*, forthcoming
- (2010) Do we Need an Accounting of Economics? *Fiducie* 17(2): 28-33
- (2010) 'Credit Cycles'. In J Toporowski and J Michell (eds.) The Handbook of Critical Issues in Finance. Edward Elgar
- (2010) 'Who Predicted the Crisis and What Can We Learn from Them?'. In: Dejuán, O, E Febrero and C Marcuzzo (eds.) The First Great Recession Of The 21st Century: Competing Explanations. Edward Elgar
- (2010) The Human Costs of Financial Instability in Latvia. Forthcoming in: Tavasci, D and J Toporowski (ed.) Minsky, Financial Development and Crisis. Palgrave MacMillan
- (2010) "Innocent frauds meet Goodhart's Law in monetary policy", with G Gardiner Levy Institute working paper
- (2009) This is not a credit crisis, it's a debt crisis. *Economic Affairs 29(3): 95-97*

***In the Press:***

- Lending must support the real economy. *Financial Times*, 5 november 2009
- "No one saw this coming" - or did they? *VoxEU*, 30 September 2009
- Why some economists could see it coming. *Financial Times*, 8 September 2009
- No, c'e chi ha vista la crisi. *Il Sore 24 Ore* (in Italian), 9 September 2009