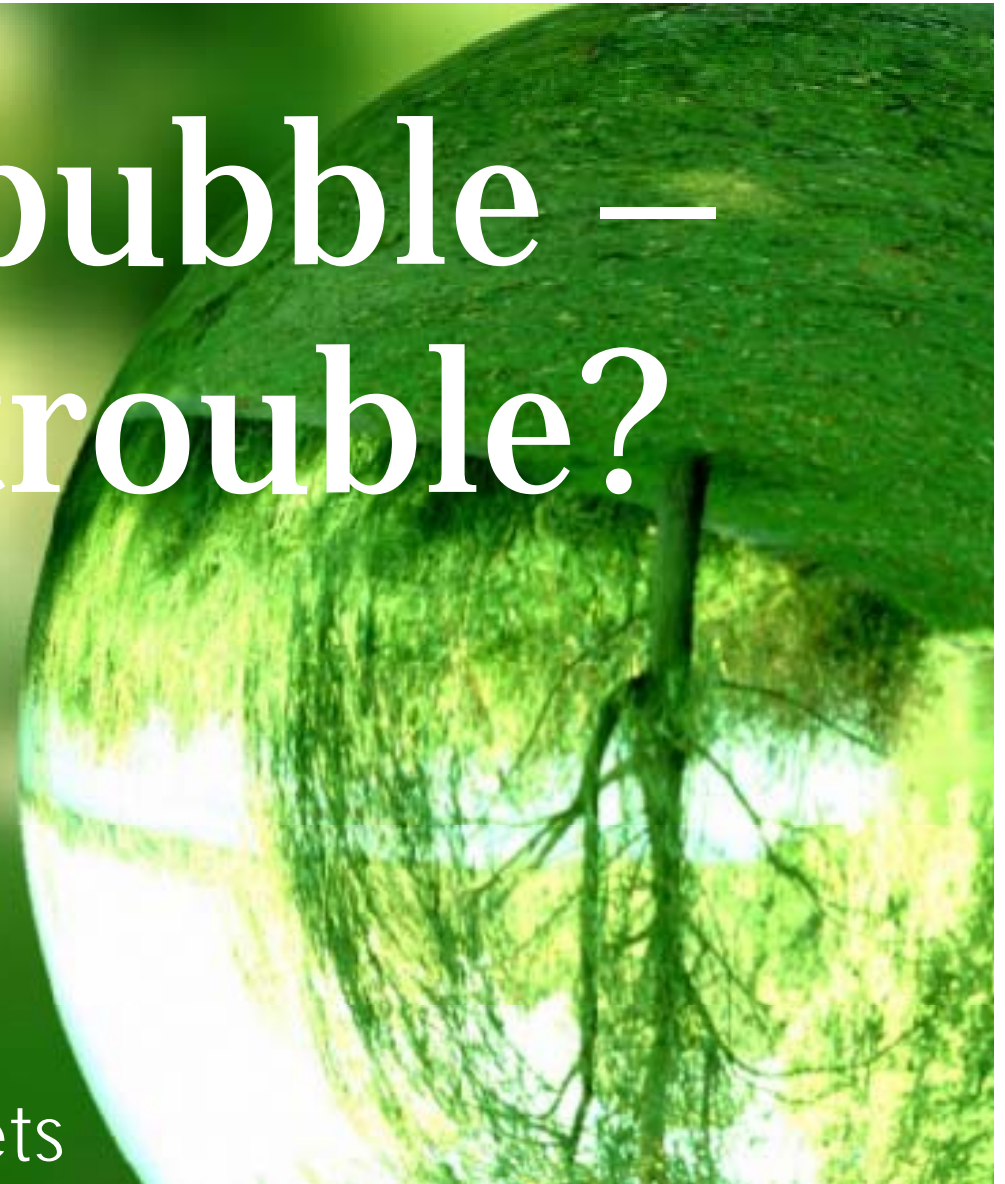


# Bubble, bubble – toil and trouble?

15 February 2011

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facilitating  
debate on the  
outlook for the markets





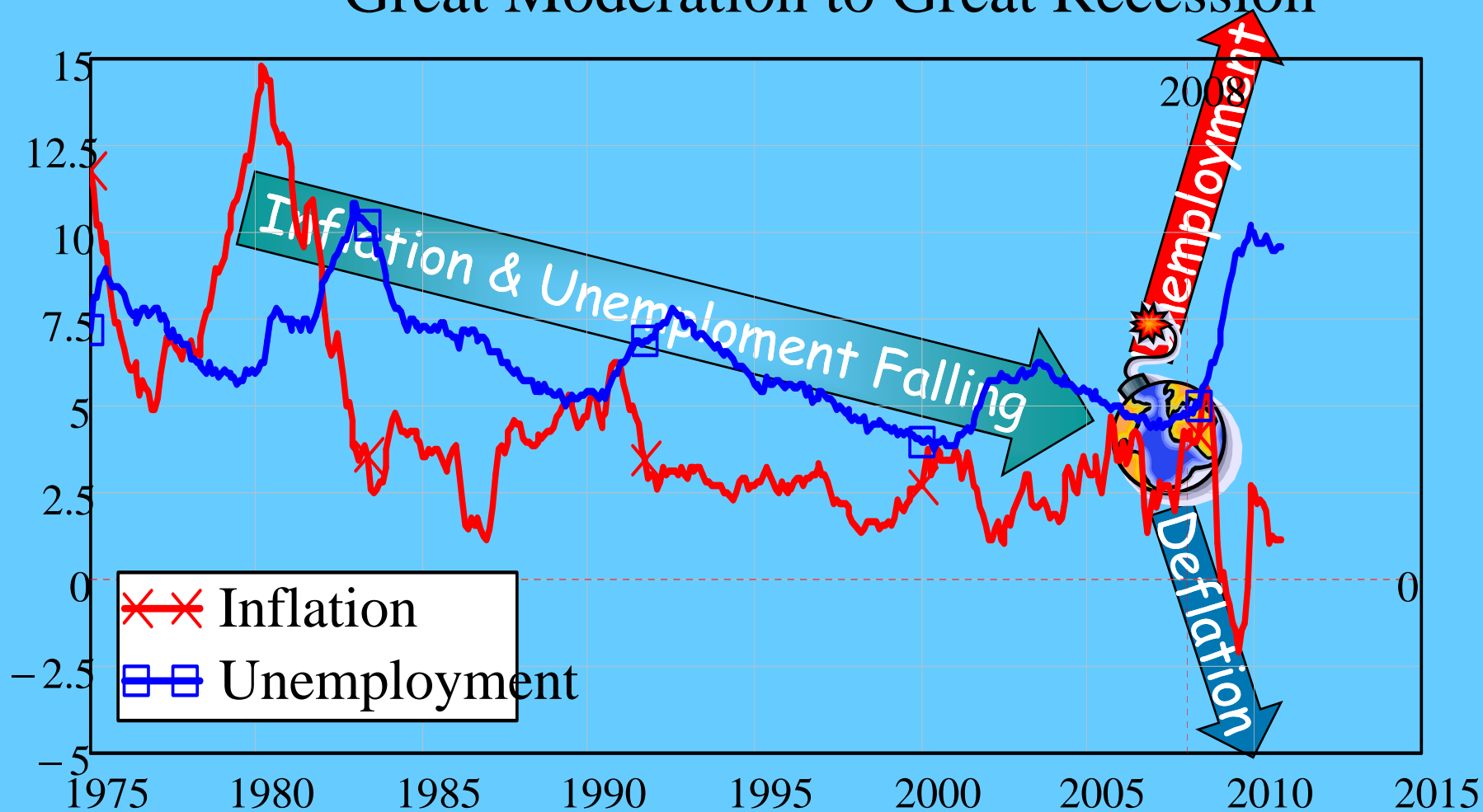
# Dr Steve Keen

Associate Professor  
University of Western Sydney

# The Global Context: The "Great Recession"

- USA: from "Great Moderation" to "Great Recession"

## Great Moderation to Great Recession



- Conventional economics gave no warning of this event:

## "No-one could have seen this coming..."

- "The sources of the Great Moderation remain somewhat controversial, but ... improved control of inflation has contributed in important measure to *this welcome change in the economy*." ([Bernanke, Federal Reserve 2004](#))
- "Our central forecast remains indeed quite benign: a soft landing in the United States, a strong and sustained recovery in Europe, a solid trajectory in Japan and buoyant activity in China and India. In line with recent trends, sustained growth in OECD economies would be underpinned by strong job creation and falling unemployment." ([Cotis, OECD 2007, p. 7](#))
- "I do not know anyone who predicted this course of events. This should give us cause to reflect on how hard a job it is to make genuinely useful forecasts..." ([Glenn Stevens, RBA, 2008](#))

## WE did see "It" coming!

- *At least 12 did, and warned of it (Bezemer 2009, 2010)*

### **Analyst**

Dean Baker

Wynne Godley

Fred Harrison

Michael Hudson

Eric Janszen

**Stephen Keen**

Jakob Brøchner Madsen &  
Jens Kjaer Sørensen

Kurt Richebächer

Nouriel Roubini

Peter Schiff

Robert Shiller

- *"Distinction between financial wealth and real assets..."*
- *Concern with debt as the counterpart of financial wealth...*
- *Growth in financial wealth and the attendant growth in debt can become a determinant (instead of an outcome) of economic growth ...*
- *Recessionary impact of the bursting of asset bubbles...*
- *Emphasis on the role of credit cycles in the business cycle..."*
- **Common themes from Bezemer 2009 (pp. 10-11)**

## Common theme: credit in the business cycle

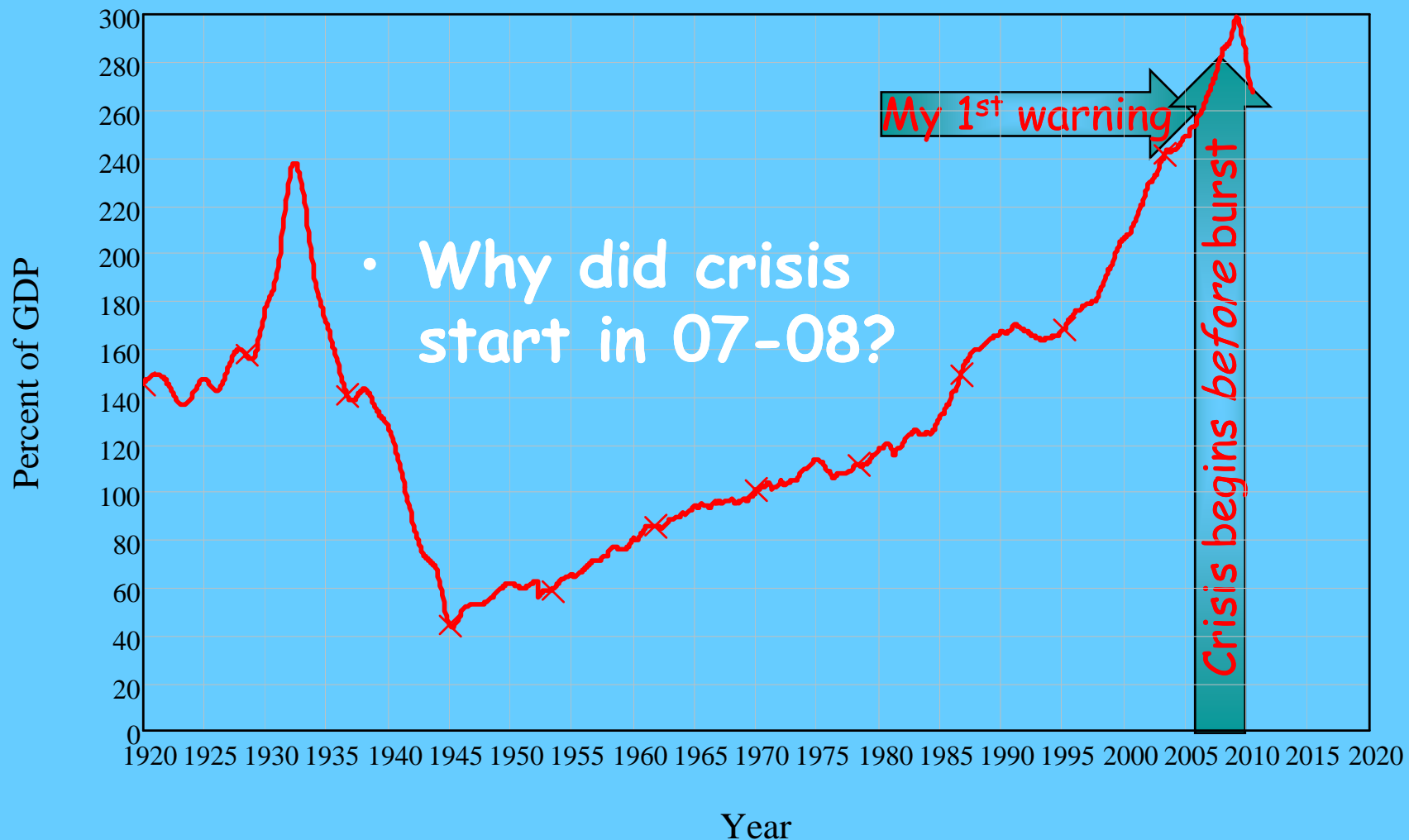
- Conventional economics ignores credit & debt
  - Non-monetary economy: aggregate demand (AD, GDP Income) equals aggregate supply (AS, GDP Output)
- Credit economy fundamentally different to barter
  - "The granting of credit comes first ... purchasing power is created to which ... no new goods correspond. From this it follows, therefore, that in real life total credit must be greater than it could be if there were only fully covered credit." (Schumpeter 1934, p. 101)
  - Growth in debt finances economic growth
- Monetary economy:  **$AD = GDP\ Income + Change\ in\ Debt$** 
  - Spent on *GDP plus net sales of existing assets*
  - Focus on dynamics of debt is why I and other rebel economists did "see "It" coming":



# Macroeconomics of Private Debt (USA)

- Biggest debt bubble in US history burst:

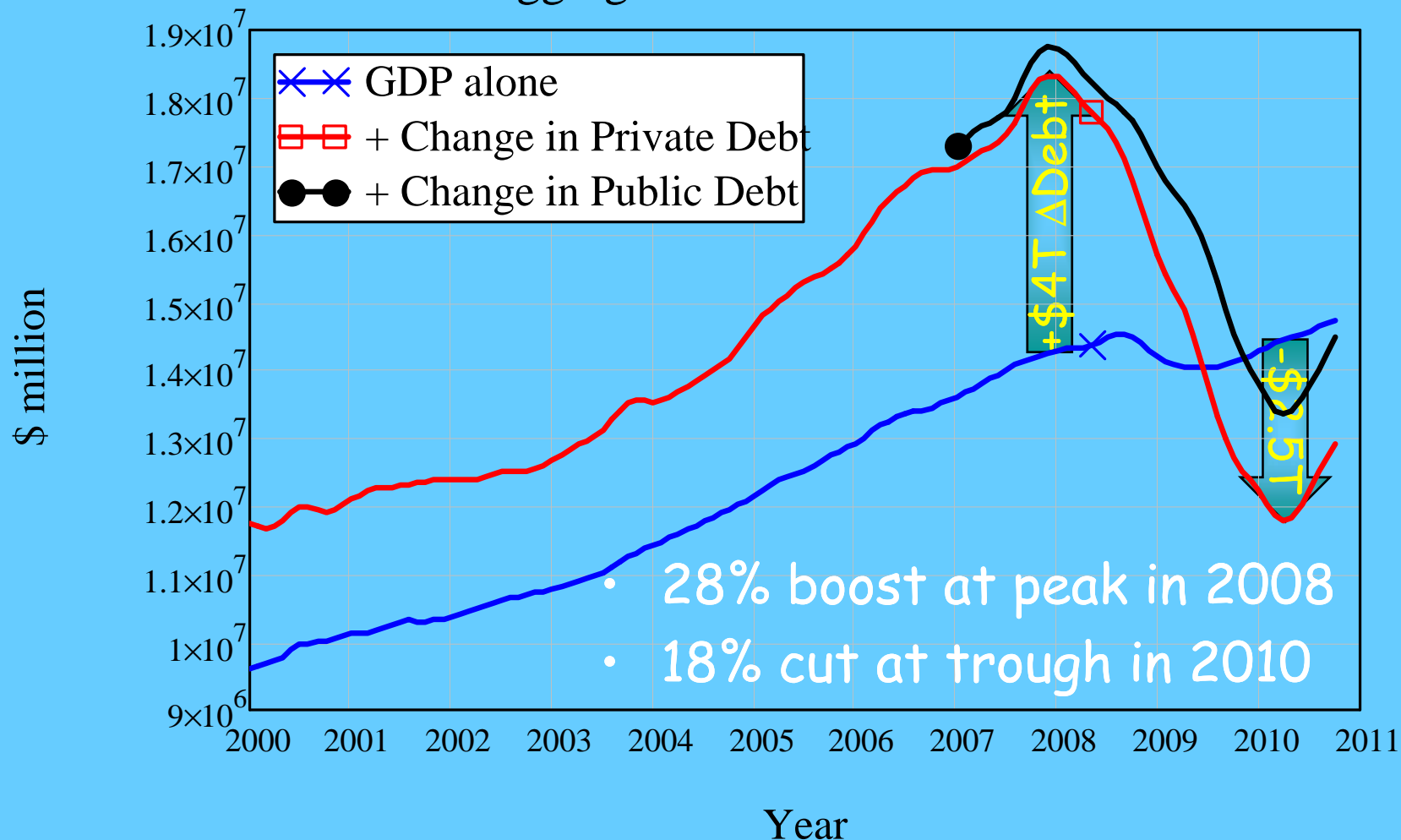
USA Private Debt to GDP



# Macroeconomics of Private Debt (USA)

- Aggregate demand =  $GDP + \text{change in debt}$ 
  - Change in debt began to fall in 2007-08:

US Aggregate Demand GDP 2000-2011

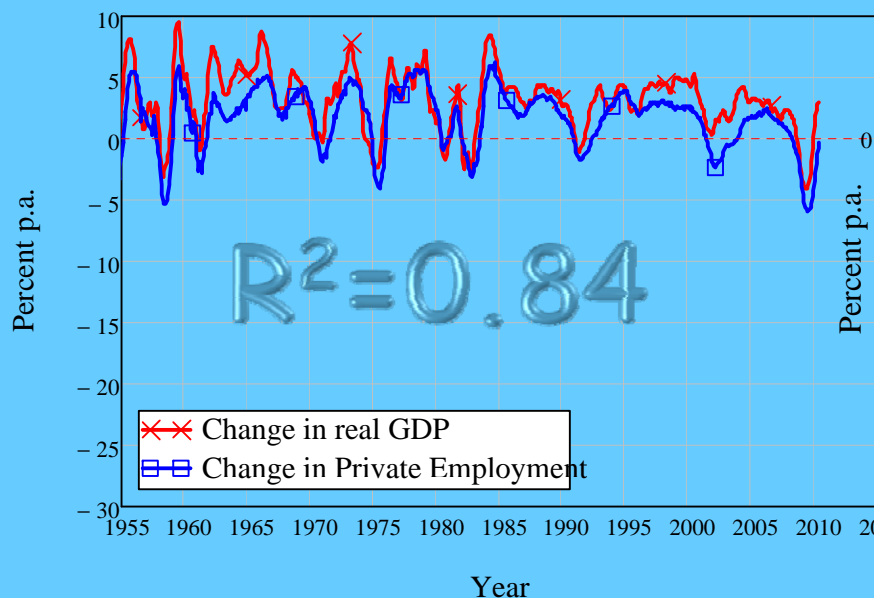




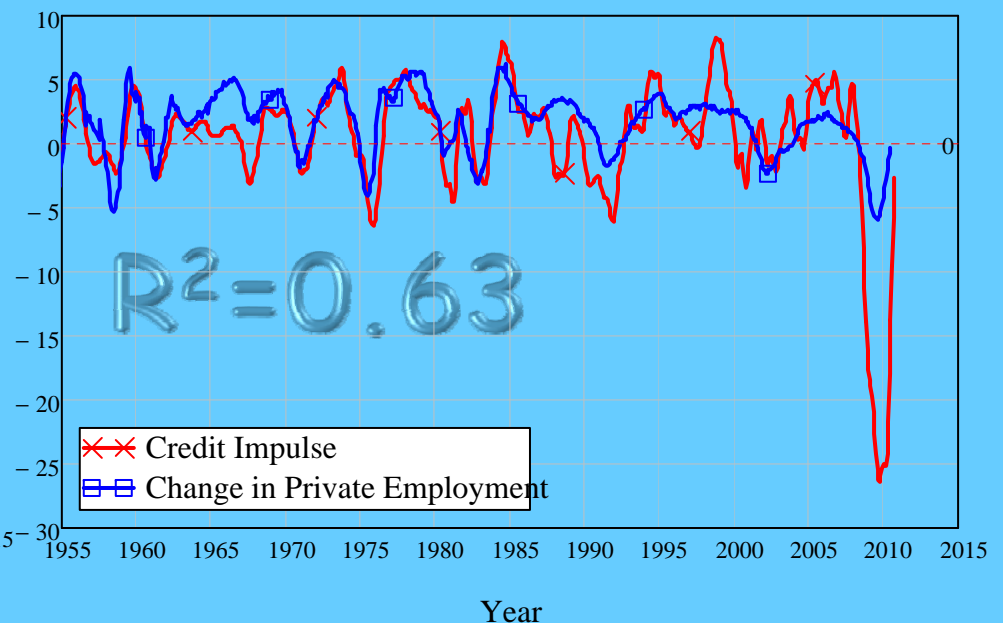
# The Credit Impulse (USA)

- Since  $AD = GDP + \Delta Debt$
- Then  $\Delta AD = \Delta GDP + \Delta \Delta Debt$ 
  - "Credit Impulse" (Biggs et al. 2010)  $CreditImpulse = \frac{\Delta \Delta Debt}{GDP}$
- Change in GDP dominant factor in employment
- But Credit Impulse made this recession "Great"
  - Fastest Debt Deceleration ever:

Change in real GDP & change in employment, USA

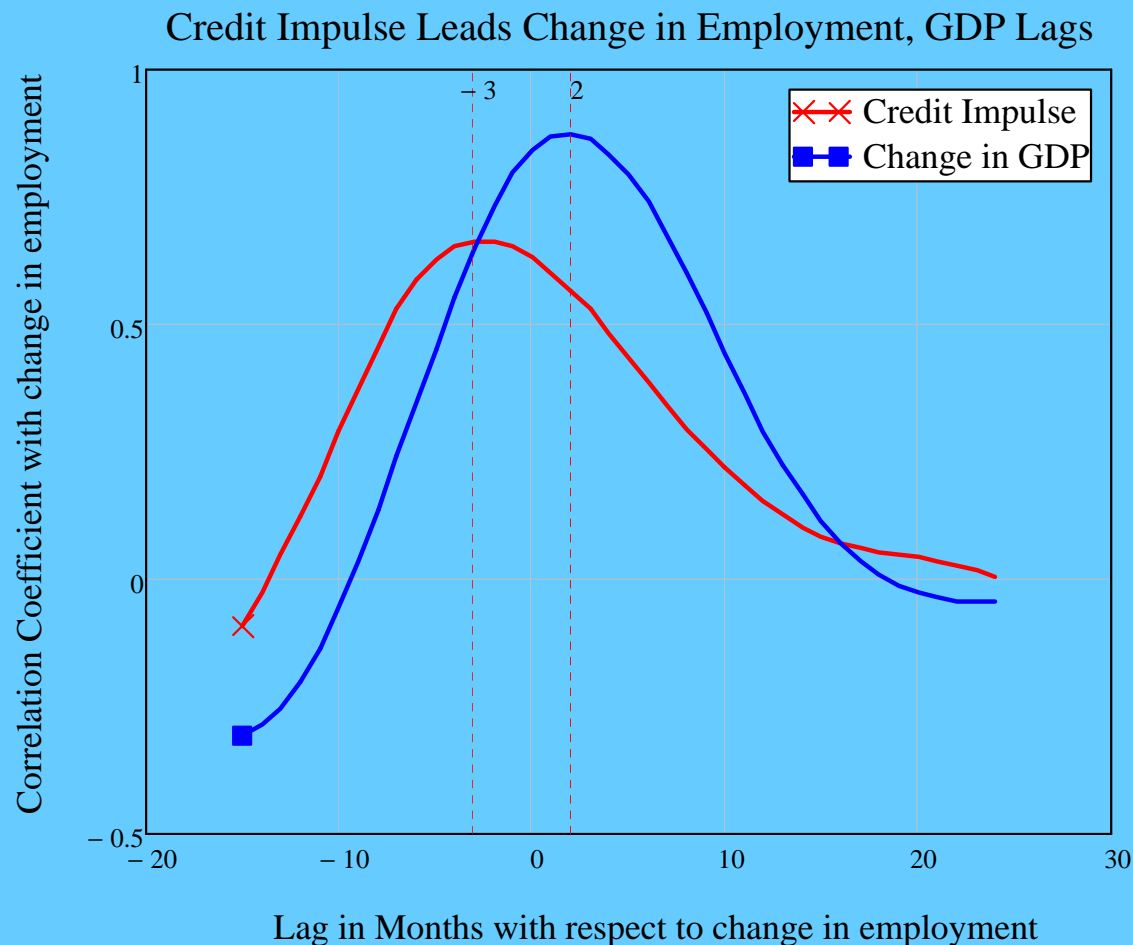


Acceleration of private debt & change in employment, USA



# The Credit Impulse (USA)

- Credit Impulse in the driver's seat
  - Leads changes in Employment by 3 months
  - Leads changes in GDP by 5 months



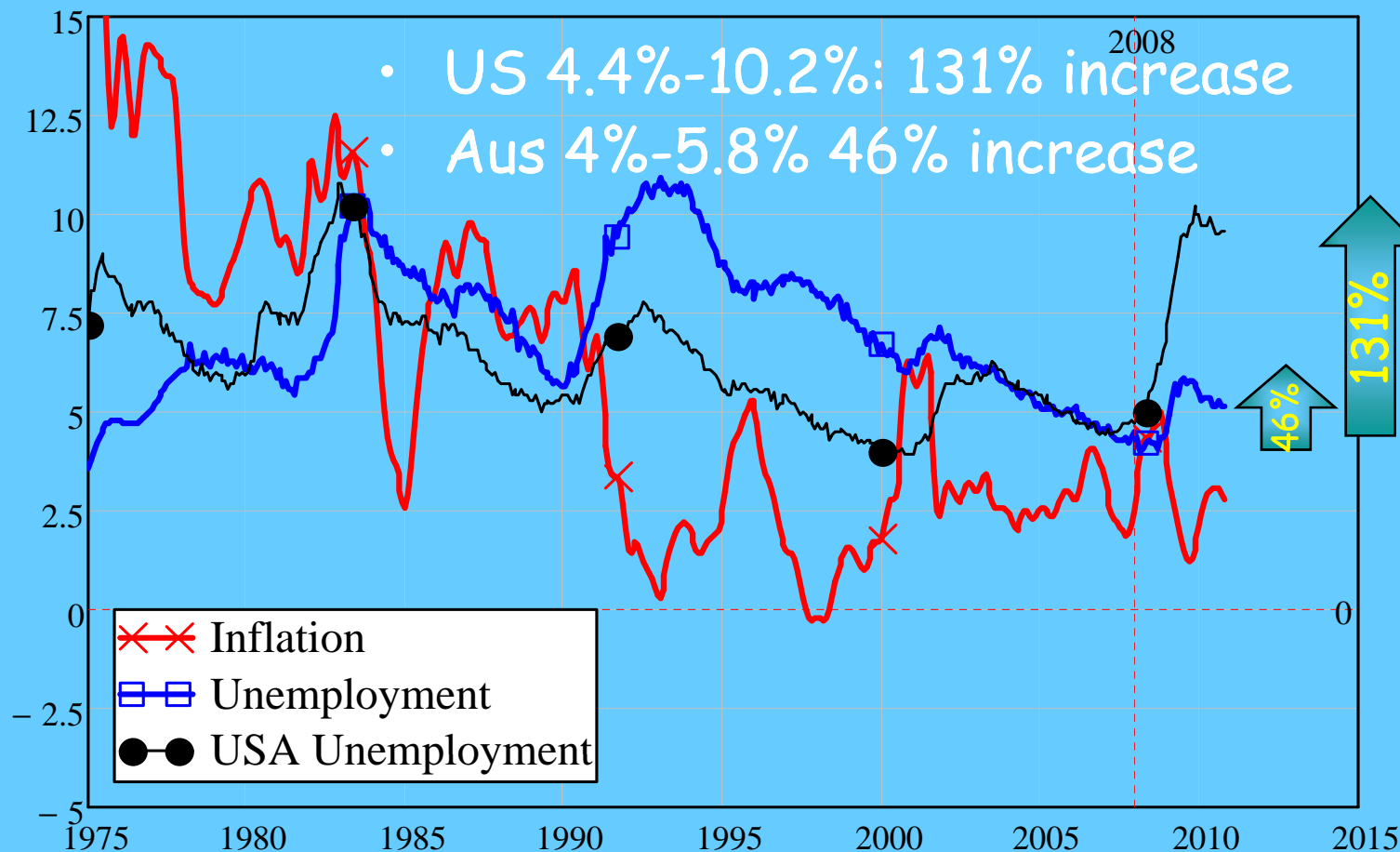
## Australia's different, right?

- Right... and Wrong...
- Wrong:
  - Same debt, debt change, credit impulse dynamics
    - Sort-of-right
      - Different magnitudes
        - Government policy key factor here
        - First Home Vendors' Boost
  - Credit Impulse starting to turn negative again...
- Right
  - More effective fiscal stimulus
    - Sort-of-wrong
      - About to be reversed...
  - China boom
    - Sort-of-wrong: Our eggs in a China basket?

# Australia: Crisis? What Crisis?

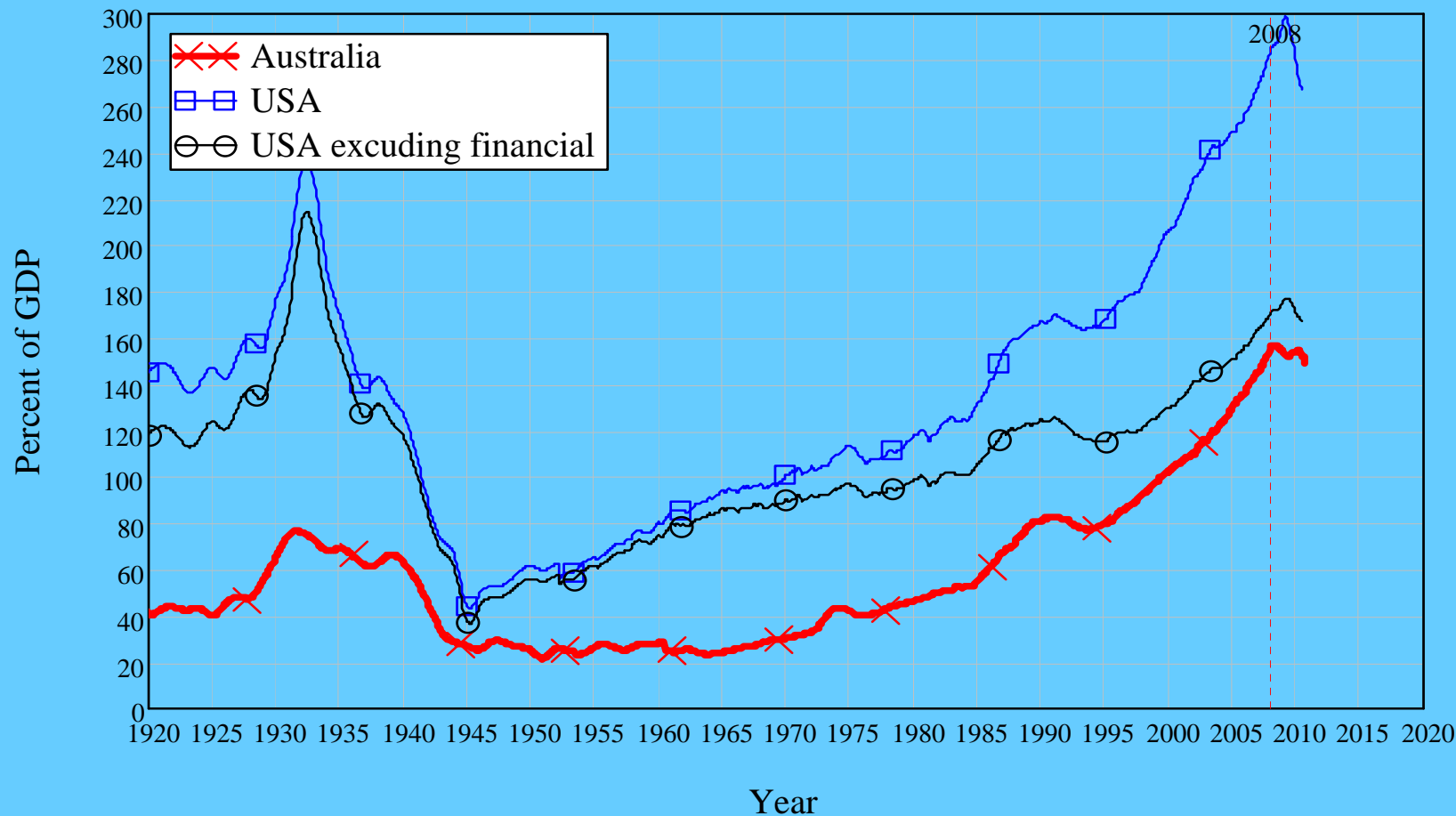
- Same sudden turnaround in unemployment
  - But rapid reversal of trend
- Same decline in inflation (if more volatile)

Australia: Crisis? What crisis?



# Australia: Crisis? What Crisis?

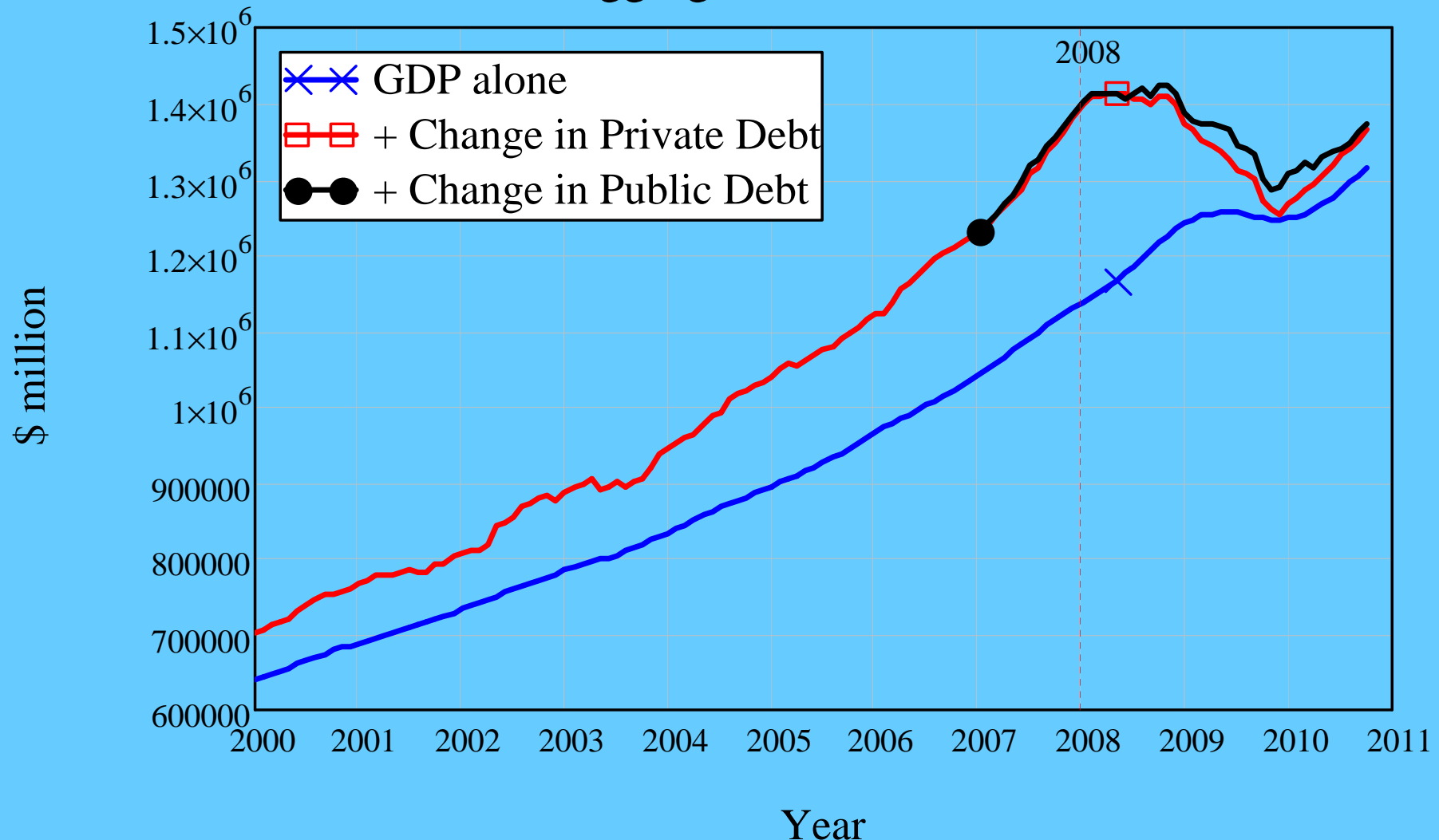
- Same bursting of debt bubble
    - From lower level
  - Though similar for non-financial sector debt
- Australian Private Debt to GDP



# Macroeconomics of Private Debt (Australia)

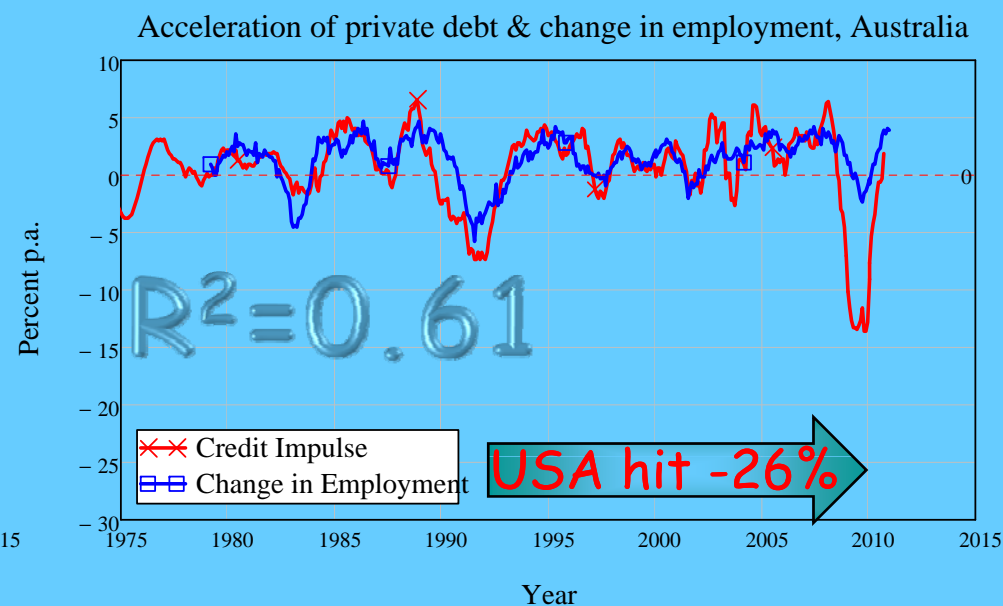
- We avoided crisis by avoiding deleveraging:

Australian Aggregate Demand GDP 2000-2011



# The Credit Impulse (Australia)

- Same GDP/Credit Impulse dynamics as USA
  - But smaller negative impulse, rapidly turned positive:

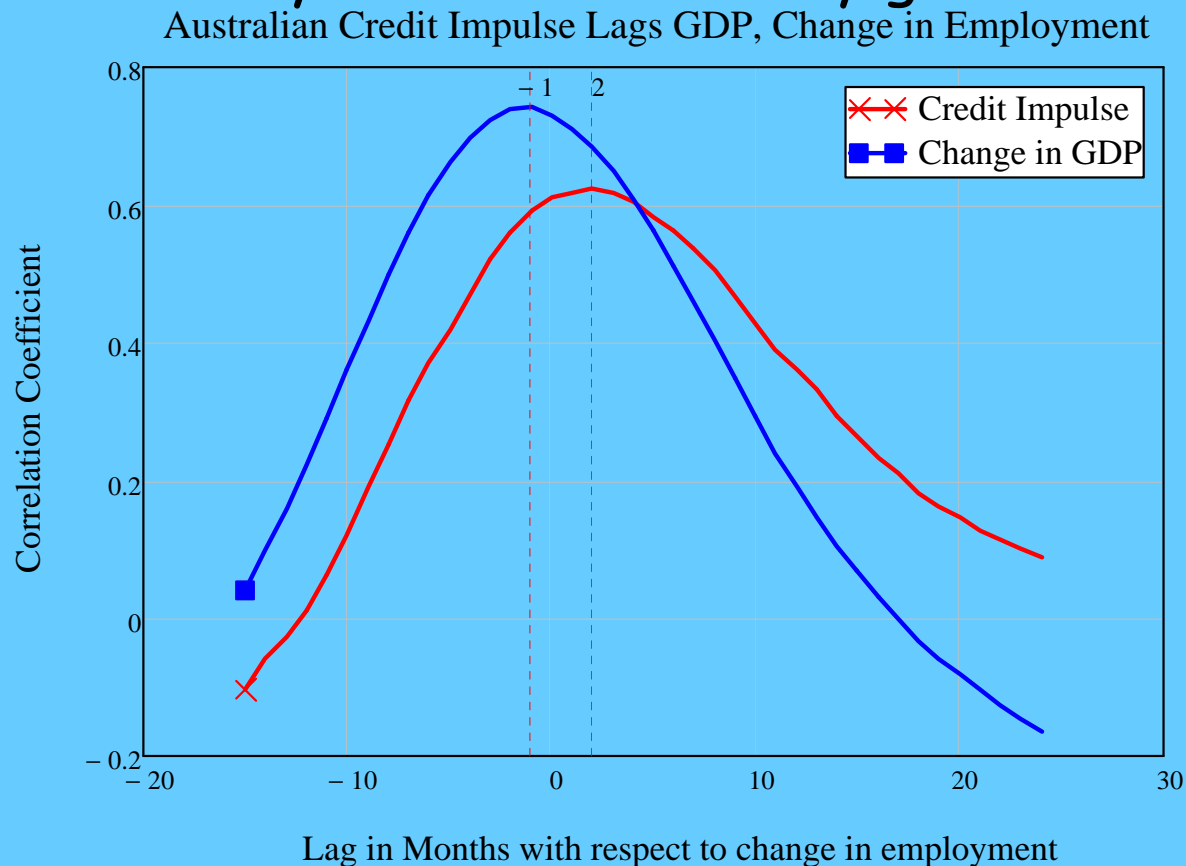


- Result was we never experienced deleveraging
  - Debt continued to expand demand...



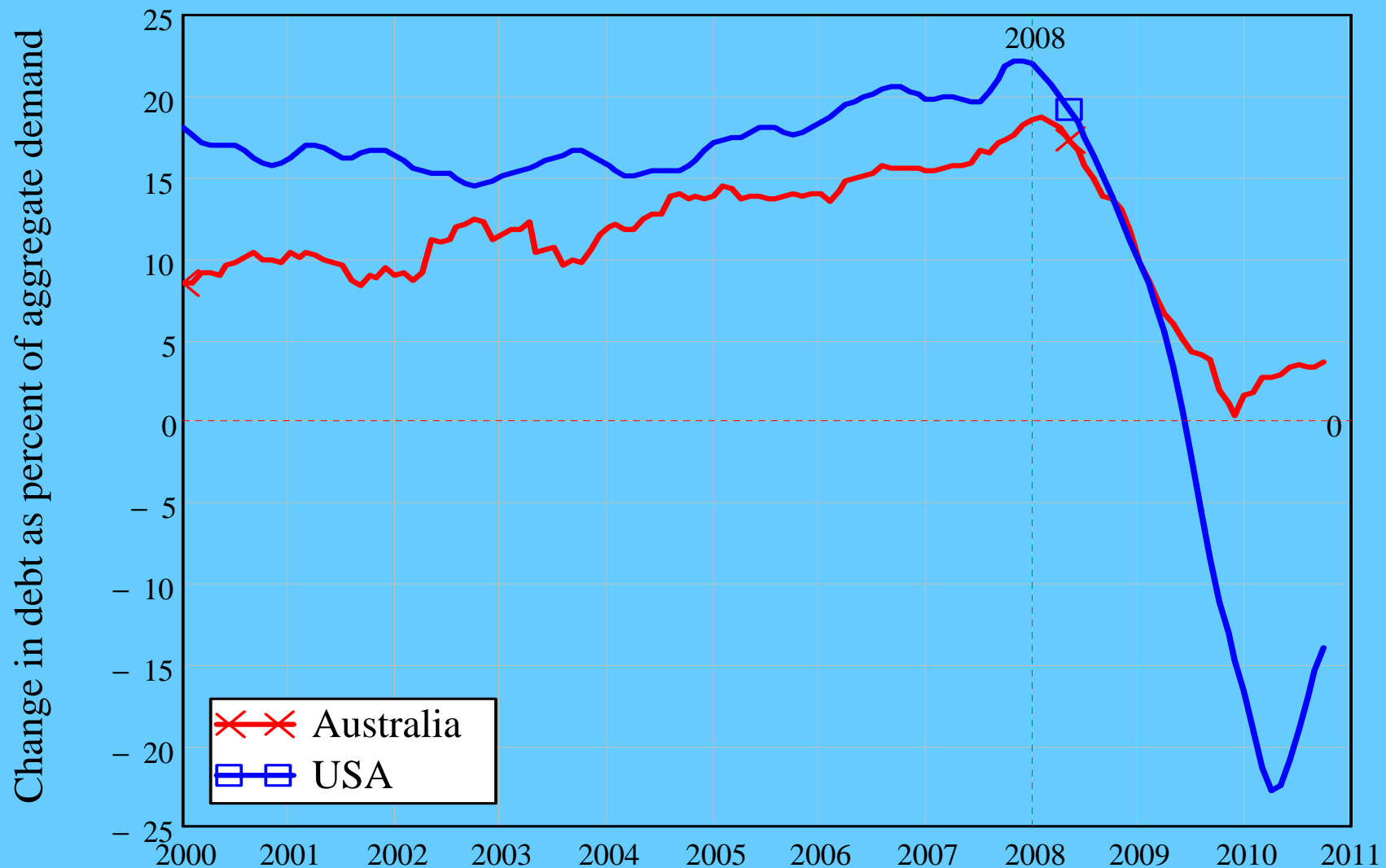
## Caveat! Australian Credit Impulse different

- GDP leads employment & Credit Impulse here
  - Probably reflects greater export exposure of Australian economy
  - Economy more affected by global factors than USA



# Comparative Macroeconomics of Private Debt

- Debt-financed demand never turned negative in Australia
- Debt-financed demand



# Comparison of the Credit Impulse

- Negative Credit Impulse far larger in US
- Demand in Australia now being boosted by credit impulse
- **Australia re-levered its way out of trouble...**

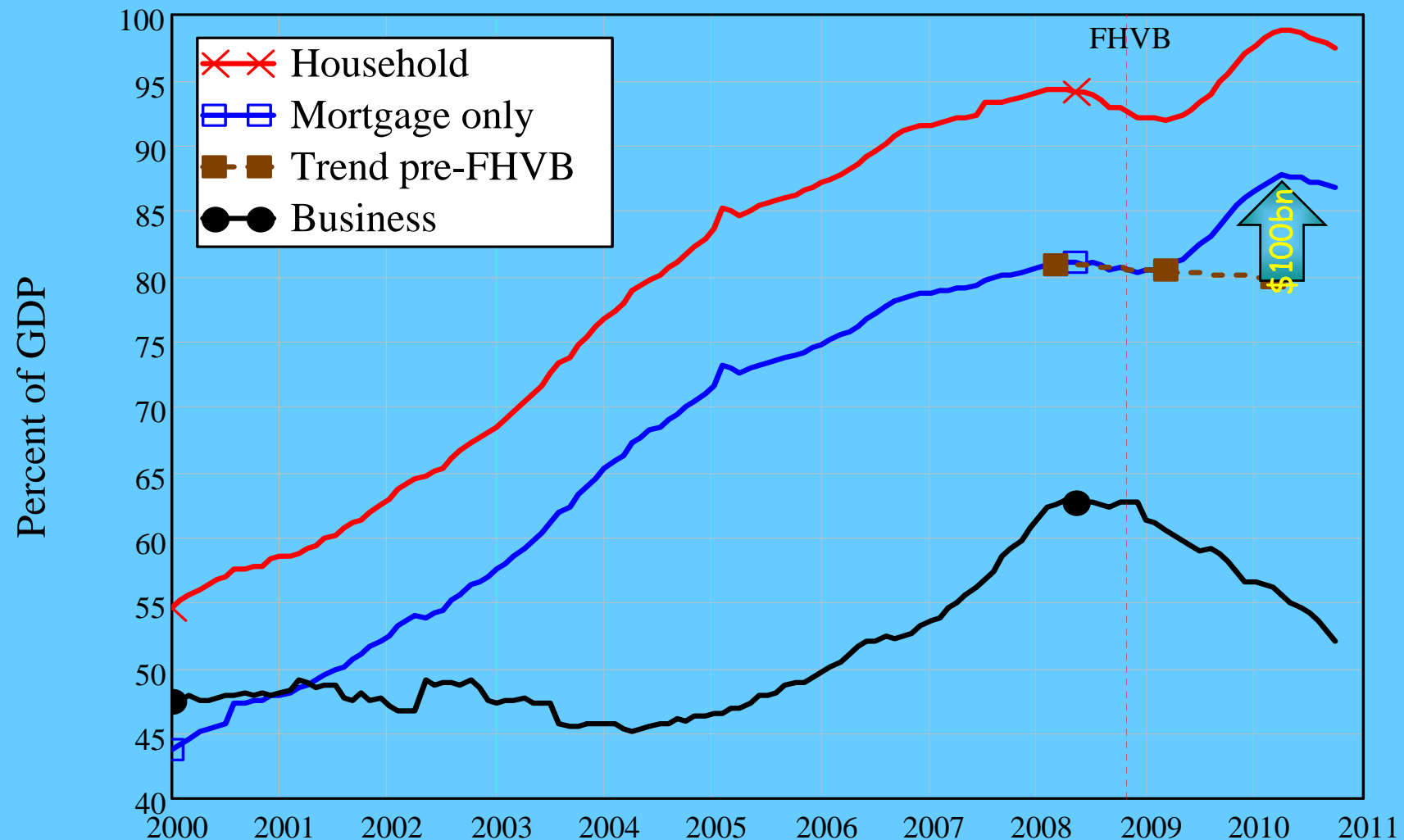
Credit Impulse, USA & Australia



# Why did we do it?

- FHVB encouraged \$100 billion growth in mortgage debt

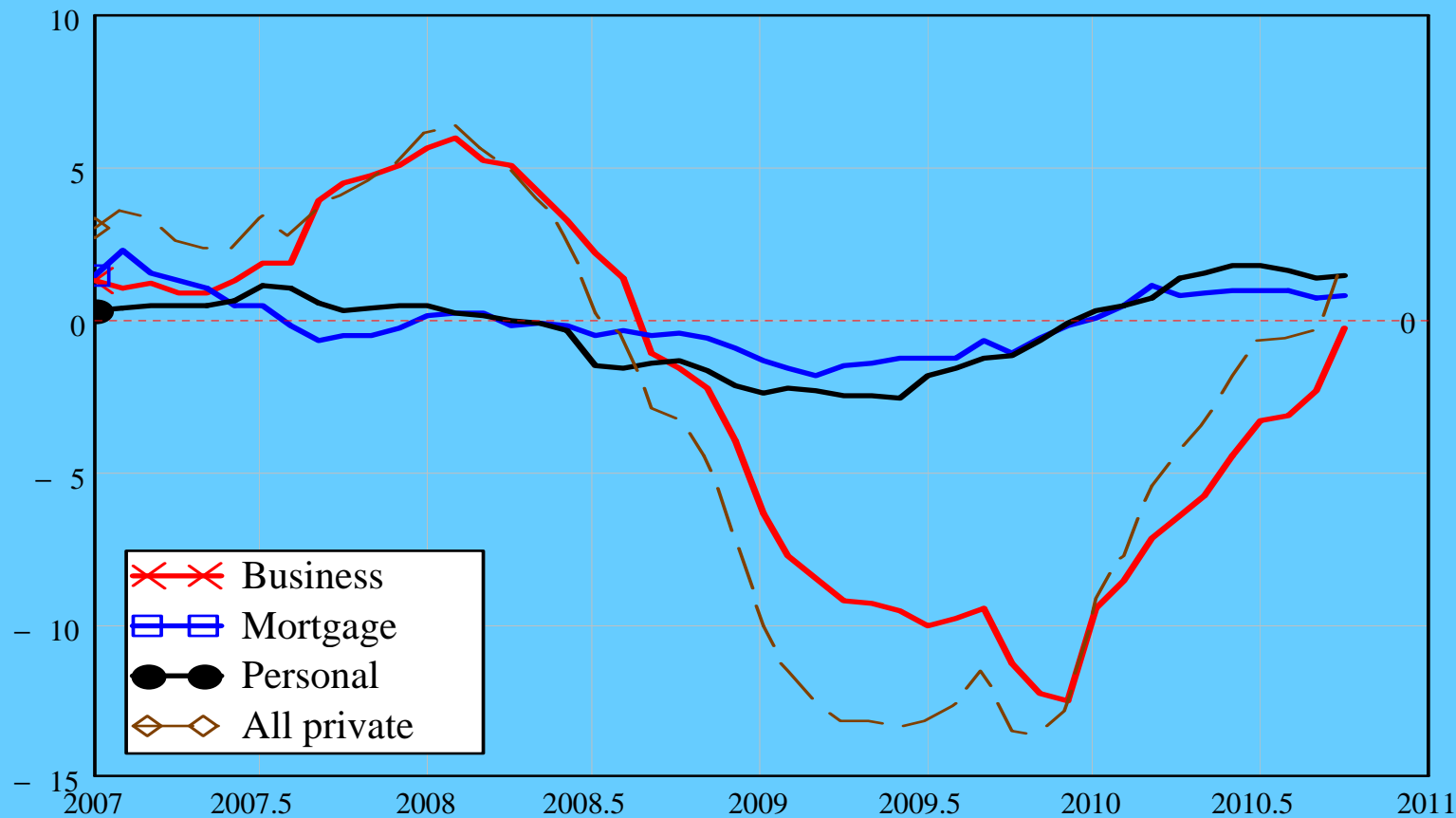
Impact of First Home Vendors Boost on Mortgage Debt



## Can we keep on doing it?

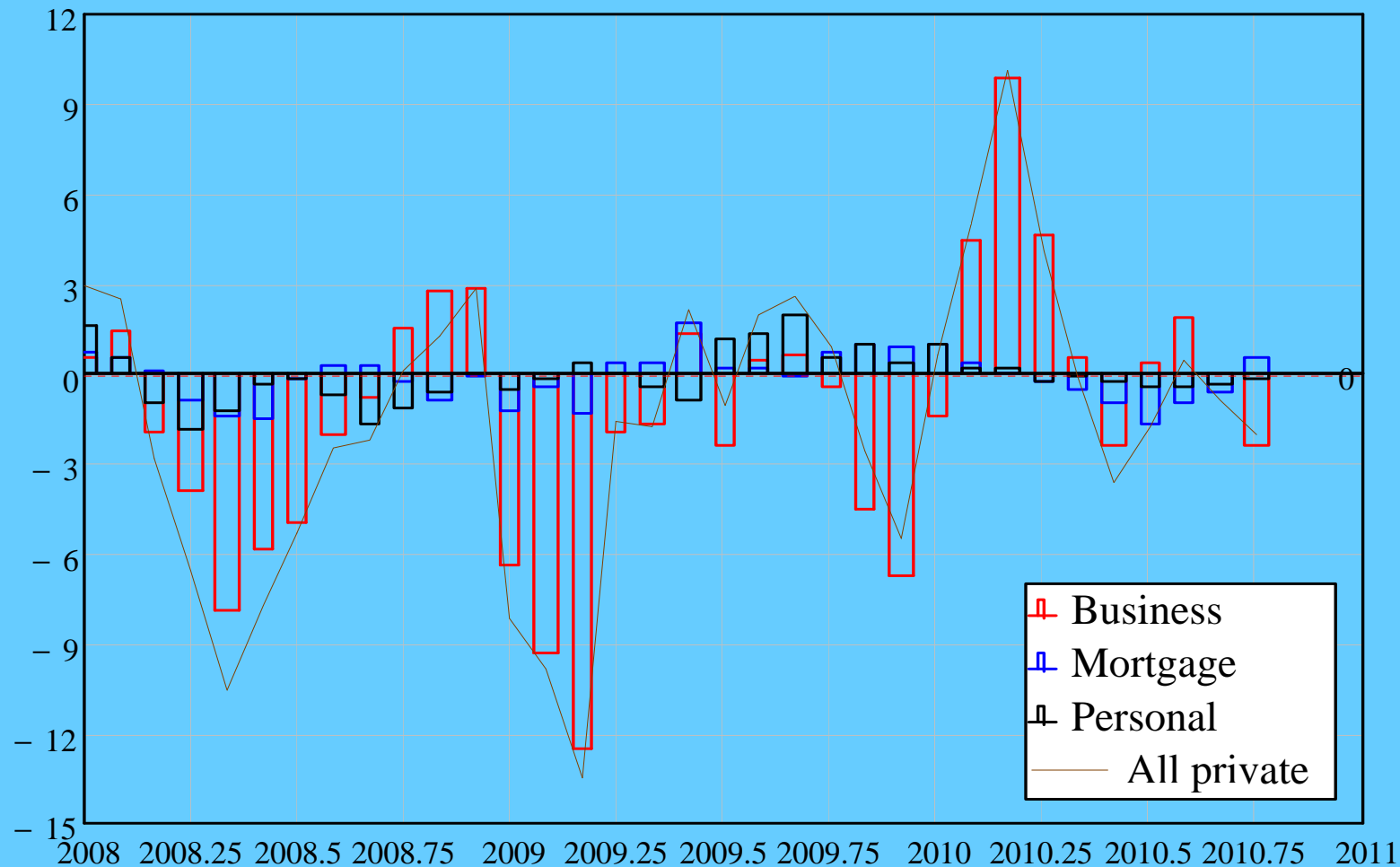
- Boost from mortgage debt running out
- Business Credit Impulse still negative, but turning positive

Credit Impulse by Sector (Yearly)



## Can we keep on doing it?

- Quarterly data paints less optimistic picture
  - - Business turning negative again (even with China boom)  
Credit Impulse by Sector (Quarterly)



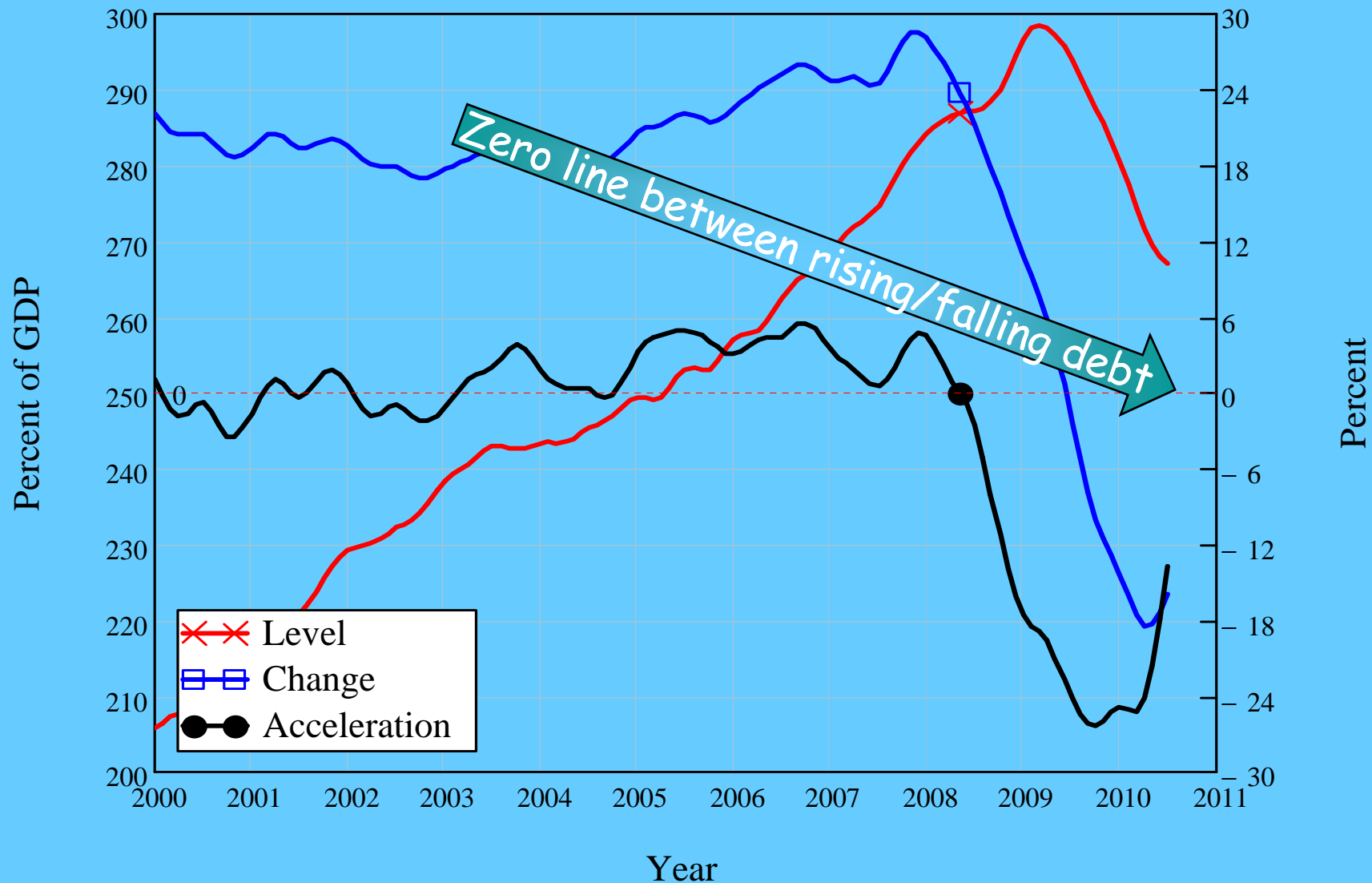
## Can we keep on doing it? An analogy

- Crisis like a drive
  - Distance → Debt to GDP Ratio
    - Sydney to Canberra? Return drive a piece of cake...
    - Sydney to Perth?...
      - It's a long way back even to Canberra...
  - Speed → Rate of change of debt
    - Higher speed feels good (boom)
    - Driving backwards feels bad (deleveraging)
  - Acceleration → Credit Impulse
    - Accelerating feels **really** good (faster to Perth)
    - Decelerating feels **really** bad (going backwards faster to Canberra)
      - Slowing down deceleration can feel good
        - Going backwards less rapidly
        - But drags out journey back...



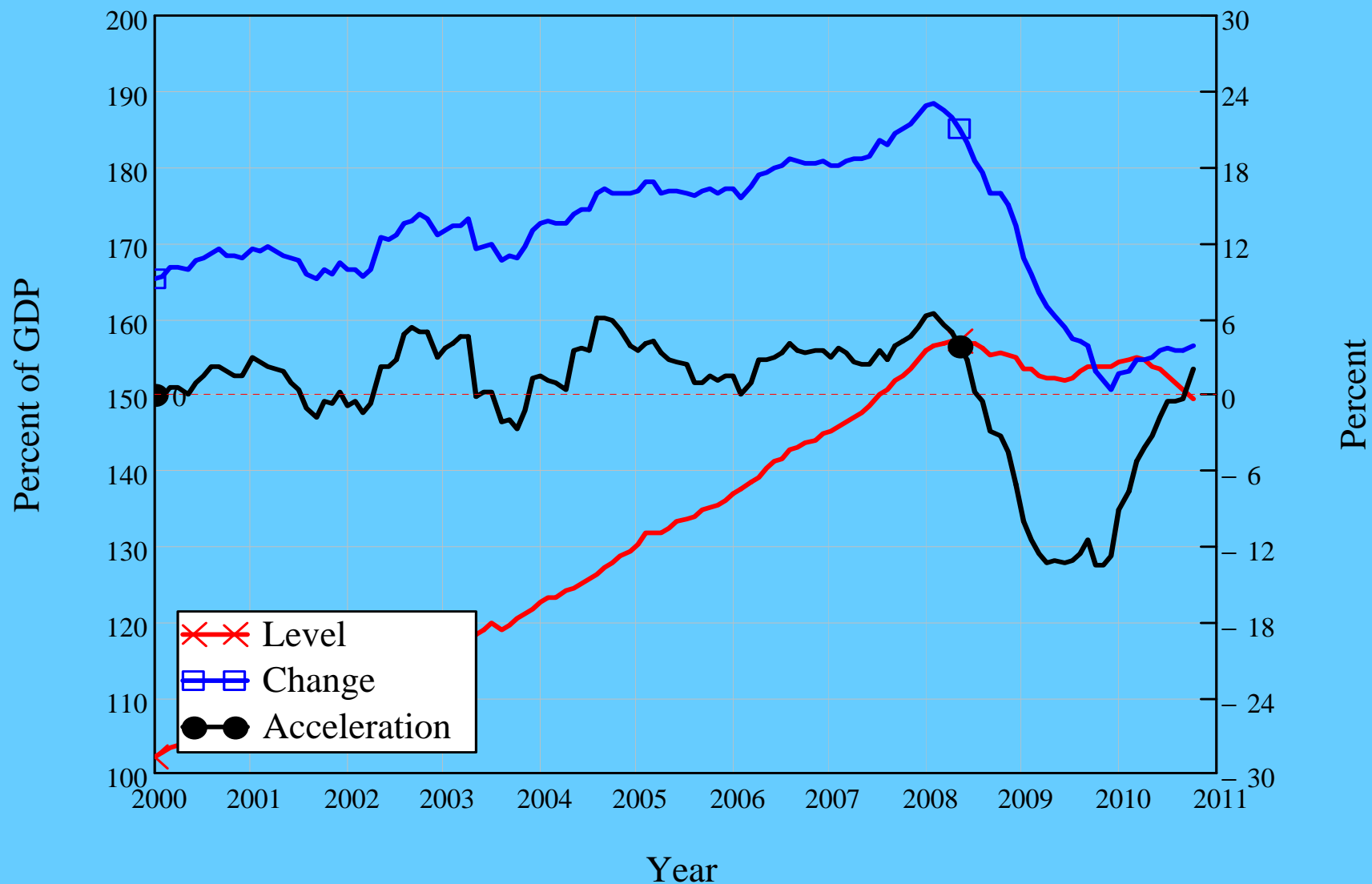
# Can we keep on doing it?

- USA level of debt will stop Credit Impulse turning positive  
Private Debt USA: Level, Change, Credit Impulse



## Can we keep on doing it?

- Australia not as dire but same problem: debt ceiling hit
- Private Debt Australia: Level, Change, Credit Impulse



## Is it a good idea?

- Certain level of debt necessary for investment
  - US: historical record implies under 100% of GDP
  - Australia: 25% of GDP
- Higher debt levels reflect Ponzi behavior
  - Gambling on rising asset prices with borrowed money
- Releveraging out of Ponzi crisis means a larger one later
- Probable outcome: "Turning Japanese"
  - Occasional growth spurts via government spending, "quantitative easing", positive Credit Impulse
  - Fall back into low/negative growth again as Credit Impulse hits wall of high Debt/GDP ratio

## What about Nature's Revenge?

- Stutter courtesy of natural crises?

## Signposts in 12 months?

- Negative credit impulse from household sector
  - Credit-impulse-driven rise in unemployment
    - Countered by
      - China Boom (if it continues)
      - RBA rate cuts
    - Higher unemployment than today
- Low to negative GDP growth
- Inflation below expectations
  - Except for Climate/Peak Oil effects

# Light relief...

Pay no charges to messenger

NAME OF ADDRESSEE Ron Walker  
STREET ADDRESS First Class Saloon  
RMS FAIRFAX  
URGENT: DELIVER WITHOUT DELAY

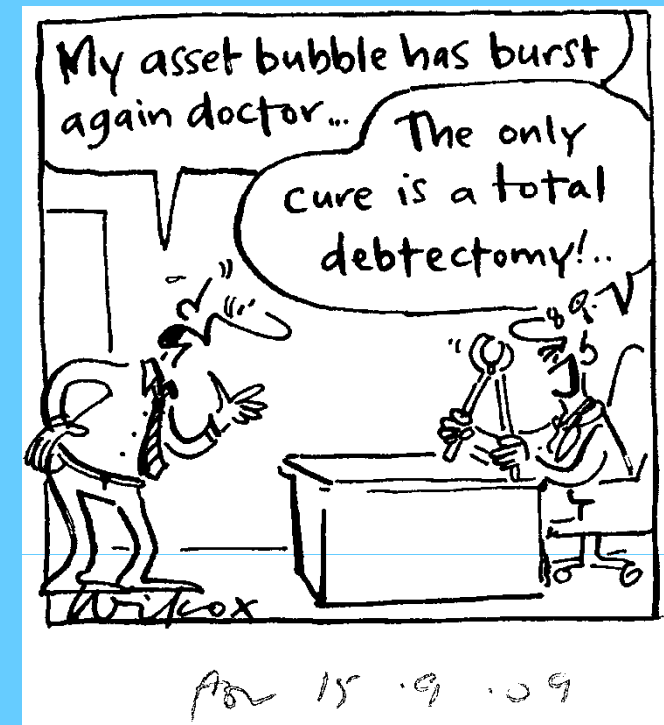
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DATE 10 Dec 2008  
TIME FILED 5:45 P.M.  
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The World Wide Electrical Printing Telegraph Co. Ltd.  
This is a full-rate telegram or electric lettergram unless its deferred character is indicated by a suitable symbol shown at preceding the address. The filing time shown in the date line on telegrams and cablegrams is STANDARD TIME at point of origin.

SENDING STATION: RMS FAIRFAX, MID ATLANTIC  
SYMBOLS: DL-DAY LETTER HL-NIGHT LETTER LC-DEFERRED CABLE NL-CABLE NIGHT LETTER SD-SHIP RADIOGRAM

FROM RMS FAIRFAX, MID ATLANTIC.

Re iceberg incident as noted previous STOP still taking water STOP all else going swimmingly STOP full meeting of band yesterday resolved to keep playing regardless of new steep tilt to deck STOP captain appears to have been flung overboard STOP purser now in charge STOP have decided on new pattern for b-deck promenade deckchairs STOP sort of an expanded clover leaf STOP very much the future of deckchairs STOP





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