

The GFC and its Consequences for Innovation and IP Applications

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OUTLINE

- The global financial crisis: what and why
- What are the implications on innovation and IP applications?
 - Economic theory
 - Historical and international experience during macroeconomic slowdowns
- What's going to happen next?

THE GFC

- **A bubble in US house prices**
- **Transferred around the global financial markets causing a liquidity crunch**
- **Global economic slowdown**
 - Effect on Equity prices, GDP, Trade - Investment, Innovation and IP applications

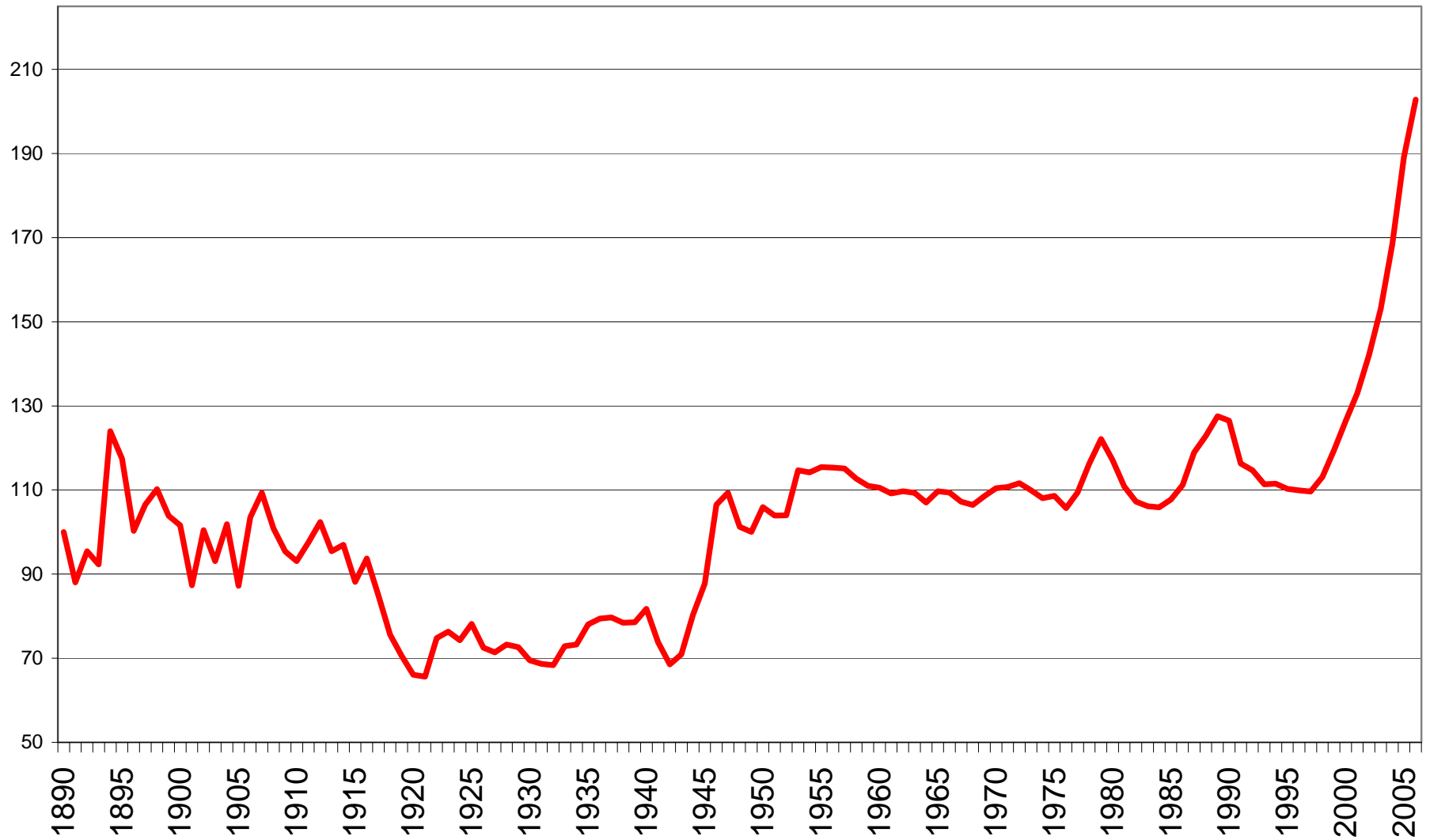
ASSET BUBBLES

Where the price of an asset cannot be explained by current or likely future income but rather is driven by an expectation that the price will rise in the future.



- Dutch tulip bulb bubble in 1636-37.
- South sea bubble 1720
- Japanese asset bubbles of late 1980s/ early 90s.
- Dot.com bubble 2000.
- In Australia:
 - Real estate bubble of the 1880's
 - Mining bubble circa 1969 (e.g., Poseidon)

REAL US HOUSE PRICES 1890-2006



Robert Shiller (<http://www.econ.yale.edu/~shiller/data.htm>)

THE ORIGIN OF THE US HOUSING BUBBLE.

- Cheap money
 - interest rates
 - capital flows
- Regulation/ lending practices
 - Subprime loans & NINJA loans
 - By 2006 subprime accounted for 15% of the mortgage market.
- Exuberance / 'Animal Spirits'
 - Asset prices take on a life of their own.



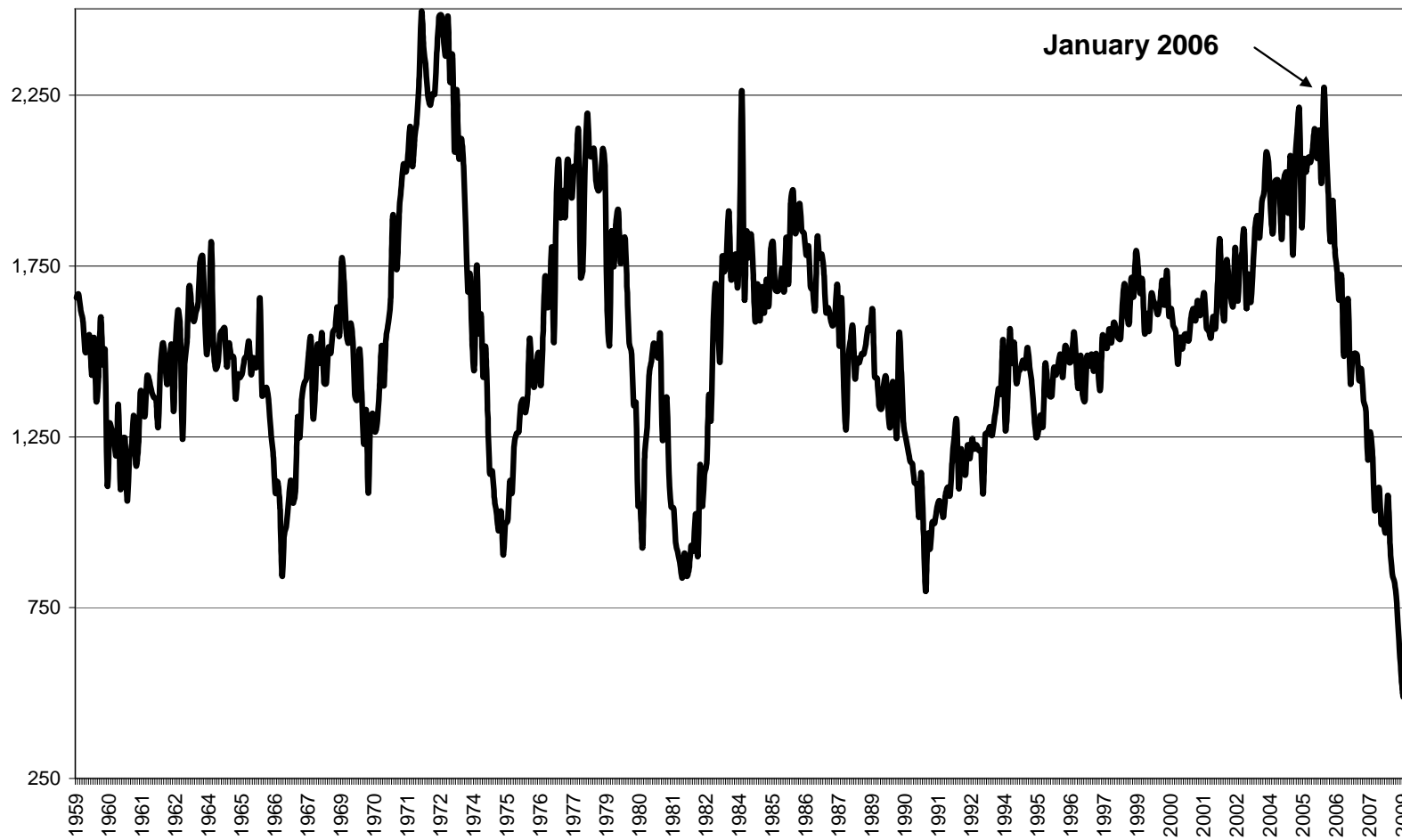
CONDITIONS FOR A CRISIS

- Financial Innovation
 - Structured finance products (e.g., CDOs) allowed lenders to sell sub-prime mortgages
 - spread exposure to sub-prime backed assets across the global financial markets.
 - “Financial innovation made it easier for money to flow around the constraints of regulation” (Timothy Geithner)
- (De)regulation
 - Growth of the “shadow banking sector”
- Wealth Effect
 - In 2006, mortgage equity withdrawals were a trillion dollars =8% of US GDP (Soros 2008)

THE CRASH

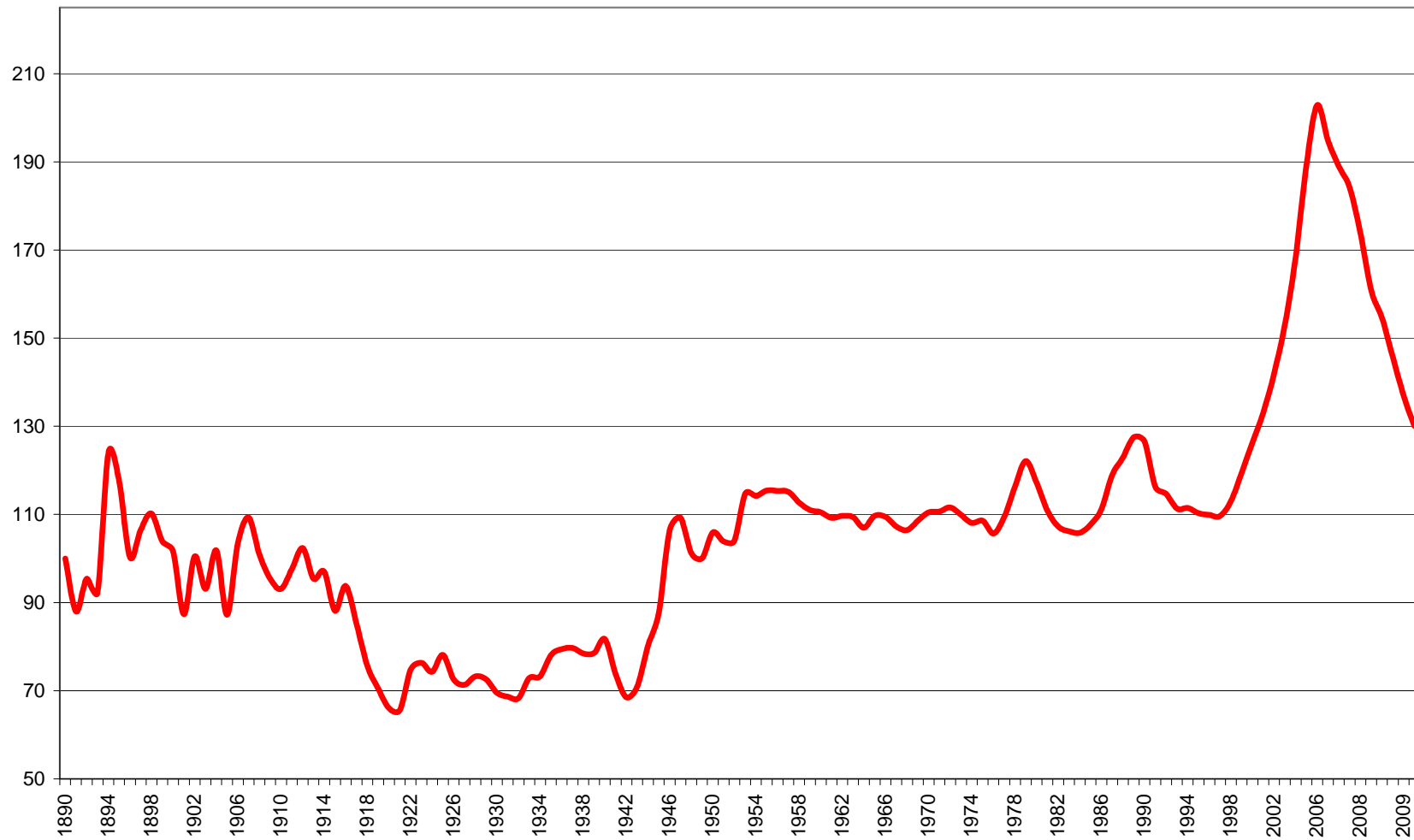
- A rise in defaults & house prices start to fall
- Lenders withdraw credit
- Prices fall faster!
- CDO holders realise their assets may be worth less than they thought.
- 9 August 2007 - BNP Paribas suspended investment funds worth 2b Euros.
 - Short term credit markets froze up (inter-bank lending).
- 15 September 2008 Lehman Bros collapses

New house starts



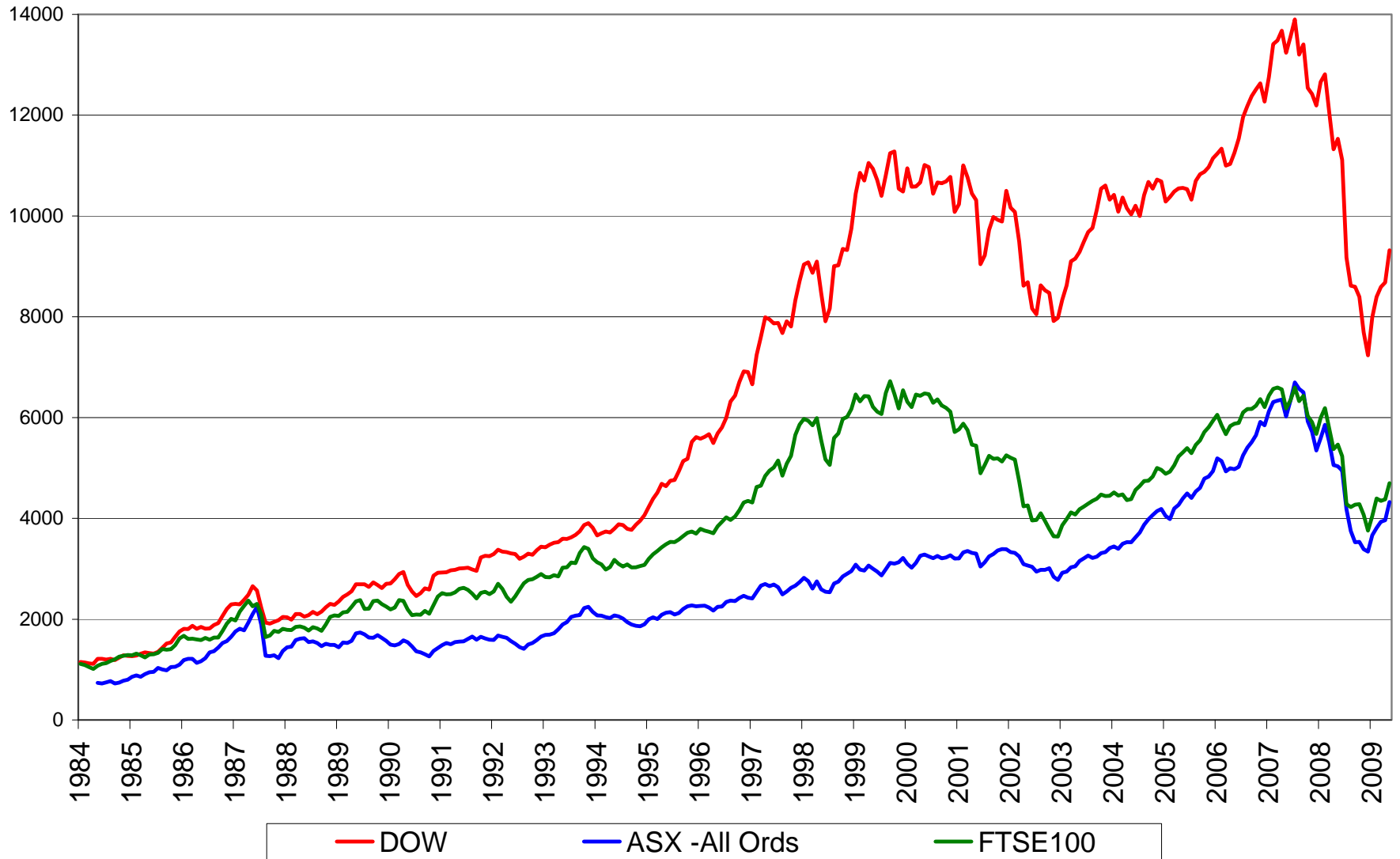
Source: US Census Bureau

Real US House Prices

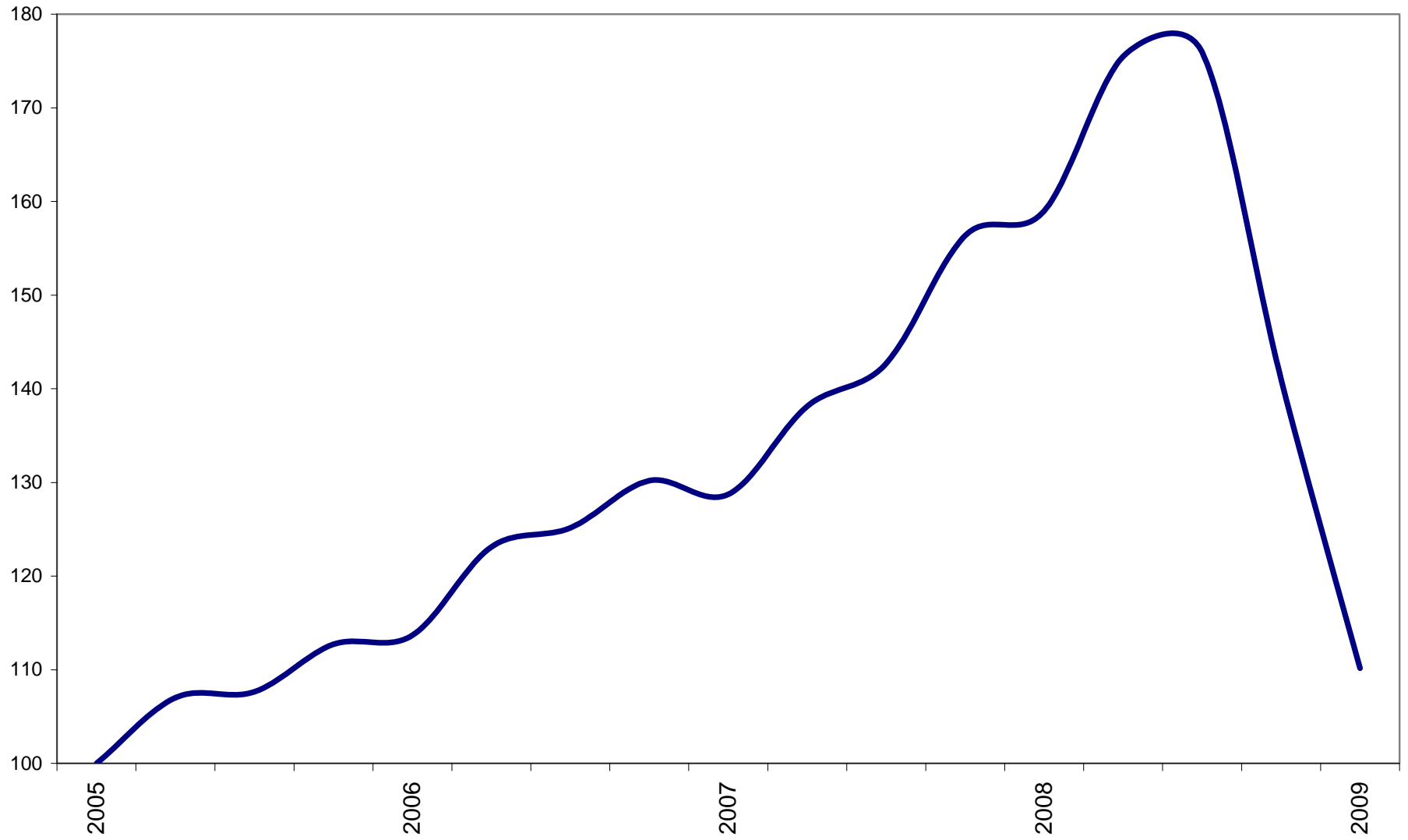


Robert Shiller (<http://www.econ.yale.edu/~shiller/data.htm>)

Equity Markets

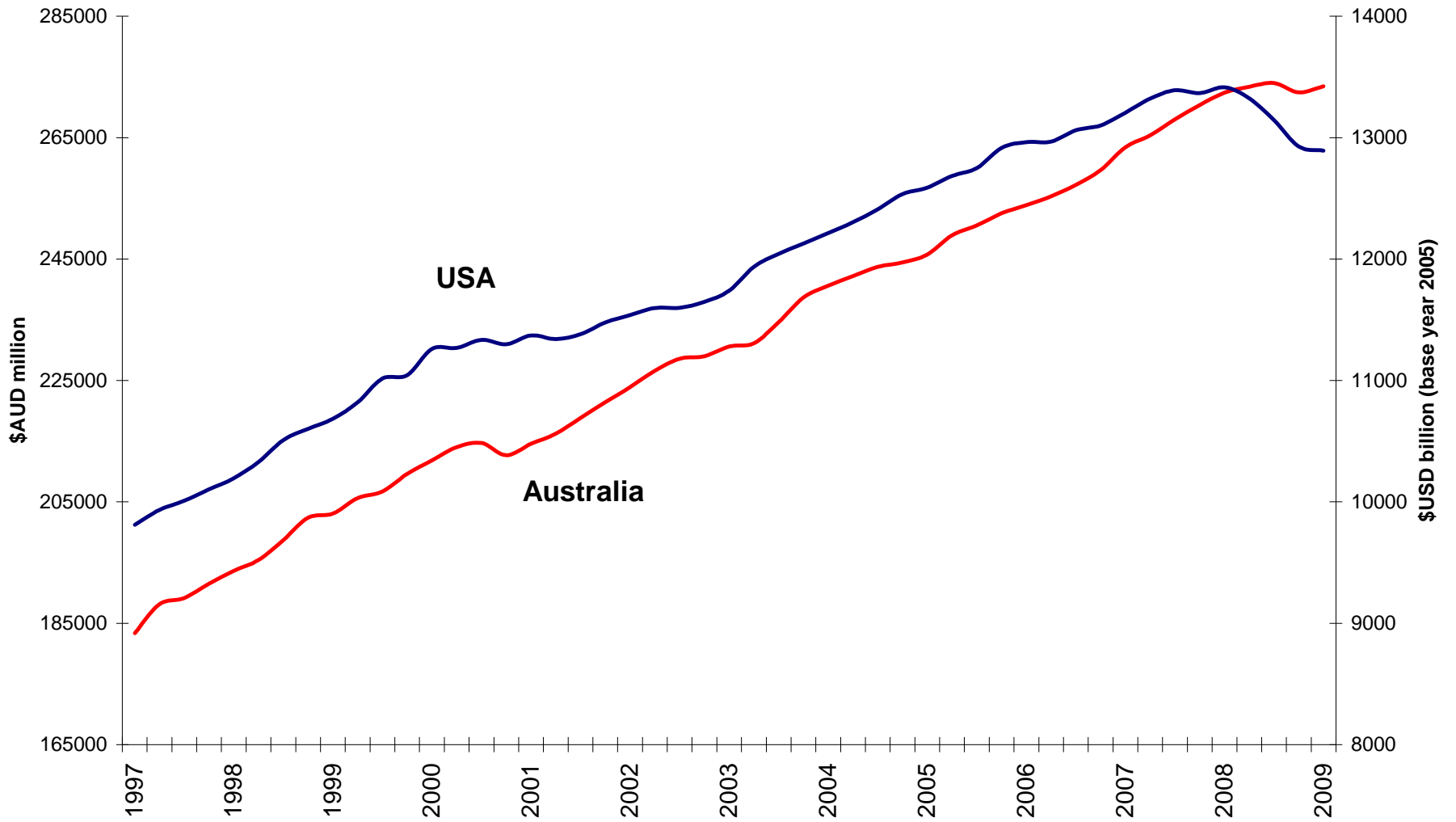


World Trade



Source: WTO secretariat (Index, Gross)

Output



THE AUSTRALIAN “MIRACLE”

- Did we avoid it?
 - Equities - huge losses.
 - Employment / output / house prices seem “ok”

Why –

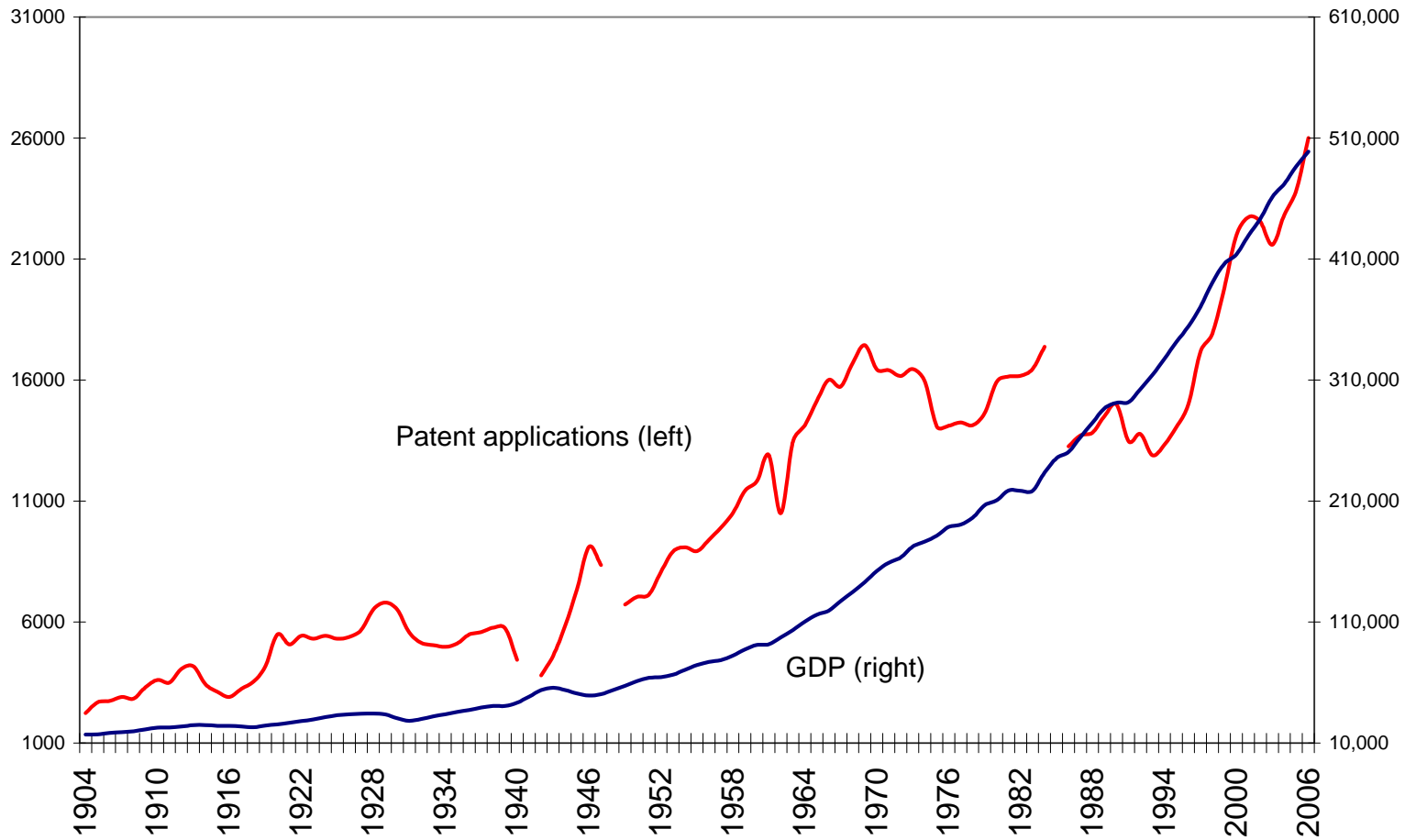
- Australian Home loans: very little sub-prime
- Well regulated banks
 - Wallis enquiry 1999; APRA reform act 2003
- Pre-crisis position - Australia was at full capacity with unemployment nearing 50 year lows.
- Fiscal stimulus

WHY MIGHT IP USAGE BE PRO-CYCLICAL?

- Economists view innovation as an investment decision:
 - Invest if discounted expected return (adjusted for risk) is higher than opportunity cost of resources (e.g., returns elsewhere).
- Affect of macroeconomic conditions on “innovation”
 - “Demand – pull” and “Induced Innovation”
 - Liquidity / Confidence
- Depends where IP usage fits on the innovation pathway
- Substitution to alternative (cheaper?) appropriation mechanisms

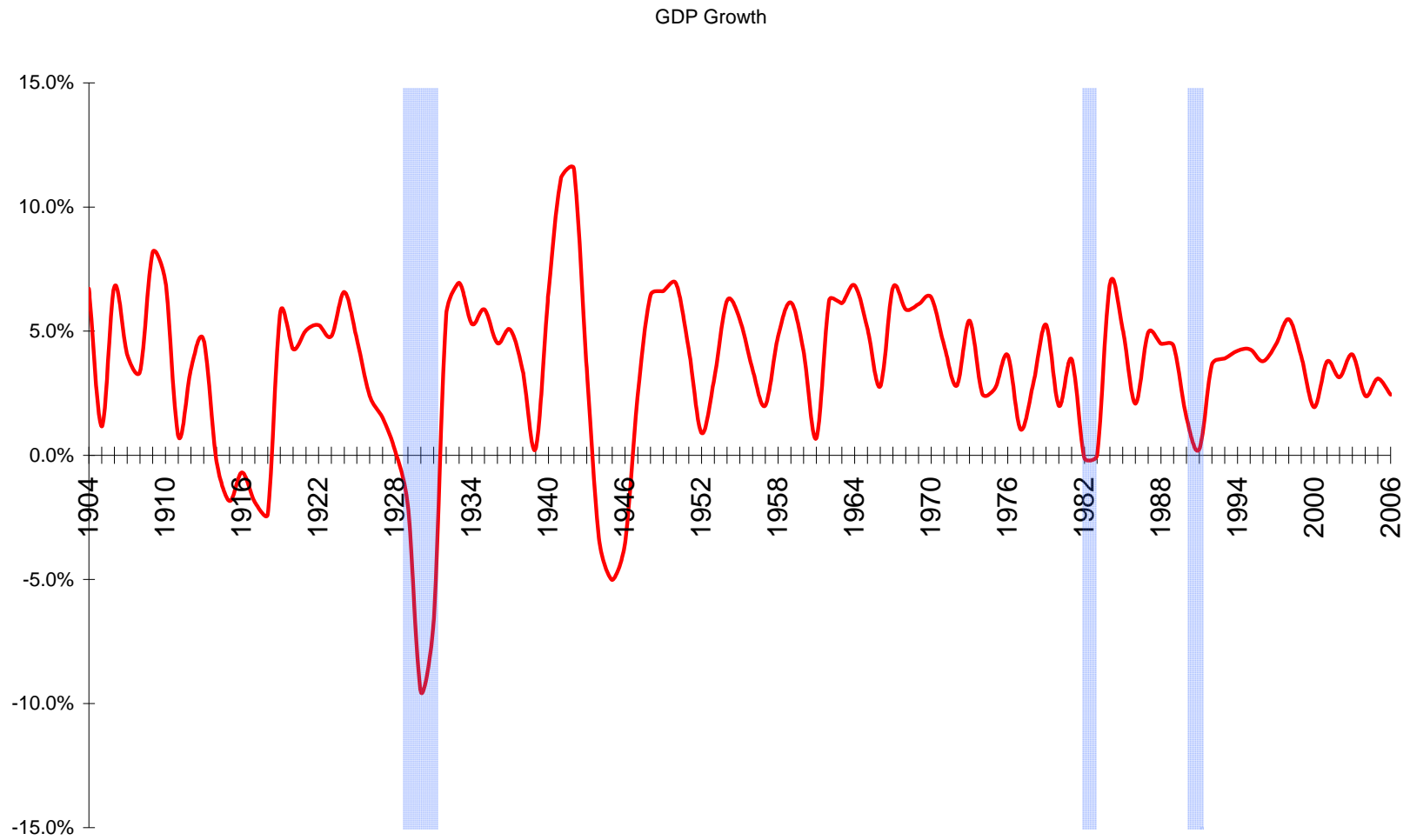
HISTORICAL EXPERIENCE.

Patenting and GDP in Australia

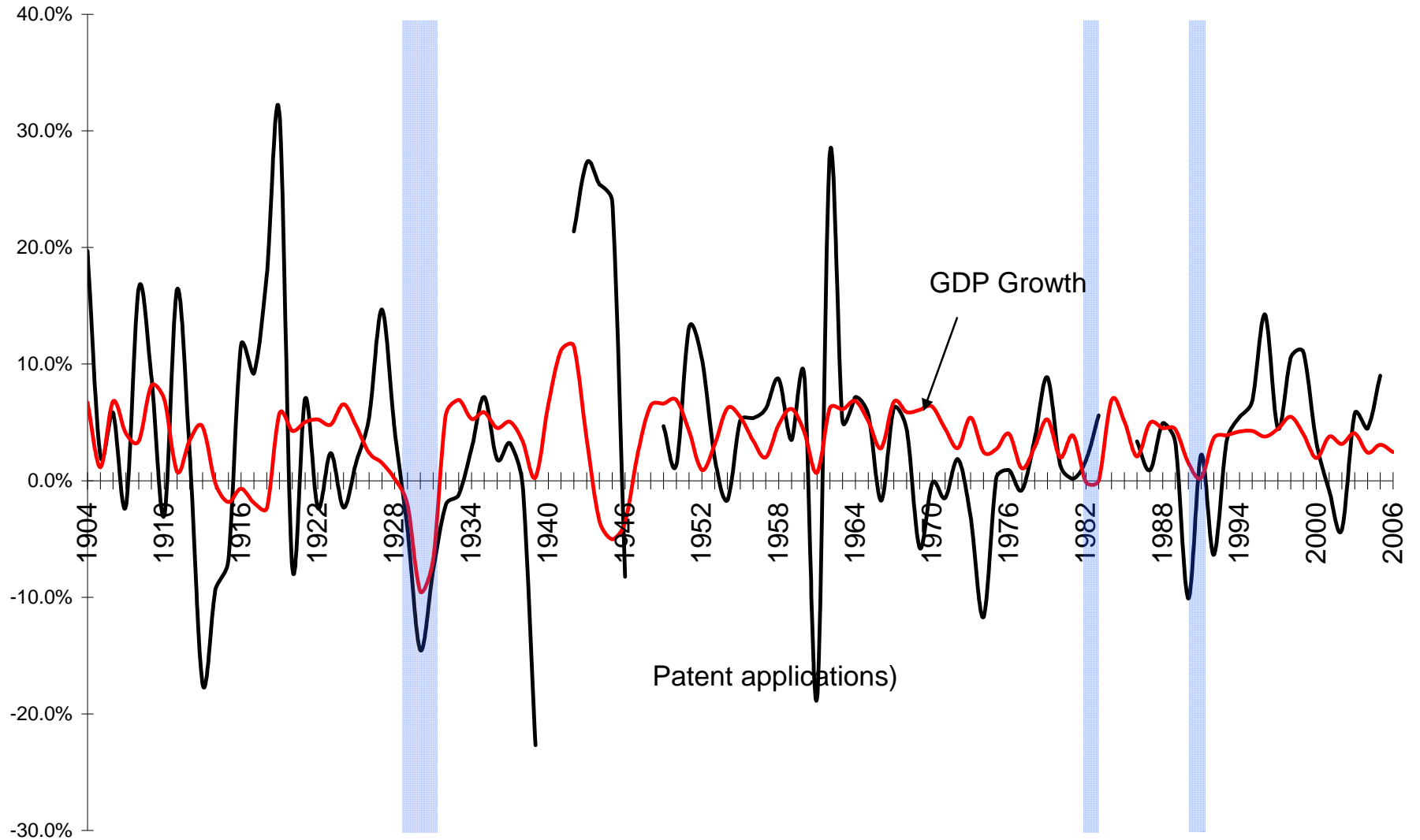


Source: WIPO; IP Australia; Maddison 2009

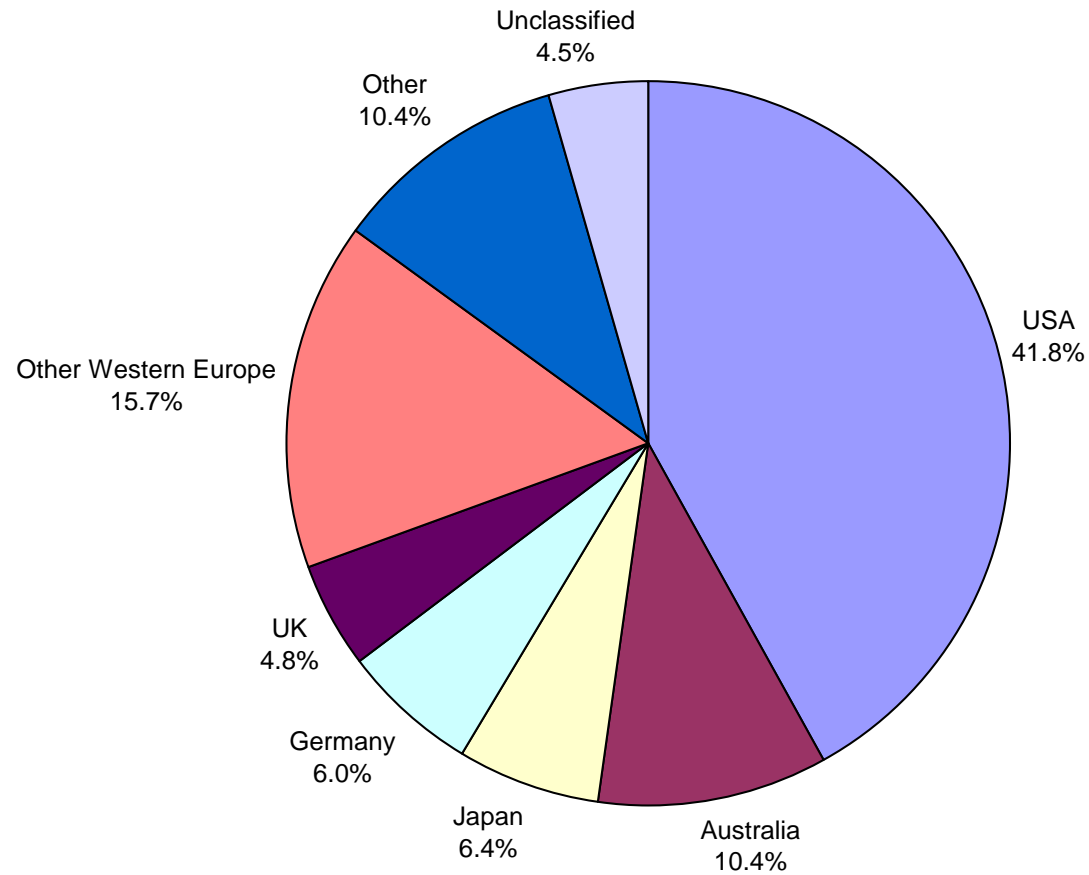
Australian GDP Growth



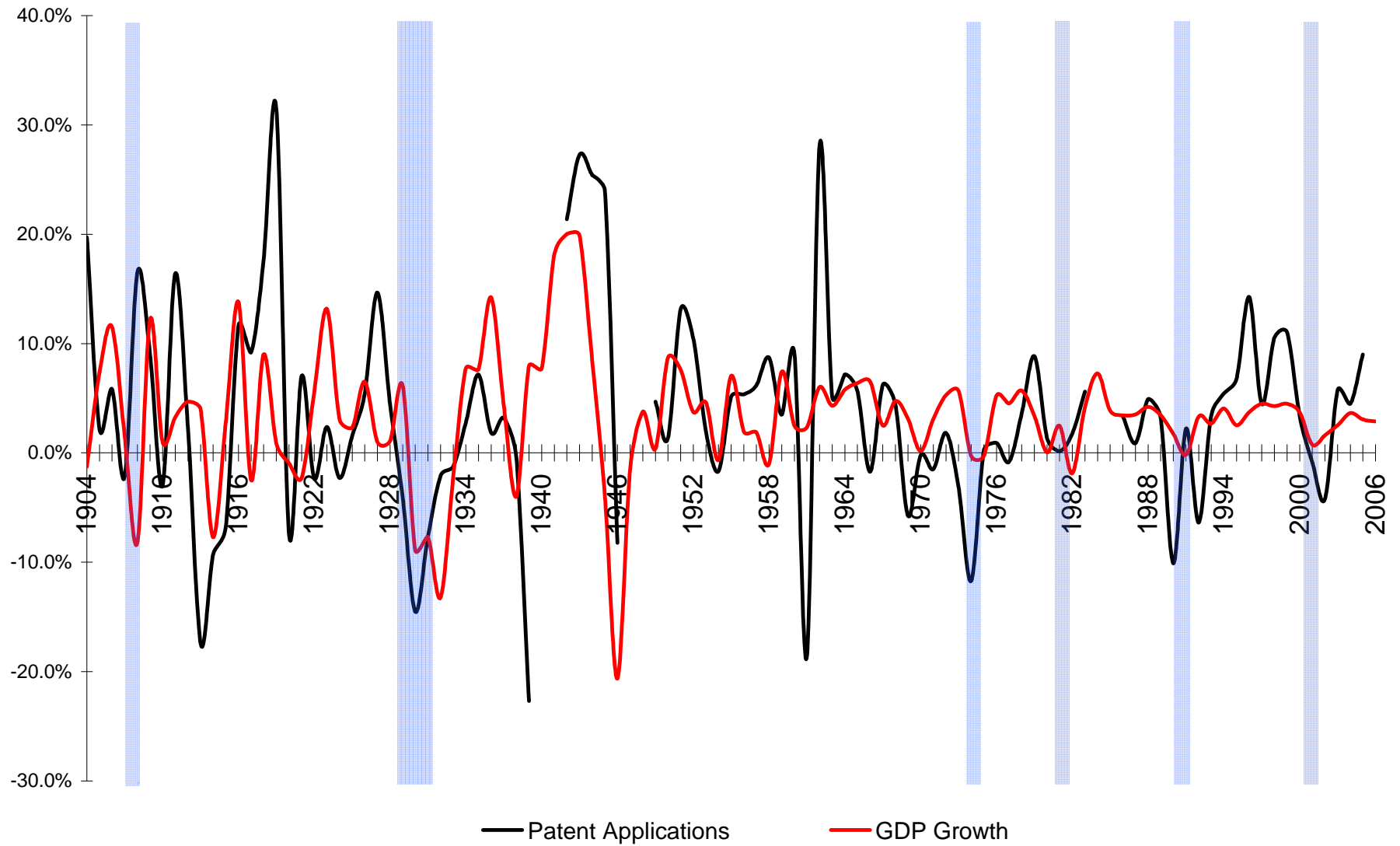
Patenting and GDP Growth in Australia



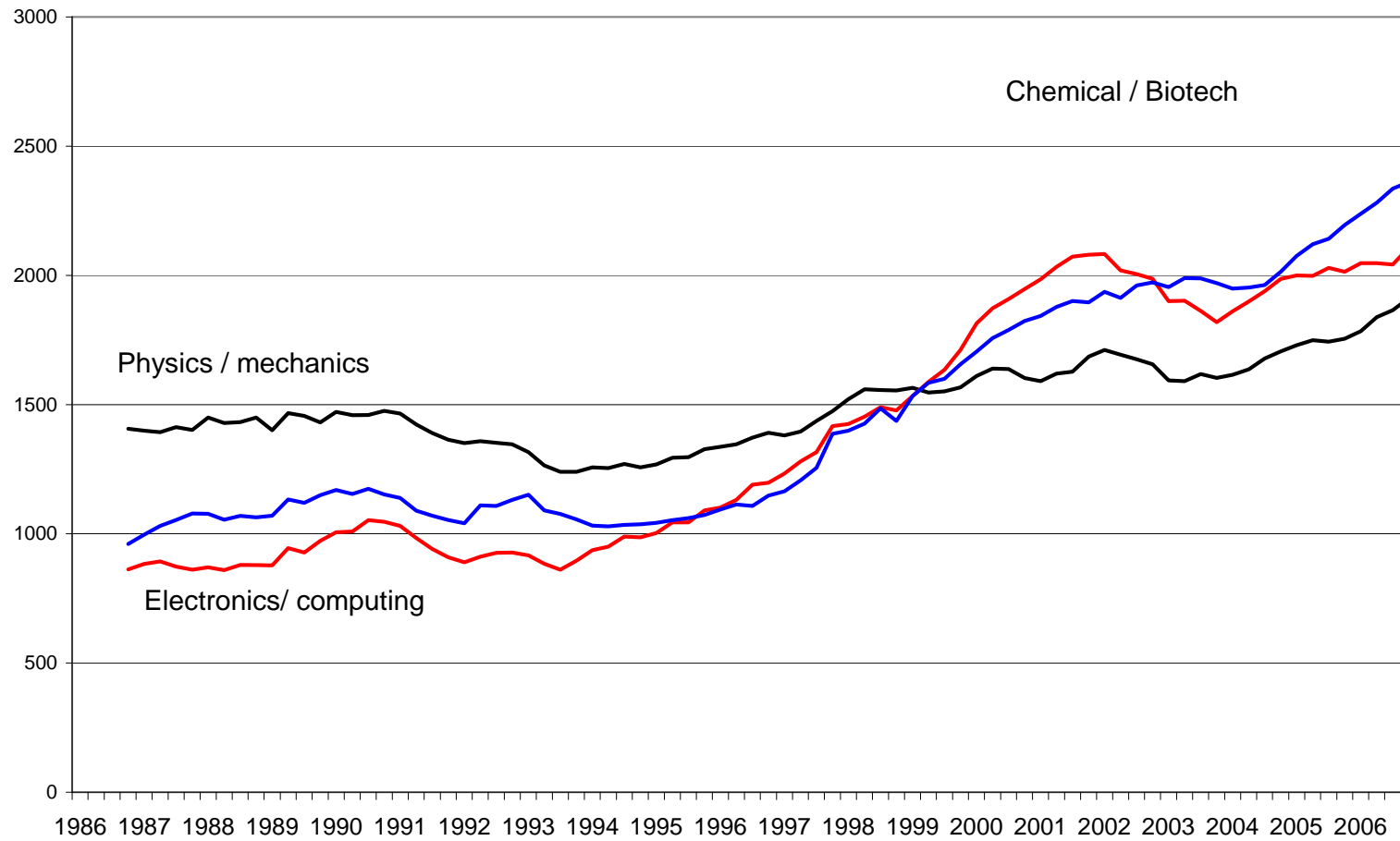
Composition of Australian Patents by Country, Total applications 2003-2007



Patenting in Australia and US Economic Growth



Patenting and the business cycle: by Technology Type

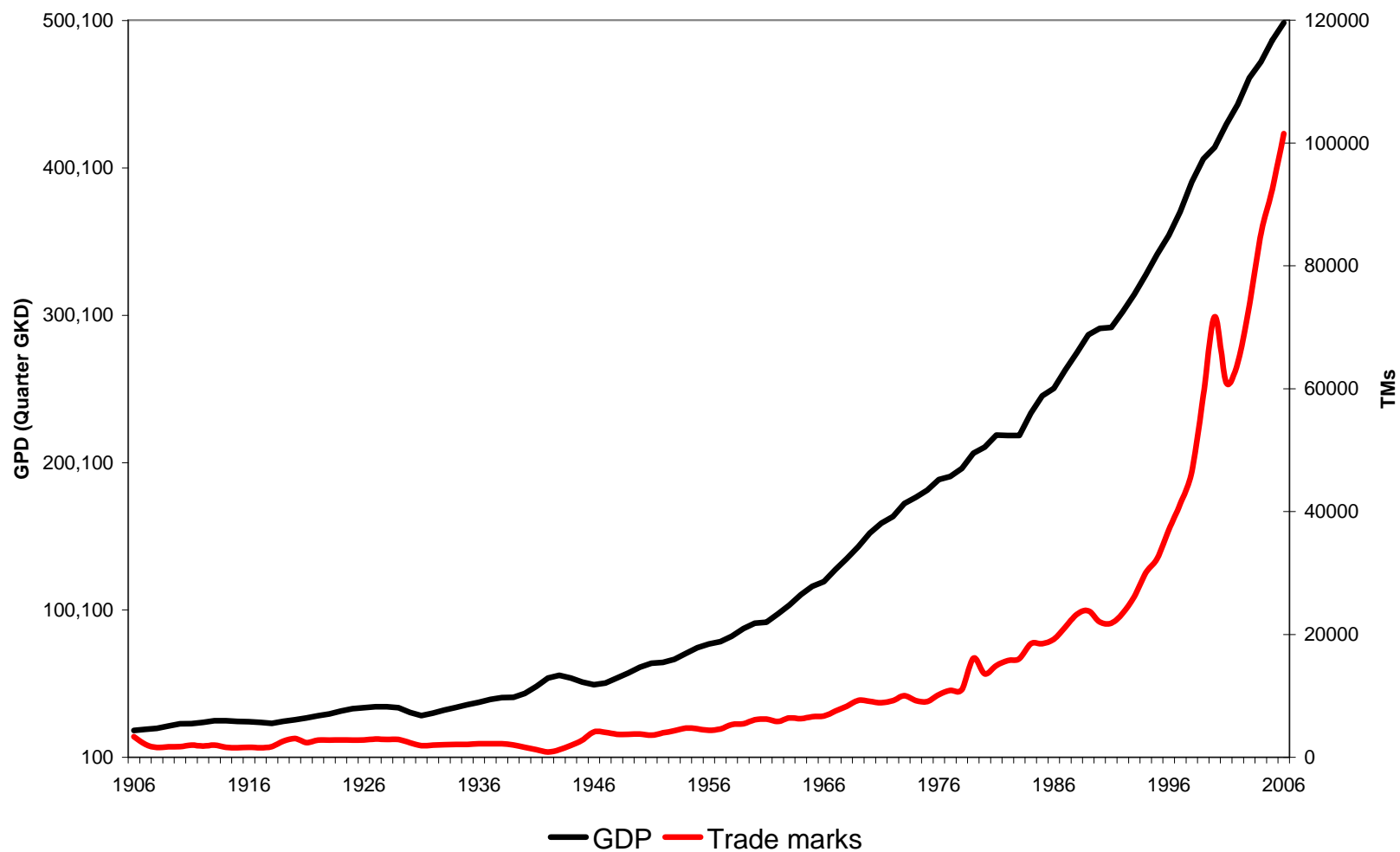


Economics of trade marking

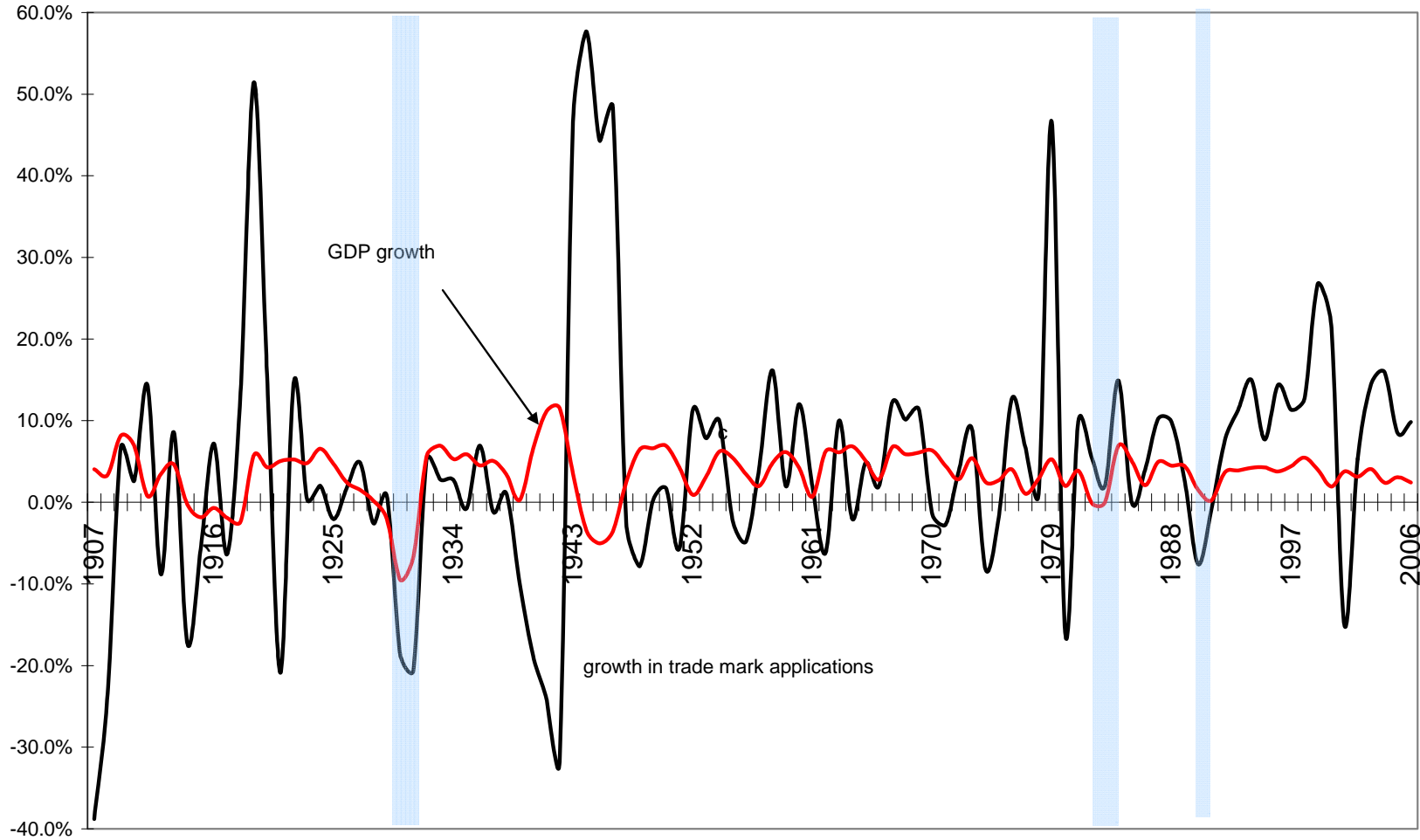
- Incentive to produce information
 - Avoid 'market for lemons' Akerlof (1970)

- Demand derived from
 - Preference for quality
 - Preference for variety

Australian trade marks and growth over the last century.



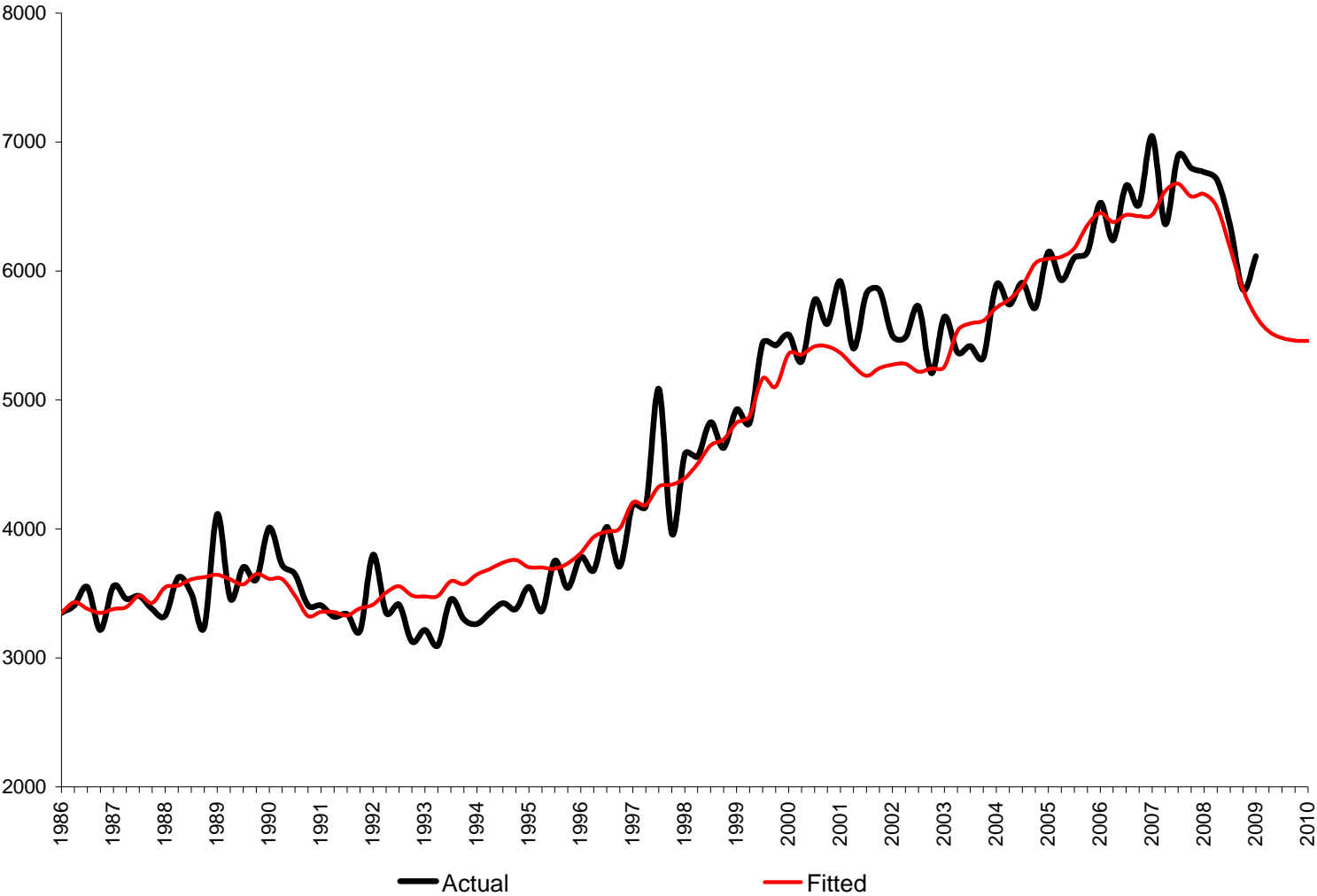
Australian trade marks and the business cycle over the last century.



Where to from here ?

	2008	2009	2010
USA			
IMF	1.1	-2.6	0.8
APCF	1	-2.6	2.1
OECD Outlook	1.1	-2.8	0.9
Australia			
APCF	2.3	-0.1	1.5
Melbourne Institute	2.3	0.5	
IMF	2.1	-1.4	0.6

PATENT APPLICATIONS – ACTUAL AND FITTED



Thank-you