

# Global financial market turbulence and the outlook for the Australian economy

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# The US sub-prime mortgage market: anatomy of a debacle

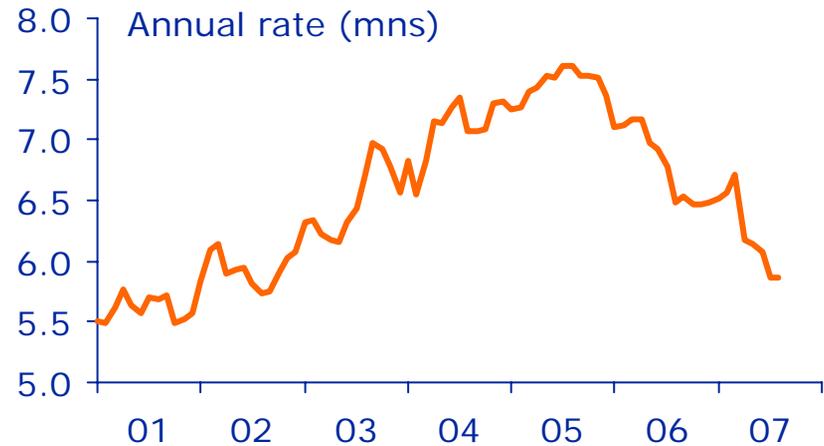
- During the years 2002-2006, mortgage lending to people with poor credit histories ('sub-prime') expanded rapidly, rising from 8-9% of all new mortgages in 2001-03 to 20-22% of the market in 2004-06
- 'Low-doc' (called 'Alt-A' in the US) mortgage lending also increased from less than 3% of all new mortgages before 2003 to 26% by 2006
- The majority of these loans were at variable ('adjustable') rates, in contrast to the traditional practice in the US of lending at 30-year fixed rates – and in many cases included 'affordability options' such as very low 'teaser' rates for an initial period, interest-only terms and interest deferrals
- Most of these mortgages were 'securitized' – that is, bundled up into securities (such as 'collateralized debt obligations' or CDOs) and sold to a wide range of investors around the world
- It's now clear that there was a good deal of 'predatory lending practices' by mortgage originators, and fraud by borrowers
- With variable mortgage rates having risen since 2004, and as loans have come off their introductory 'teaser' rates, defaults have increased sharply – in turn resulting in losses to holders of mortgage-backed securities

# Higher interest rates and falling house prices have triggered a wave of mortgage defaults

## Mortgage rates



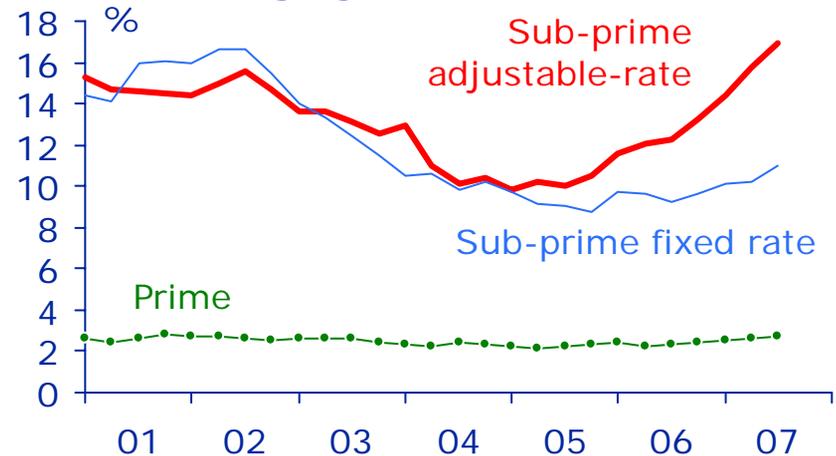
## Home sales



## House prices



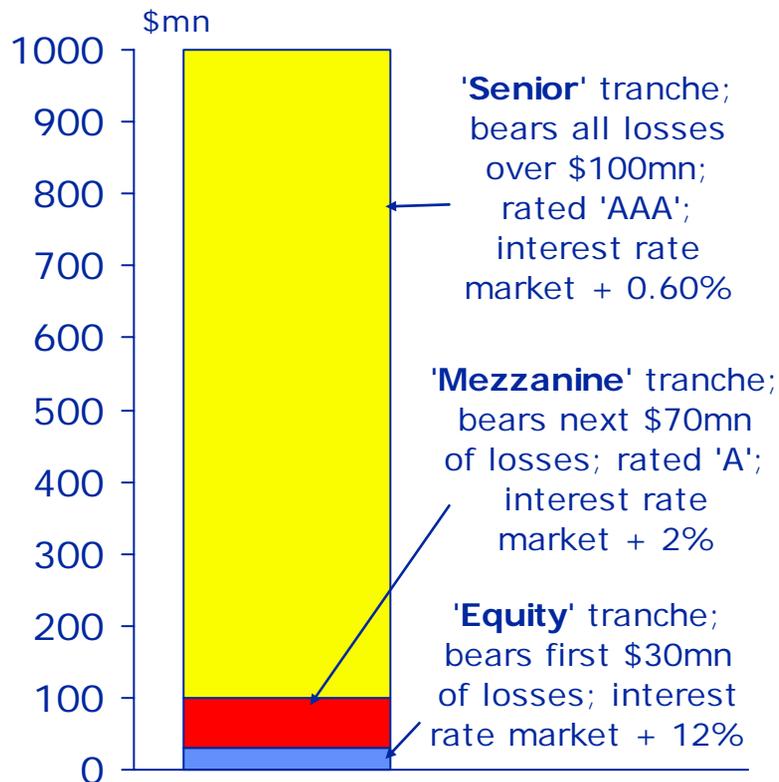
## Mortgage delinquencies



Sources: Federal National Mortgage Corporation; S&P; National Association of Realtors; Mortgage Bankers' Association.

# Rising sub-prime mortgage defaults have in turn resulted in losses on mortgage-backed securities

## Structure of a typical 'collateralized debt obligation' (CDO) security

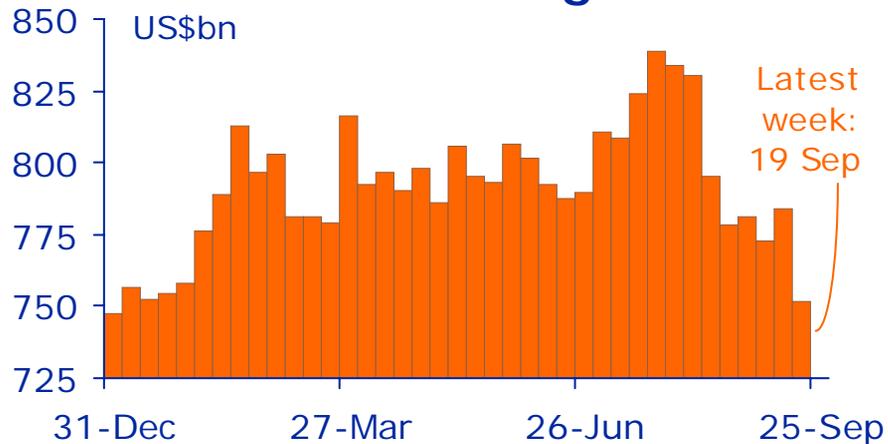


- A CDO is a debt security (like a bond) based on a set of assets (eg mortgages) and 'structured' into slices or 'tranches' so as to allocate different degrees of risk to different classes of investor in exchange for different returns
- Typically, a CDO backed by mortgages is structured so that losses occurring as a result of defaults are initially borne entirely by the more 'junior' tranches
- However as defaults rise, and the value of the 'junior' tranches is wiped out, the 'senior' tranche is then fully exposed to subsequent losses, is no longer 'AAA', and can also lose value sharply

Sources: RGE Monitor; Economics@ANZ.

# The US asset-backed commercial paper market seized up – although the Fed's rate cut has helped

## Financial commercial paper outstanding



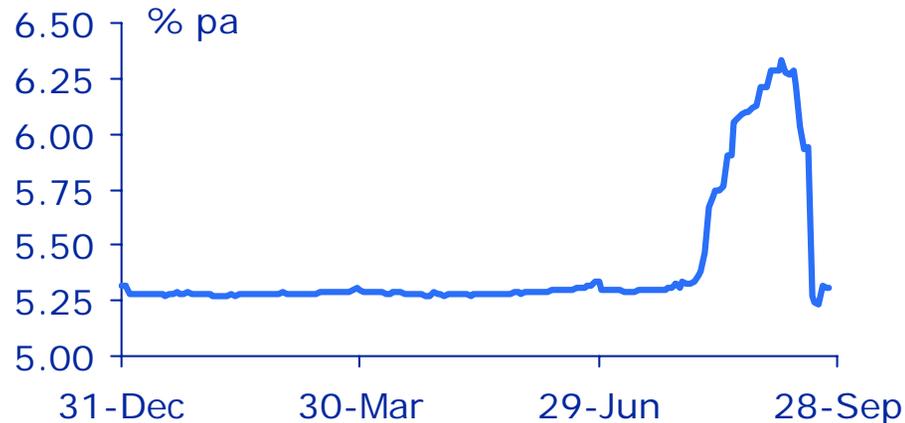
## 30 day commercial paper rate



## Asset-backed commercial paper outstanding

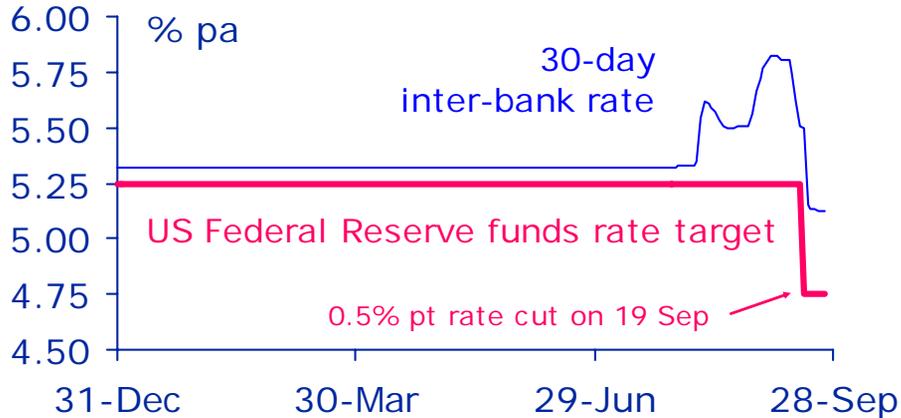


## 30 day ABCP rate

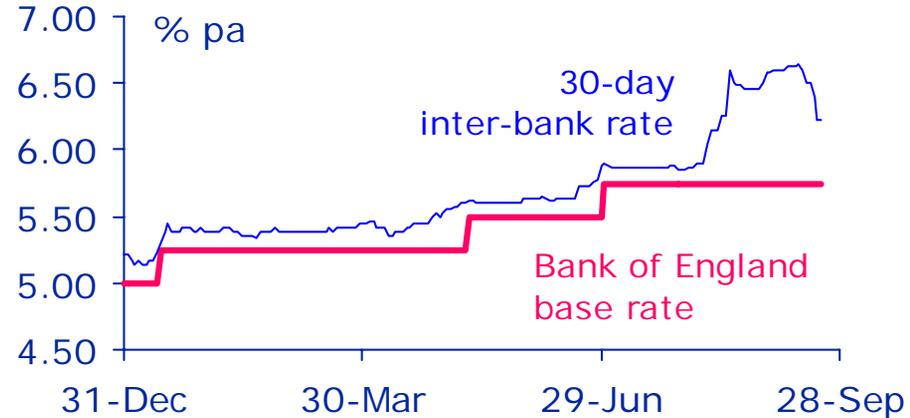


# Heightened 'risk aversion' has resulted in a *de facto* tightening of monetary conditions

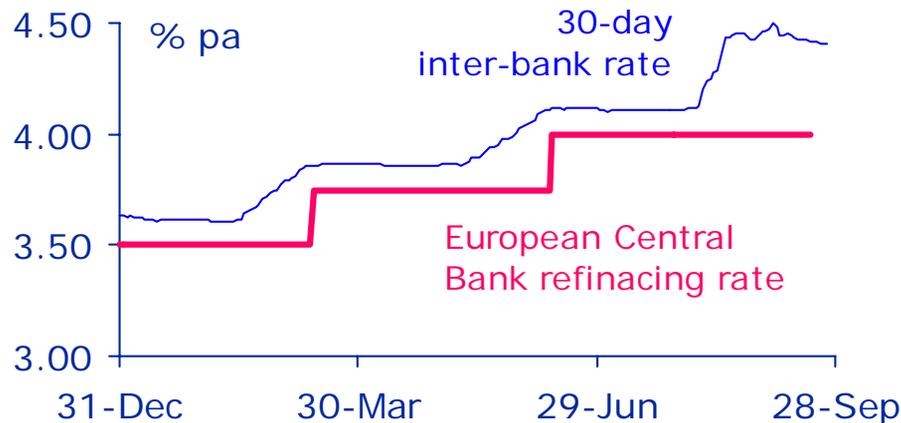
## United States



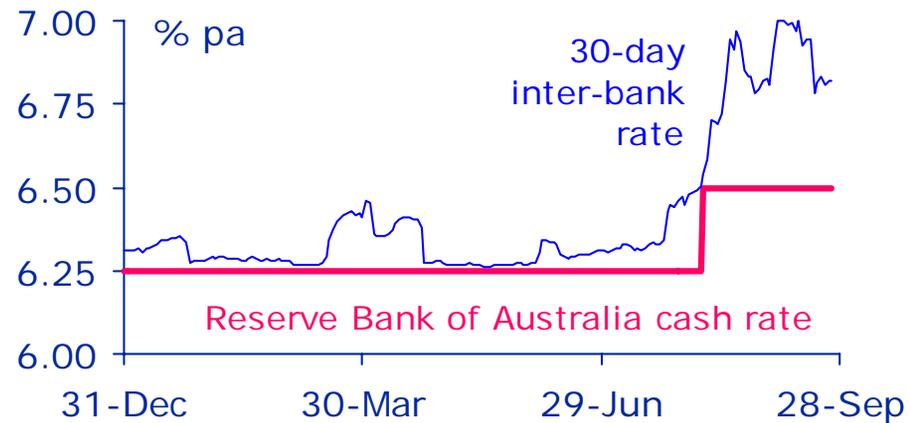
## United Kingdom



## Euro area

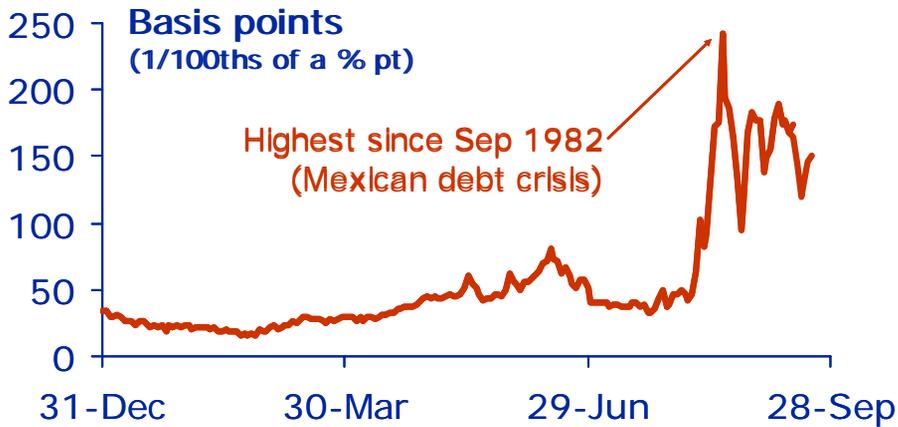


## Australia

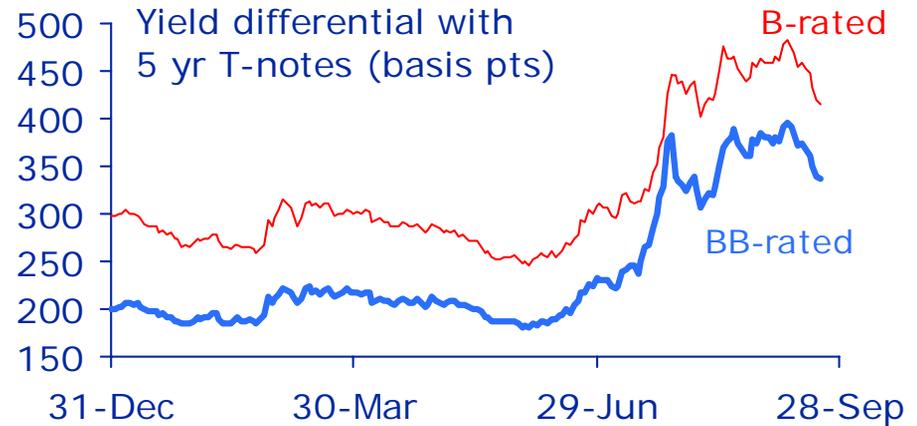


# The increase in risk aversion is also apparent in the widening in interest rate 'spreads'

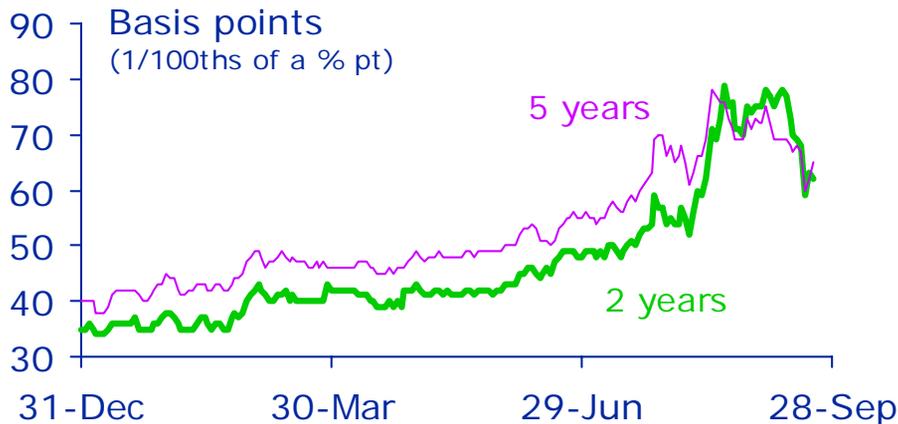
## Spread between 3-mth inter-bank rate and 3-mth US T-bills



## Spread between sub-investment grade corporate and T-bond yields



## Spread between longer-term bank ('swap') and US T-bond yields



## Australian swap spreads



# Equity markets initially fell substantially, but have recovered half of their initial losses

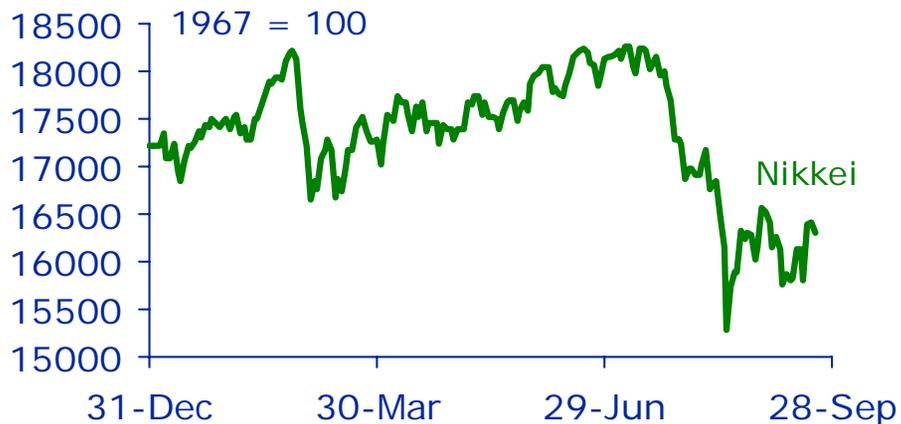
## US stock market



## UK stock market



## Japanese stock market



## Australian stock market



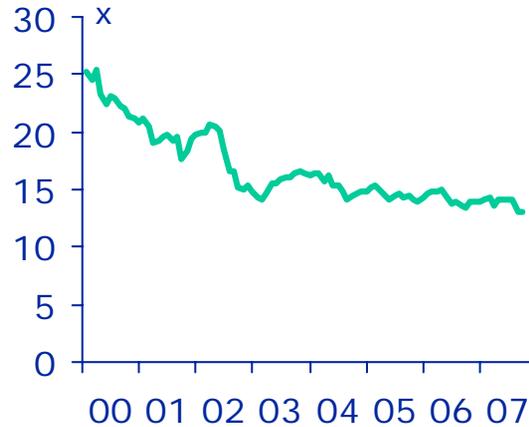
# By historical standards most equity markets (apart from China's) are not 'overvalued'

## Price-earnings (p/e) ratios

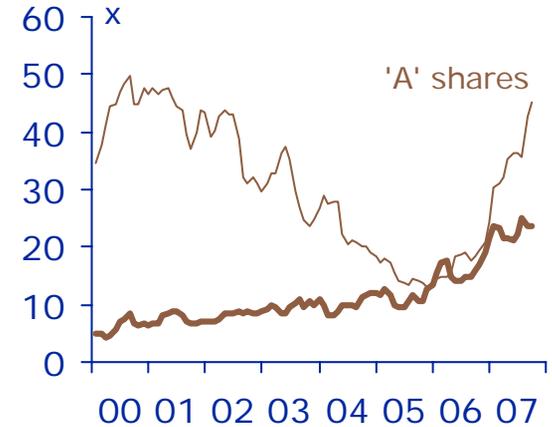
US



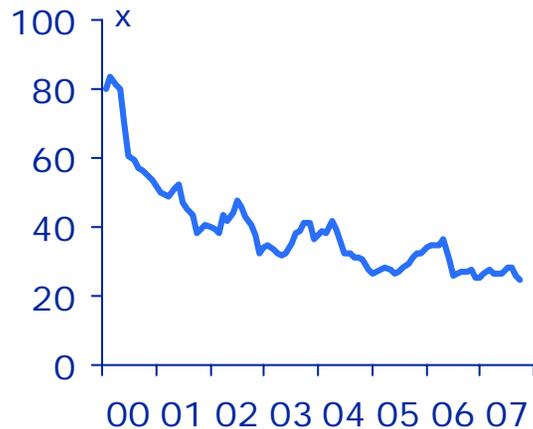
UK



China



Japan



Europe ex-UK



Australia



# Currencies have been volatile: the US\$ and A\$ have weakened, the € and ¥ have strengthened

## US dollar vs Euro



## Australian dollar vs US dollar



## Japanese yen vs US\$



## Australian dollar vs yen



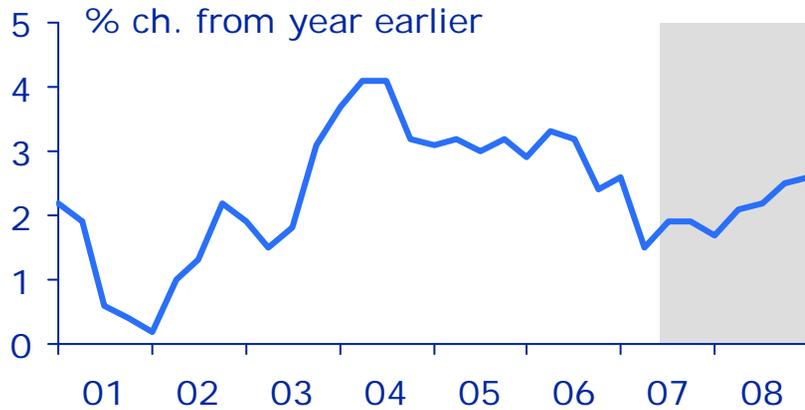
# Some other observations on the US sub-prime mortgage debacle and its consequences

- In isolation, the likely scale of losses directly attributable to sub-prime mortgage defaults ( $\frac{1}{2}$ -1% of GDP) is smaller than those arising from the late 1980s S&L crisis (2½% of GDP)
- But whereas those losses were concentrated in one sector of the financial system, the losses arising from the sub-prime mortgage meltdown have been widely dispersed
  - on the one hand this means that there have (as yet) been no significant financial institution collapses (as may well have occurred if most of the bad loans had remained on the books of those who originated them)
  - on the other hand, since no-one knows who has incurred these losses (and there has been no 'generalized confession') market participants now assume almost everyone has – leading to an erosion of trust and confidence and thus to a 'seizing up' of the credit mechanism
- Some central bankers are determined to avoid the perception that it will always 'bail out' investors who get into trouble – a charge sometimes levelled against Alan Greenspan
- But many borrowers now face tighter 'monetary conditions' even though central banks haven't tightened monetary policy – the Federal Reserve has cut US rate to offset that effect

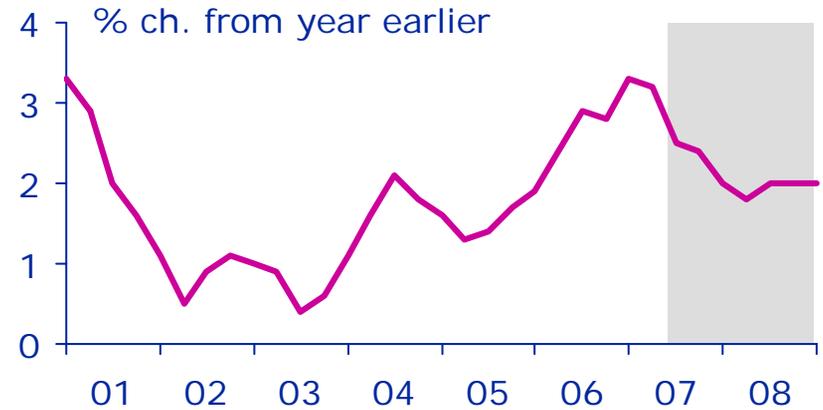
# Growth in the US and major advanced economies will slow, although outright recession is unlikely

## Real GDP growth – major industrialized economies

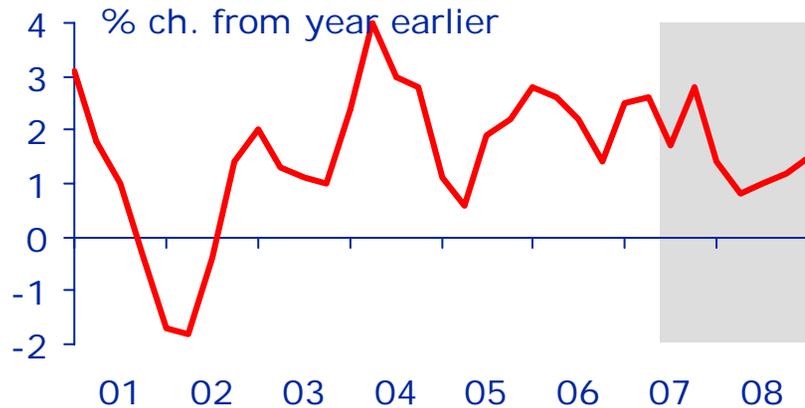
### United States



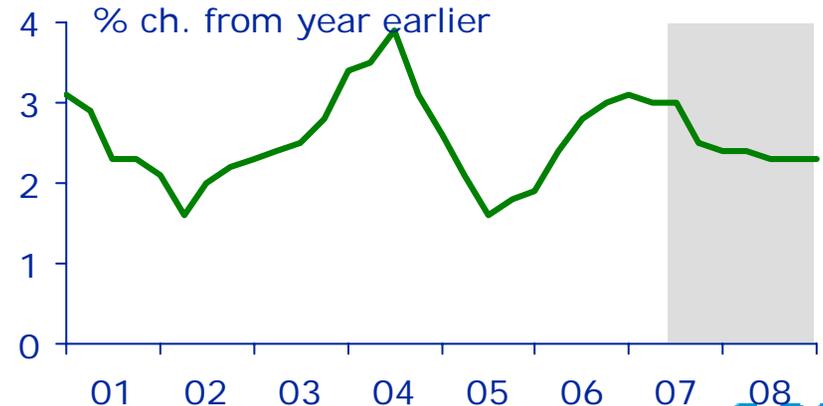
### Euro area



### Japan



### United Kingdom

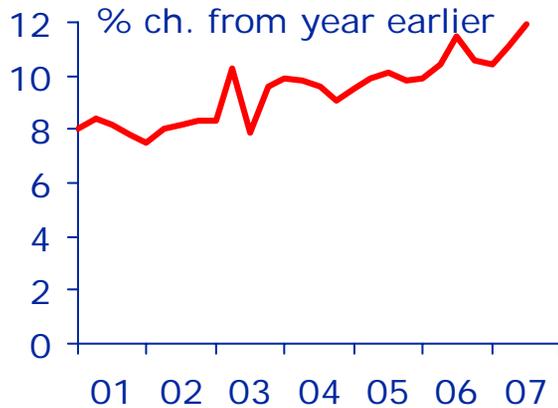


Sources: National statistical agencies; Economics@ANZ.

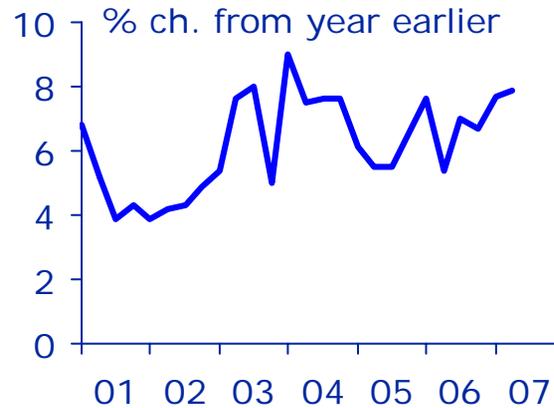
# However the major developing economies should continue to record strong growth

## Real GDP – large developing economies

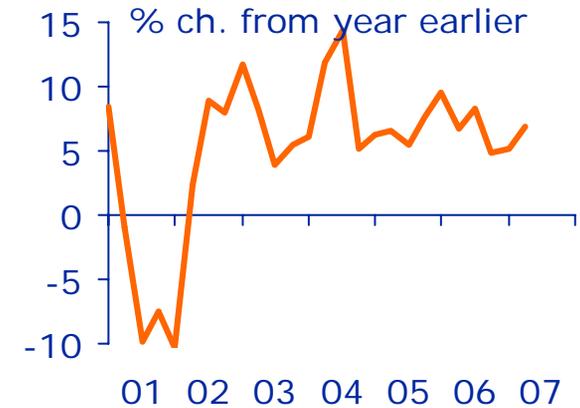
### China



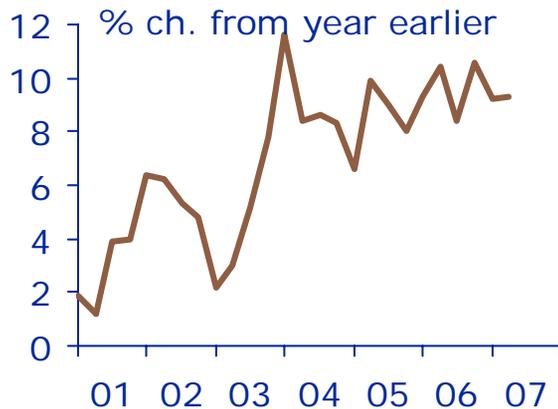
### Russia



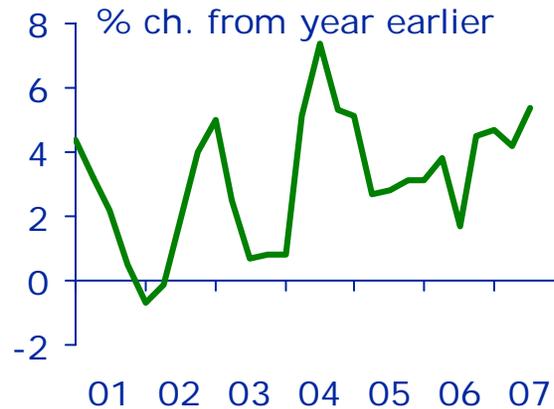
### Turkey



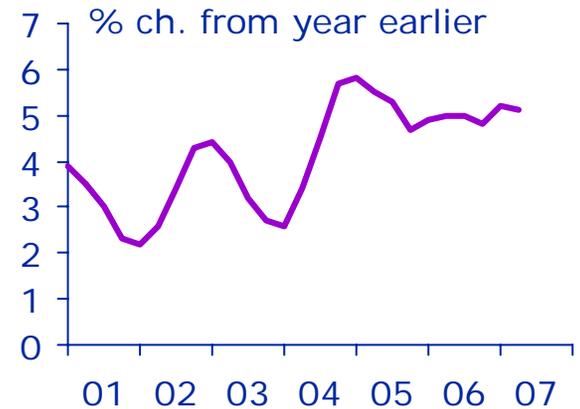
### India



### Brazil



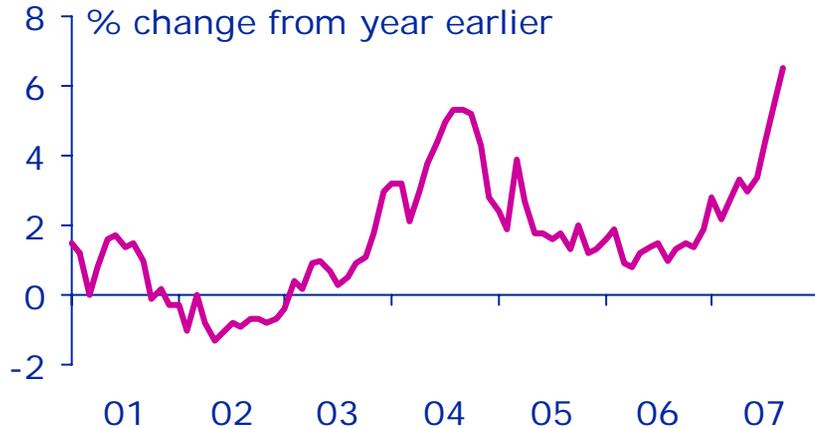
### South Africa



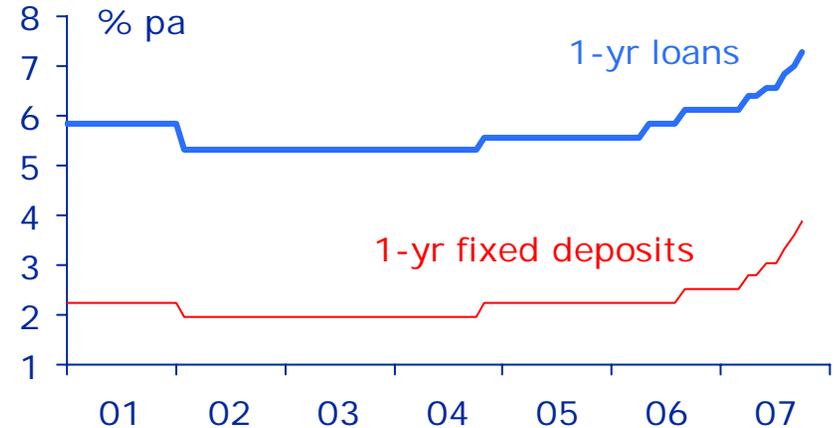
Sources: National statistical agencies; OECD; Datastream.

# China in particular is more concerned about rising inflation and 'excessive' credit growth

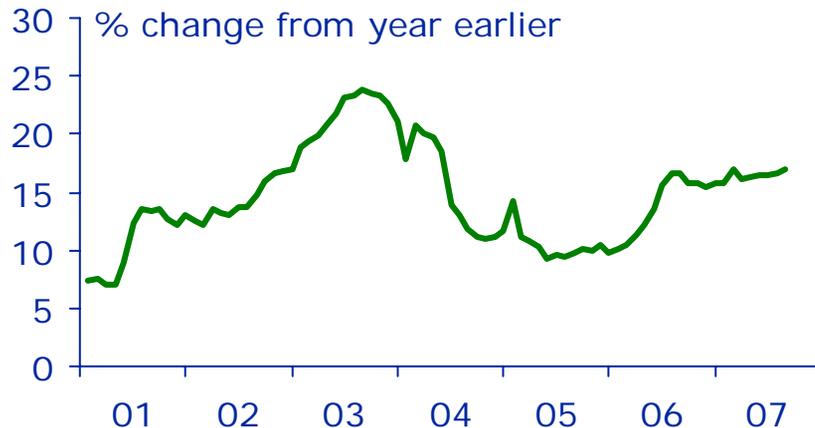
## Consumer prices



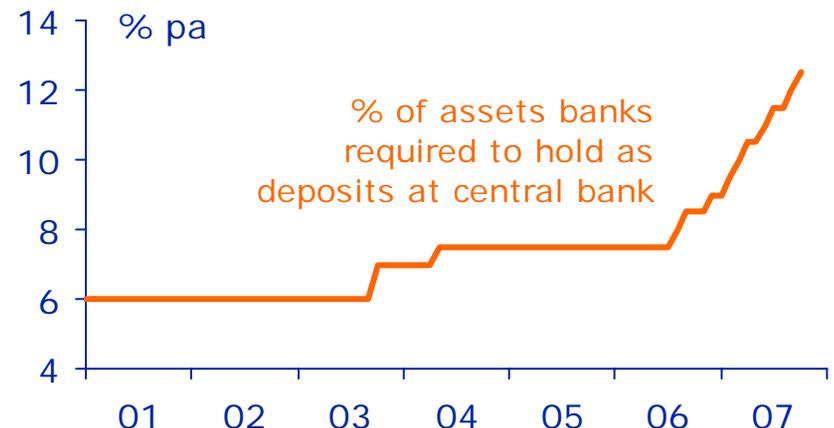
## Interest rates



## Bank lending



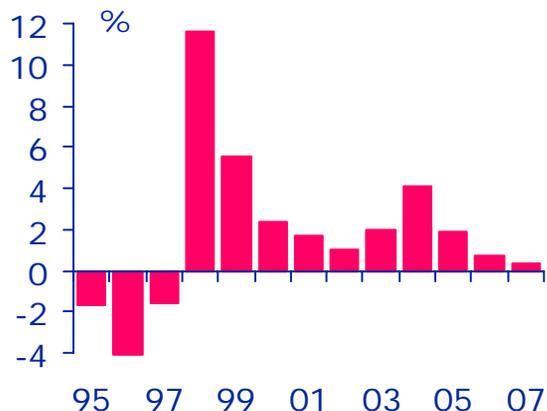
## Banks' required reserve ratio



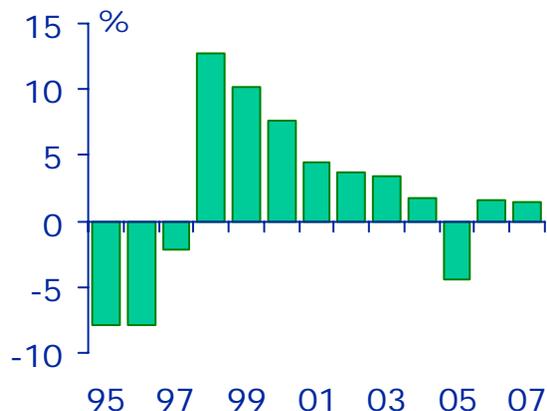
# Asian economies are now running current account surpluses, not deficits as in the mid-1990s

## Current account balances as % of GDP

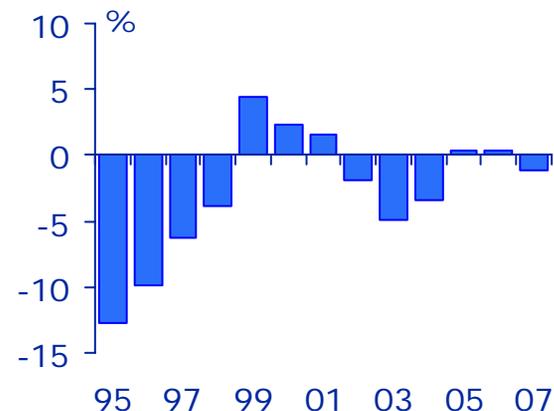
### Korea



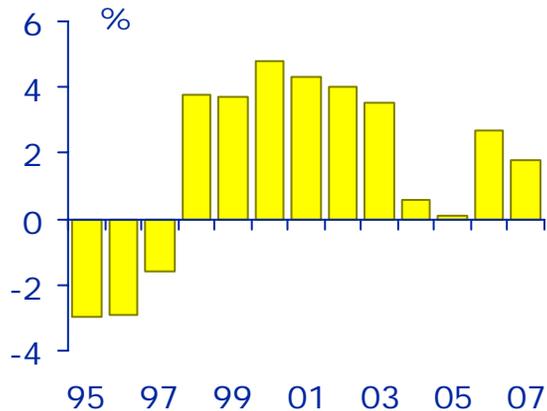
### Thailand



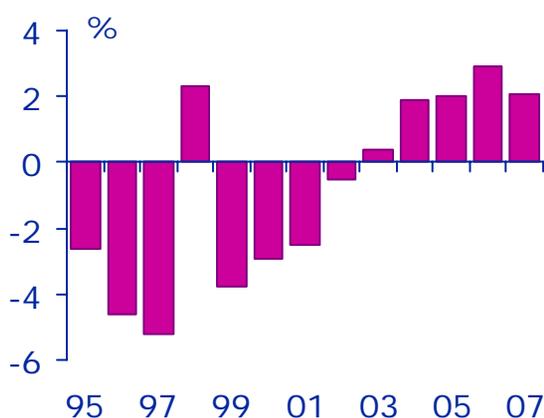
### Vietnam



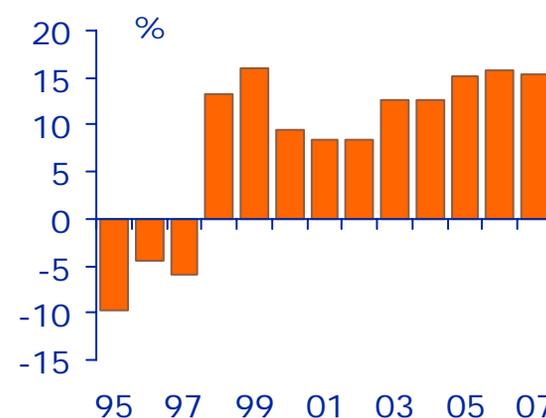
### Indonesia



### Philippines



### Malaysia

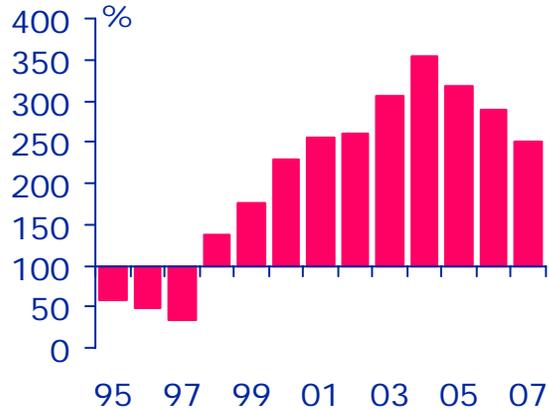


Source: IMF World Economic Outlook database (April 2007).

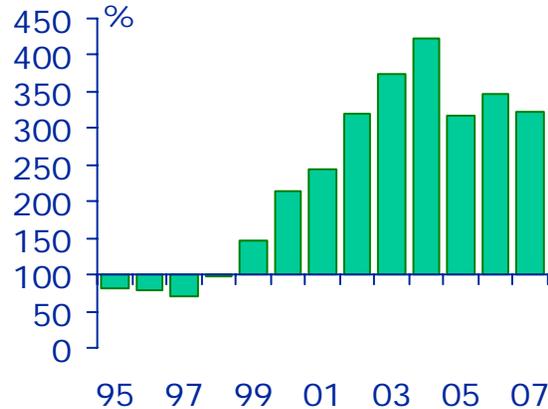
# And Asian countries have much stronger net external asset positions than in the mid-1990s

## Ratio of FX reserves to short-term foreign debt

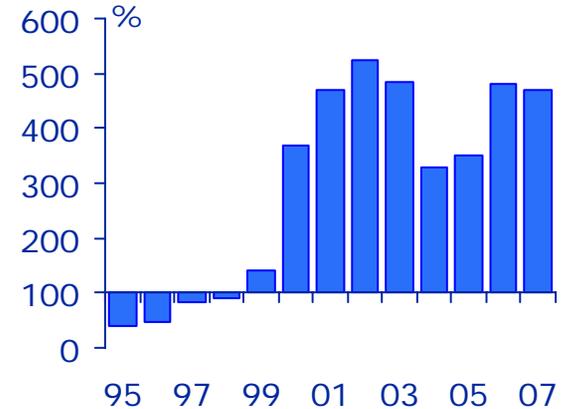
### Korea



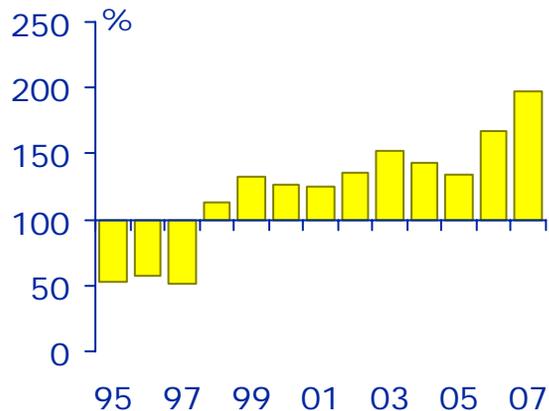
### Thailand



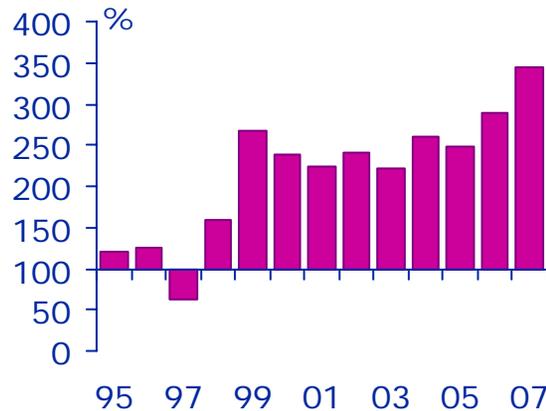
### Vietnam



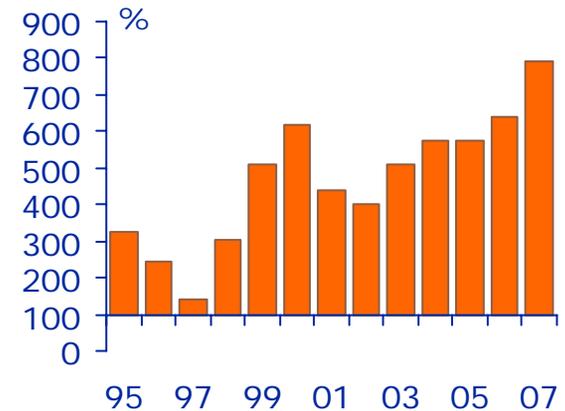
### Indonesia



### Philippines



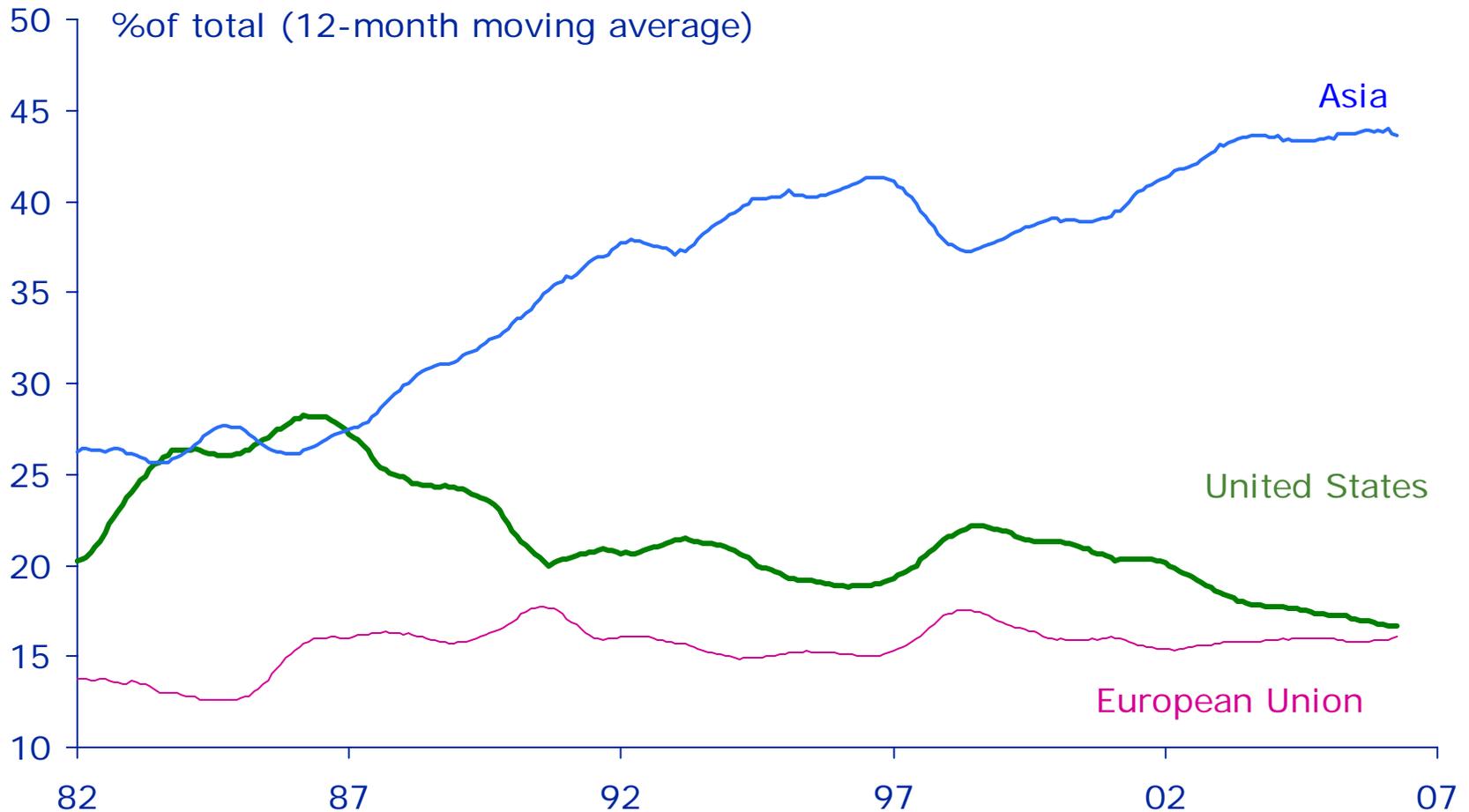
### Malaysia



Sources: Economist Intelligence Unit; Economics@ANZ

# Asia is becoming less dependent on the US as an export market

## Destination of Asian merchandise exports



Source: IMF Direction of Trade Statistics;  
Economics@ANZ.

# Importantly however global growth is now being driven by developing, not industrialized, countries

## Advanced economies



## Developing economies

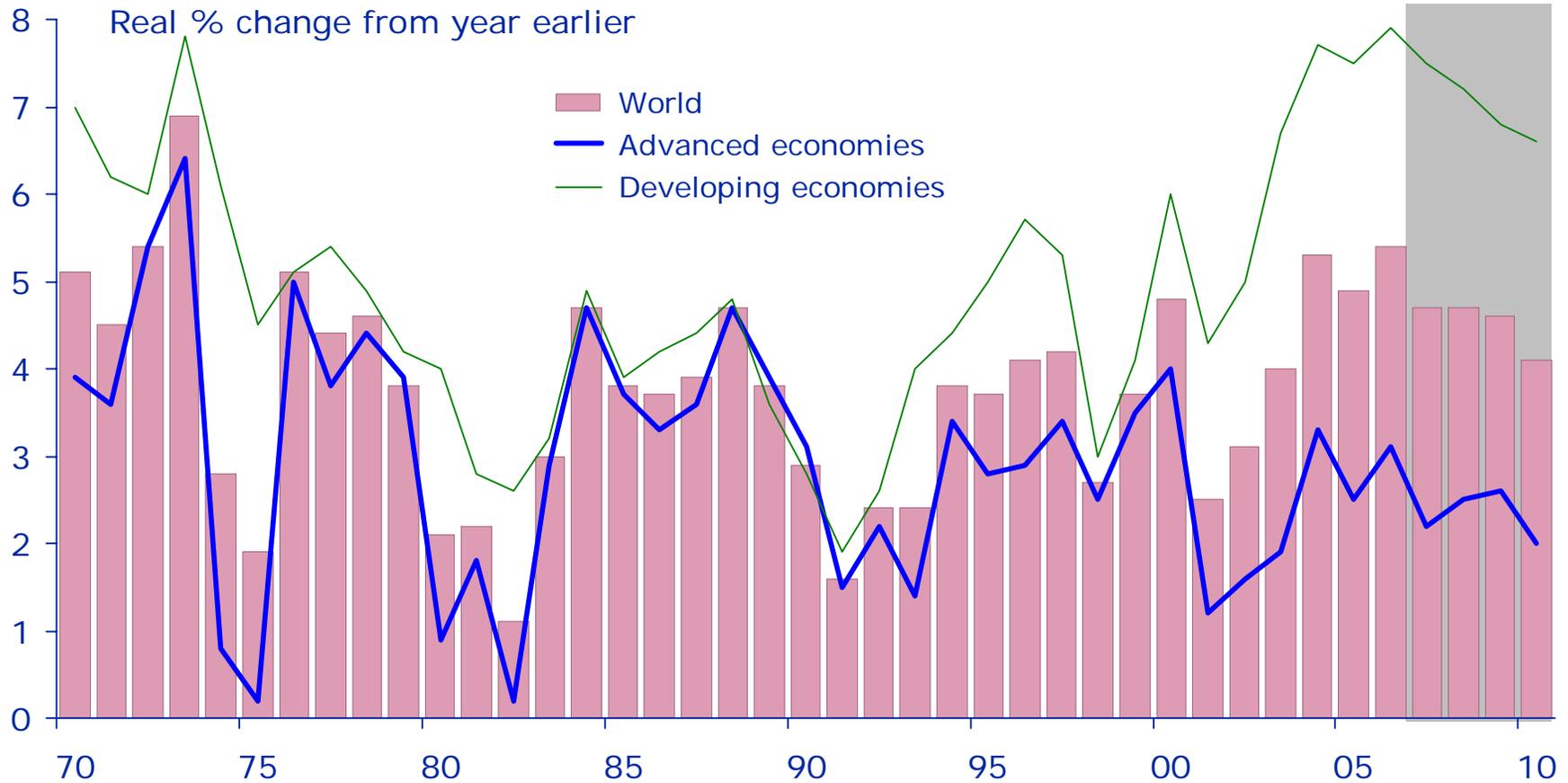


'Advanced' economies comprise the US, Western Europe, Japan, Canada, Australia, New Zealand, Korea, Taiwan, Hong Kong, Singapore and Israel.

Sources: IMF, *World Economic Outlook*; Economics@ANZ.

# Although global growth may slow a little, by historical standards it remains very solid

## Global economic growth

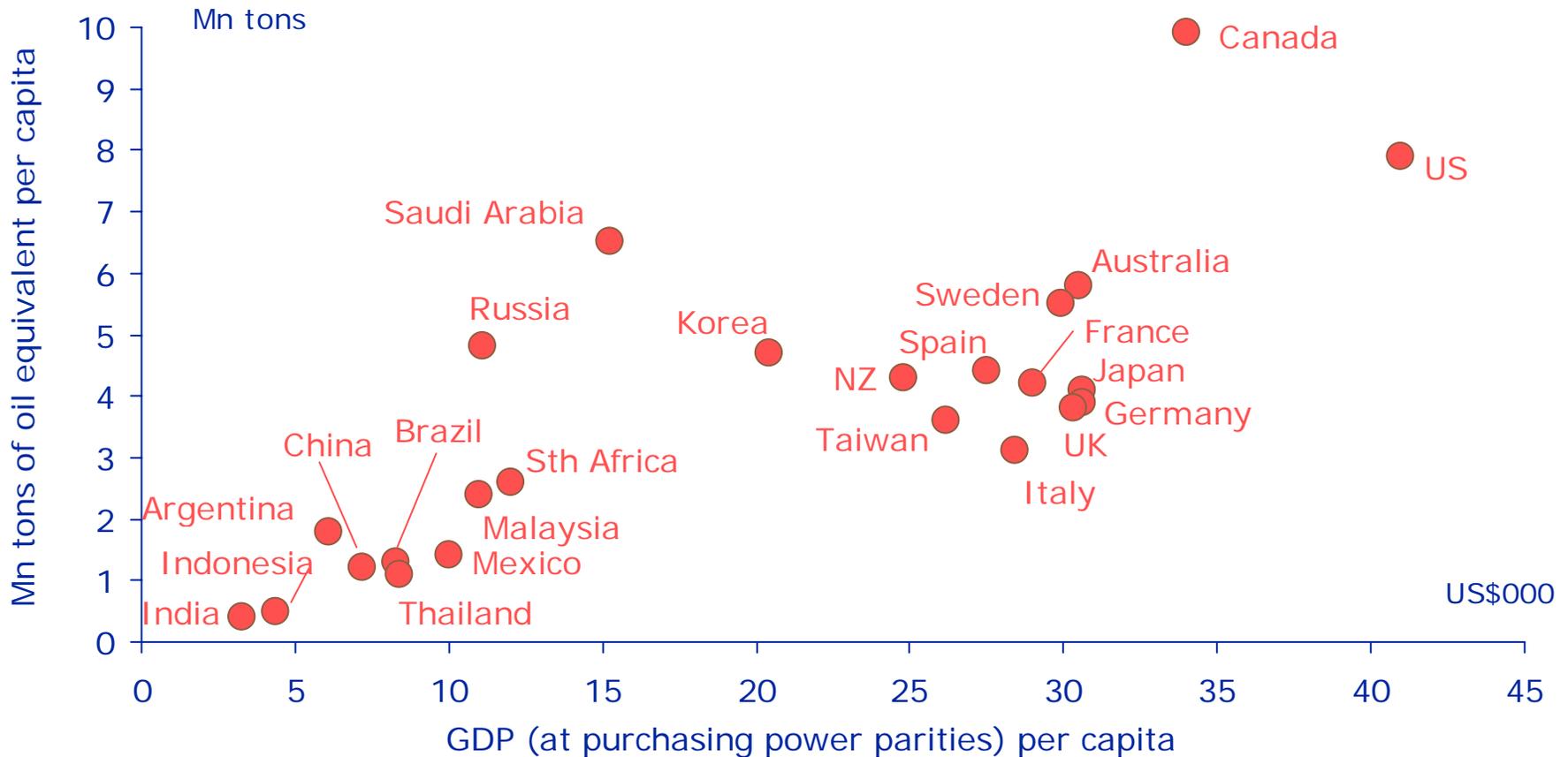


Note: GDP is measured in US\$ at purchasing power parities.

Source: IMF; Economics@ANZ.

# Developing country energy consumption will rise faster than incomes for the next few decades

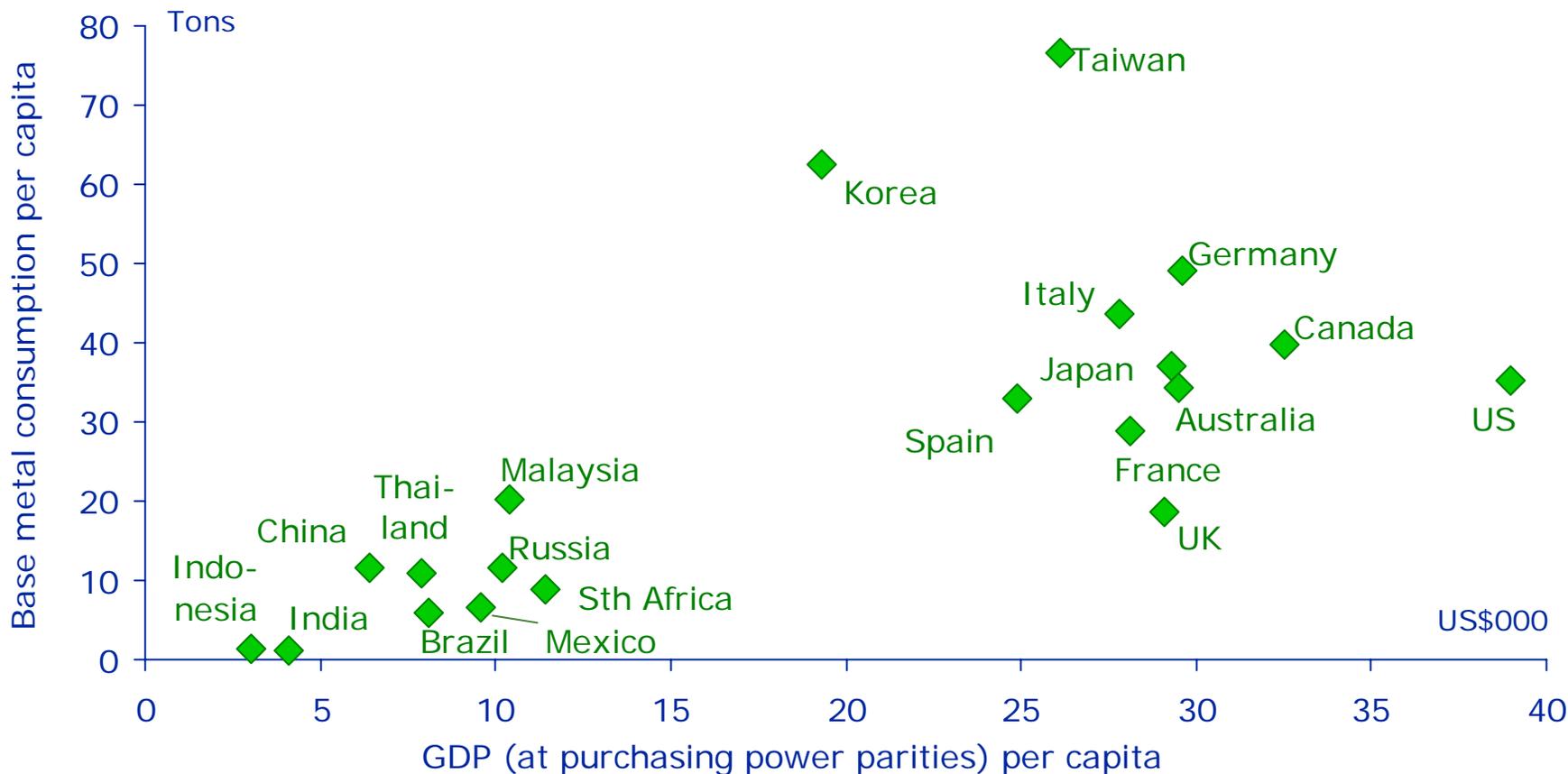
## Primary energy consumption and GDP per capita, 2005



Sources: BP Statistical Review of World Energy 2005; IMF World Economic Outlook September 2006; Economics@ANZ.

# The 'metal intensity' of developing country growth is likely to rise sharply

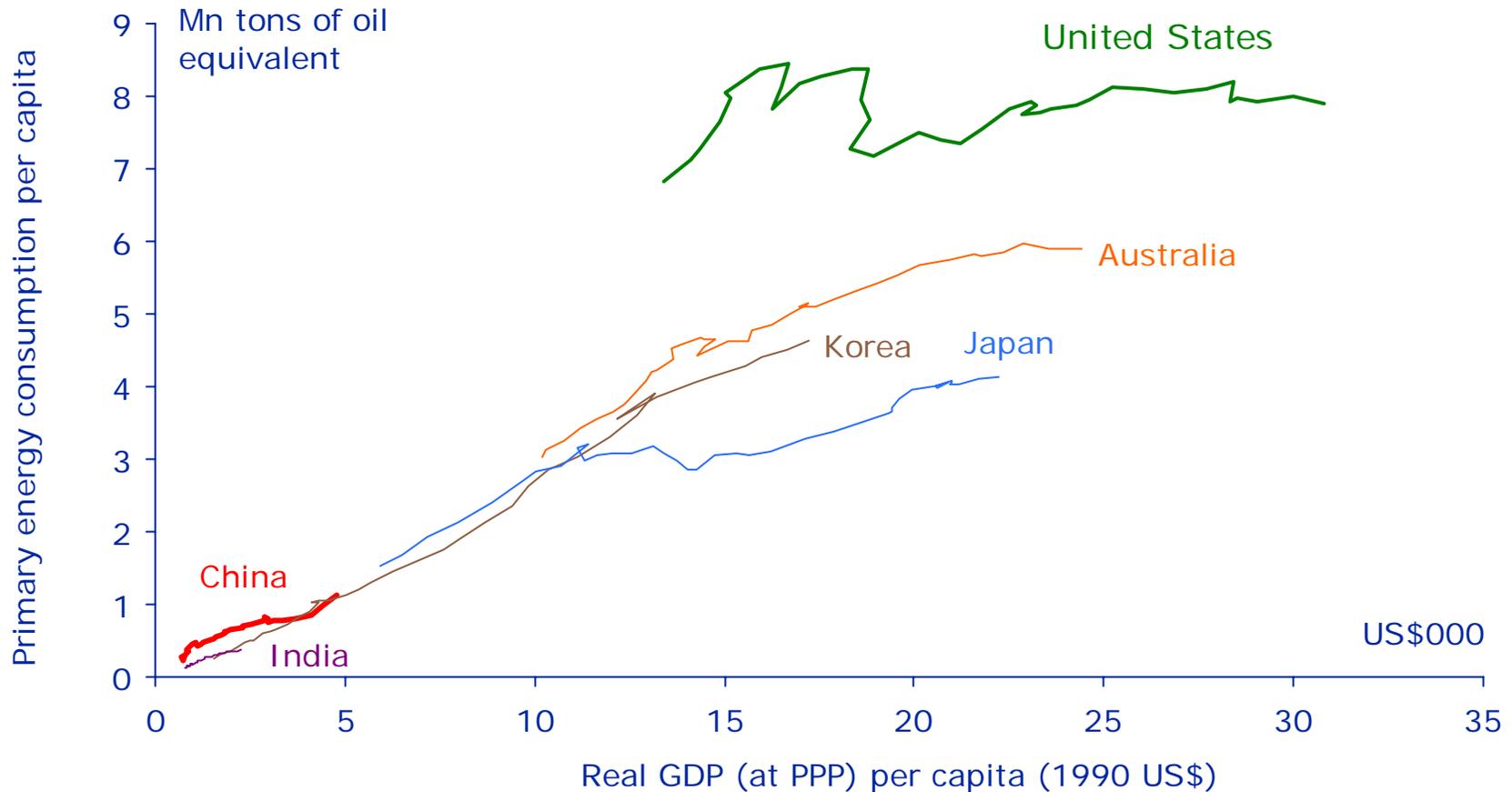
## Base metal consumption and GDP per capita, 2004



Sources: IMF World Economic Outlook September 2006; Economics@ANZ.

# Primary energy consumption in China, India etc will thus rise substantially

## Primary energy consumption and GDP per capita, 1965-2005

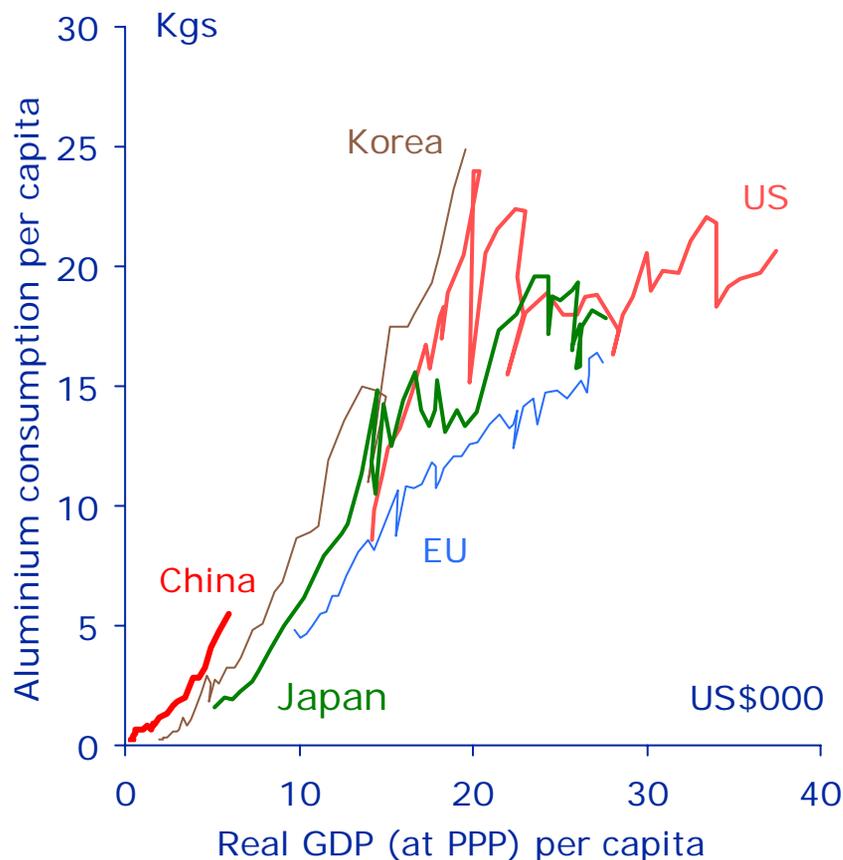


Sources: Groningen Growth and Development Centre *Total Economy Database*; BP *Statistical Review of World Energy* (2006); Economics@ANZ.

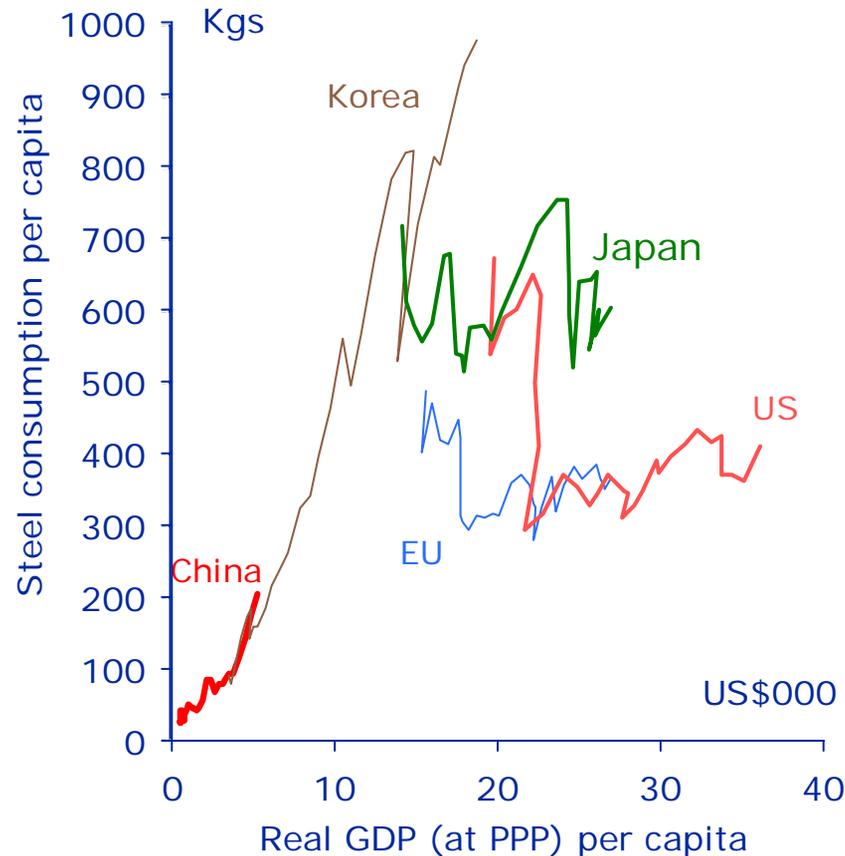
# Metal demand from China (and other emerging markets) is likely to continue to grow rapidly

## Metal consumption and GDP per capita, 1965-2005

### Aluminium



### Steel



Sources: IMF World Economic Outlook September 2006;  
(Figure 5.7); Economics@ANZ.

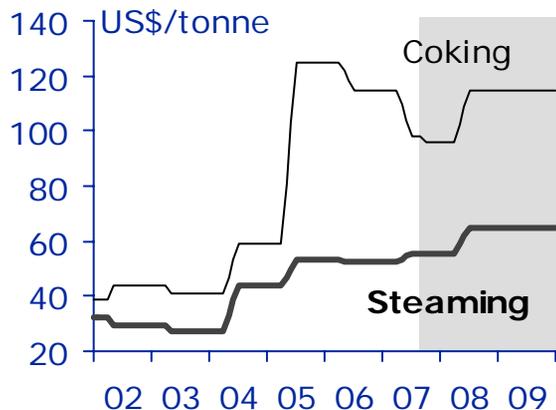
# Global supply and demand of most minerals and energy coming into better balance

	Demand (% pa)		Supply (% pa)	
	2001-2006	2007-2012	2001-2006	2007-2012
Steaming coal	3.6	3¾	10.3	4½
Coking coal	5.0	3	5.0	3
Iron ore <sup>§</sup>	11.2	4½	10.3	4½
Aluminium	7.6	6½	6.8	7
Copper	3.1	4½	2.1	4¼
Nickel	4.8	4½	3.1	5½
Zinc	4.4	4	3.0	4¾
Crude oil	1.7	1¾	1.7	1¾
Uranium	6.0	2	10.4	9
Gold	-0.2	-1¾	-5.6	3

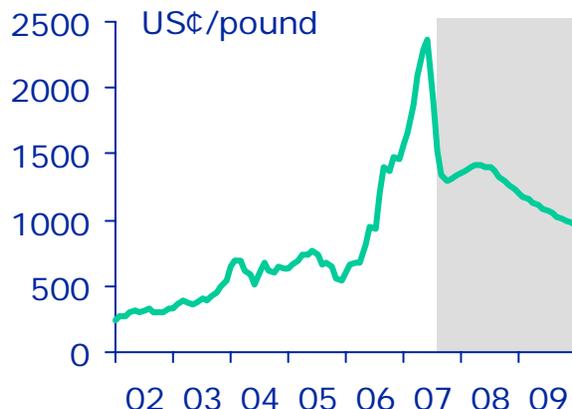
<sup>§</sup> Trade. Sources: ABARE; AME; Morgan Stanley; Economics@ ANZ.

# Mineral and energy commodity prices likely to remain at elevated levels for several more years

## Coal



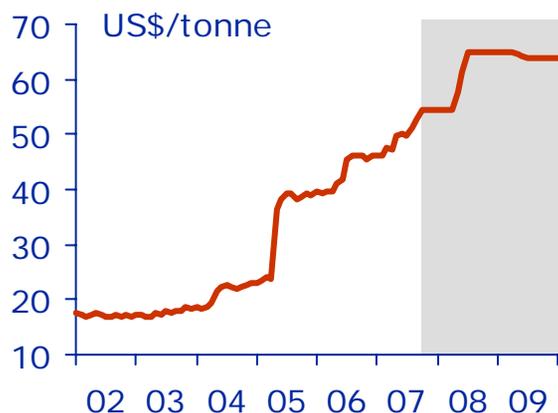
## Nickel



## Gold



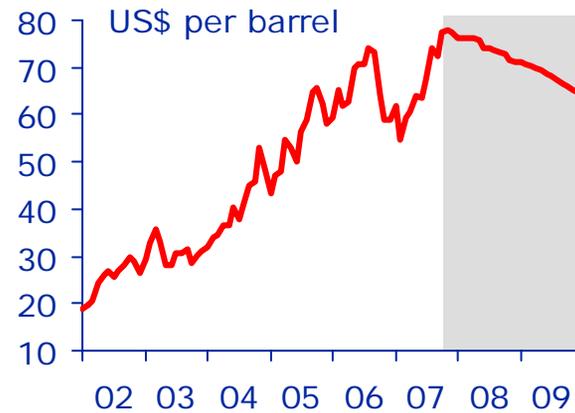
## Iron ore



## Aluminium



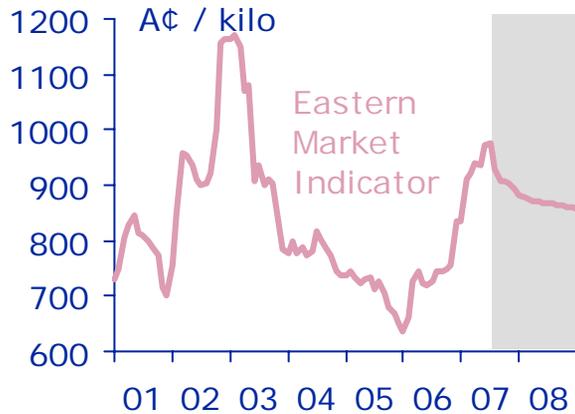
## Oil



Source: Datastream; Bloomberg; Economics@ANZ.

# Most agricultural commodities prices are also likely to remain higher than earlier in the decade

## Wool



## Wheat



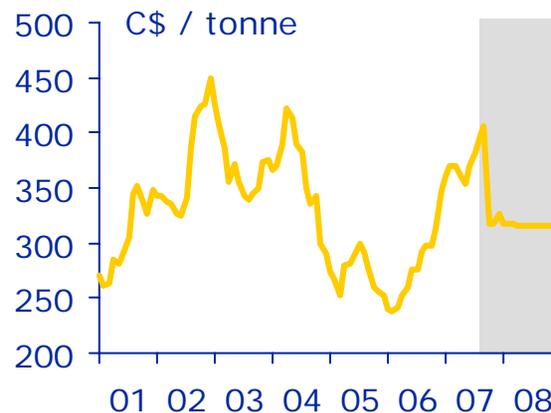
## Dairy



## Beef



## Canola



## Rice



Source: Reserve Bank of Australia; Datastream; Economics@ANZ.

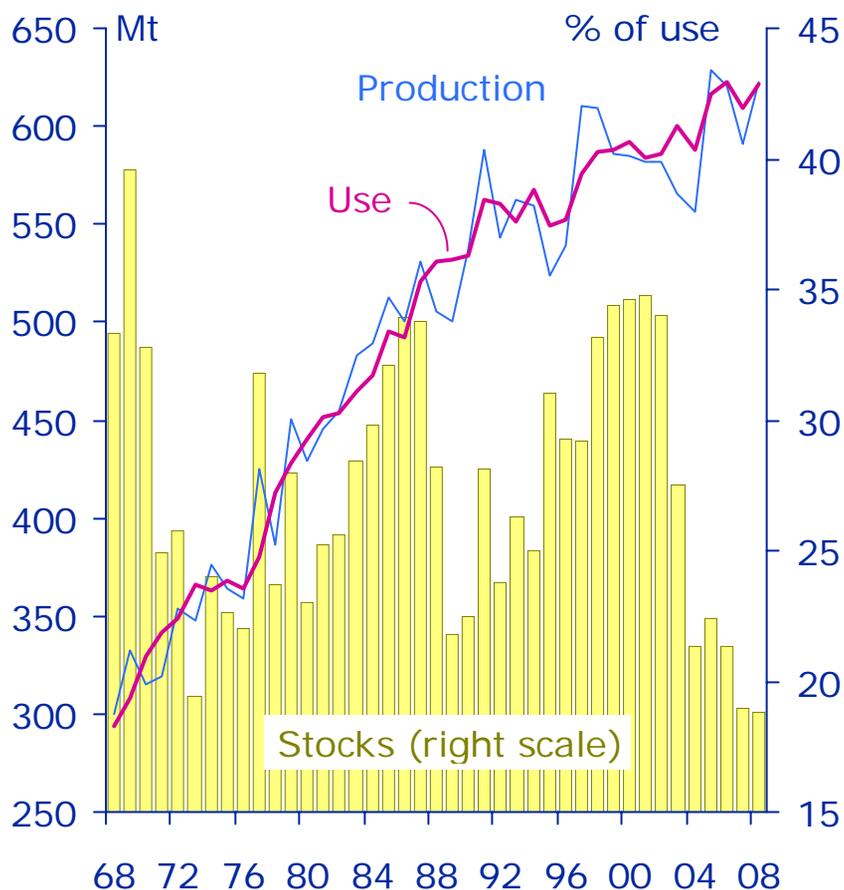
# Grain prices are being pushed up by a range of international factors

- World grain production has been reduced by adverse weather conditions in most major producing countries – including Australia, Argentina, Canada, China and Europe
- Demand has been boosted by rapid growth in use of grain for the production of ethanol and as animal feed
  - the US is ramping up corn-based ethanol production (even though it is a very inefficient form of energy), ostensibly in order to enhance 'energy security', using a mixture of subsidies and trade measures
  - US ethanol production capacity has trebled (to 23bn L pa) over the past six years, and capacity expansions/additions currently under way will double it again (to 48bn L pa)
  - despite US corn production now being at its highest level since 1944, high corn prices are prompting livestock producers to use other grains for feed, including wheat
  - demand for feed grains is also being boosted by increasing meat consumption, especially in Asia
- As a result of developments on both the demand and supply side of global grain markets, world stocks are at their lowest levels since the early 1970s
- When stocks are very low, prices respond much more sharply to changes in demand or supply

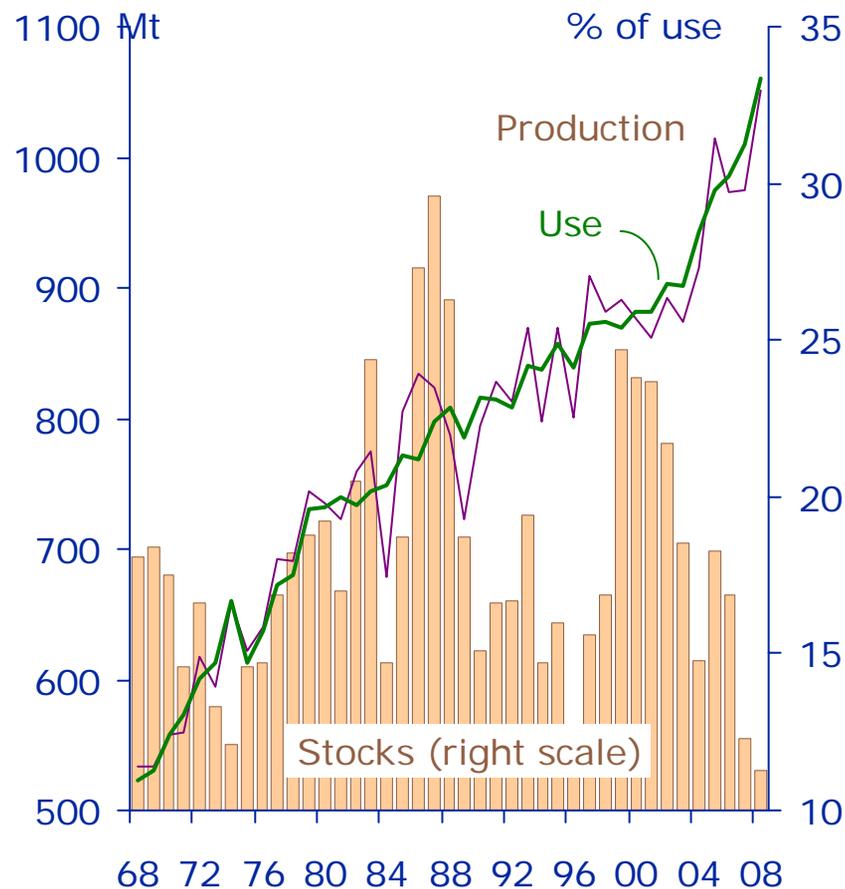
# High grain prices reflect rising demand and extremely low stock levels

## Global grain production, consumption and stocks

### Wheat



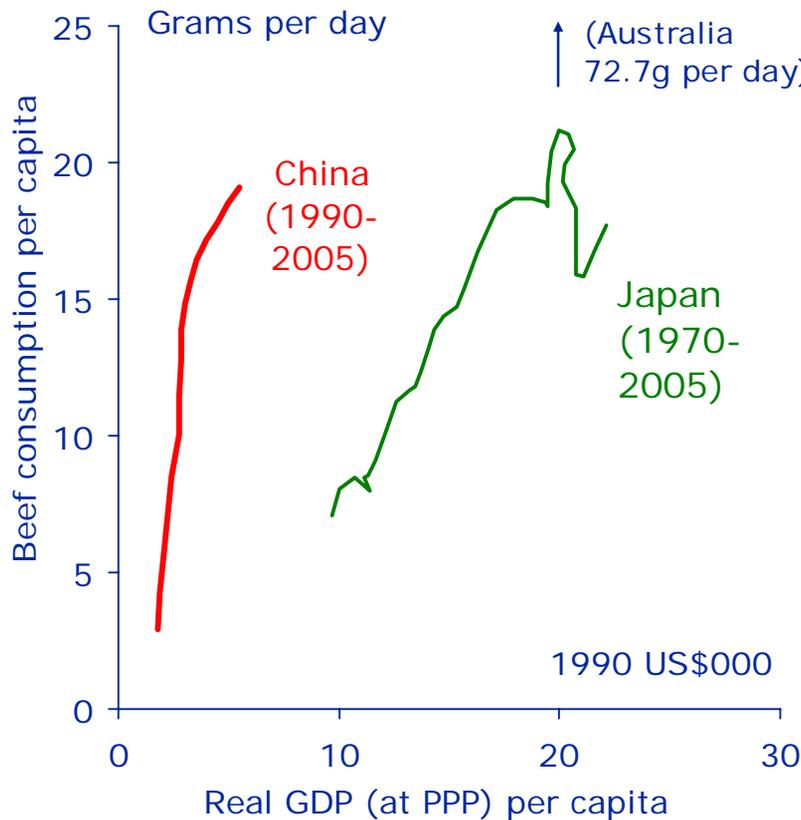
### Corn



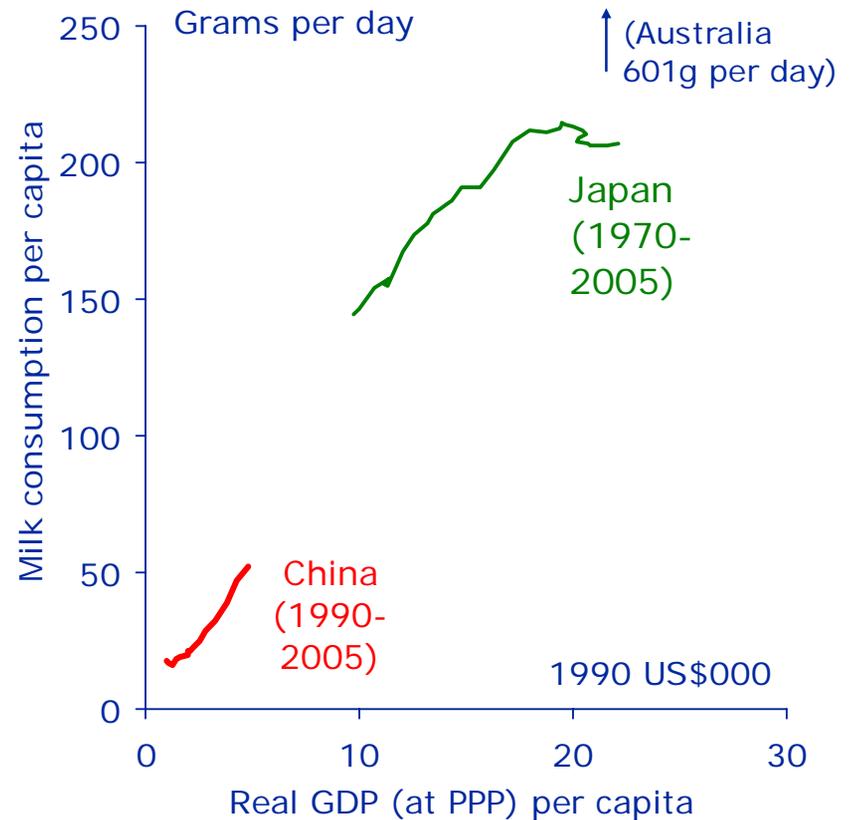
Sources: ABARE; US DoA; Economics@ANZ.

# Chinese already eating as much beef per head as Japanese, and milk consumption is also rising

## Beef consumption and GDP per capita



## Milk consumption and GDP per capita

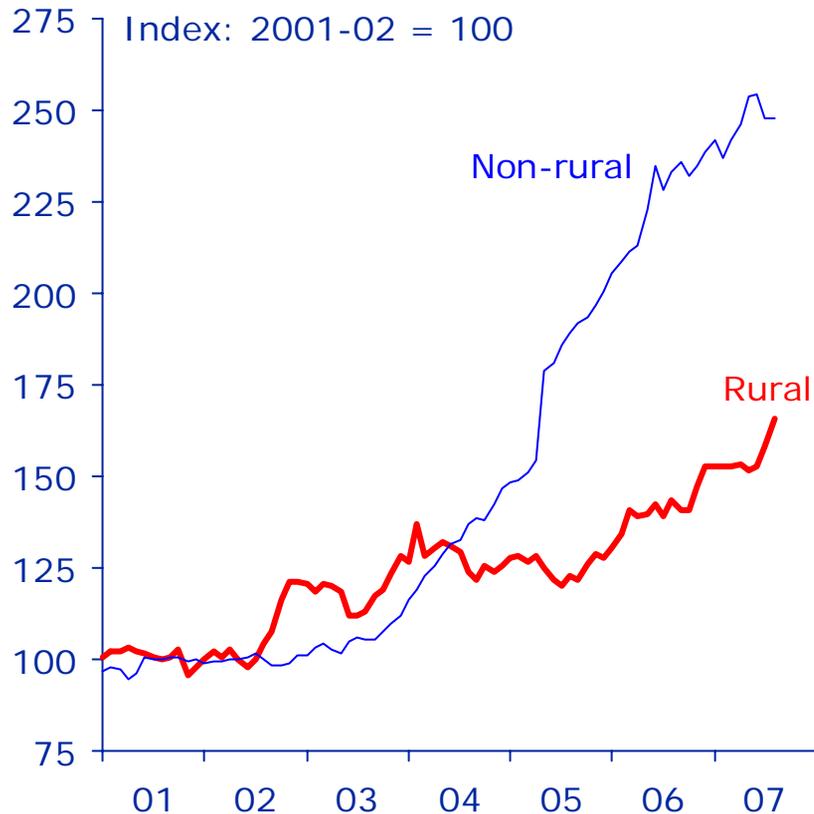


Sources: UN Food & Agricultural Organization; Groningen Growth and Development Centre; Economics@ANZ.

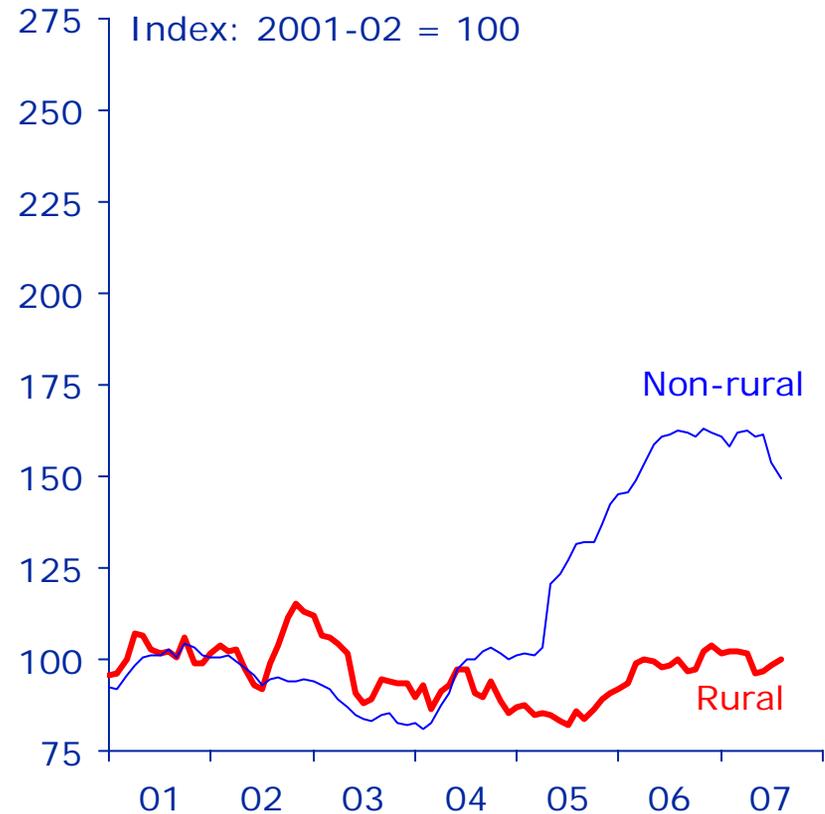
# For Australian farmers, the rising A\$ has largely wiped out gains in world commodity prices

## Australian rural and non-rural commodity prices

### In US dollars



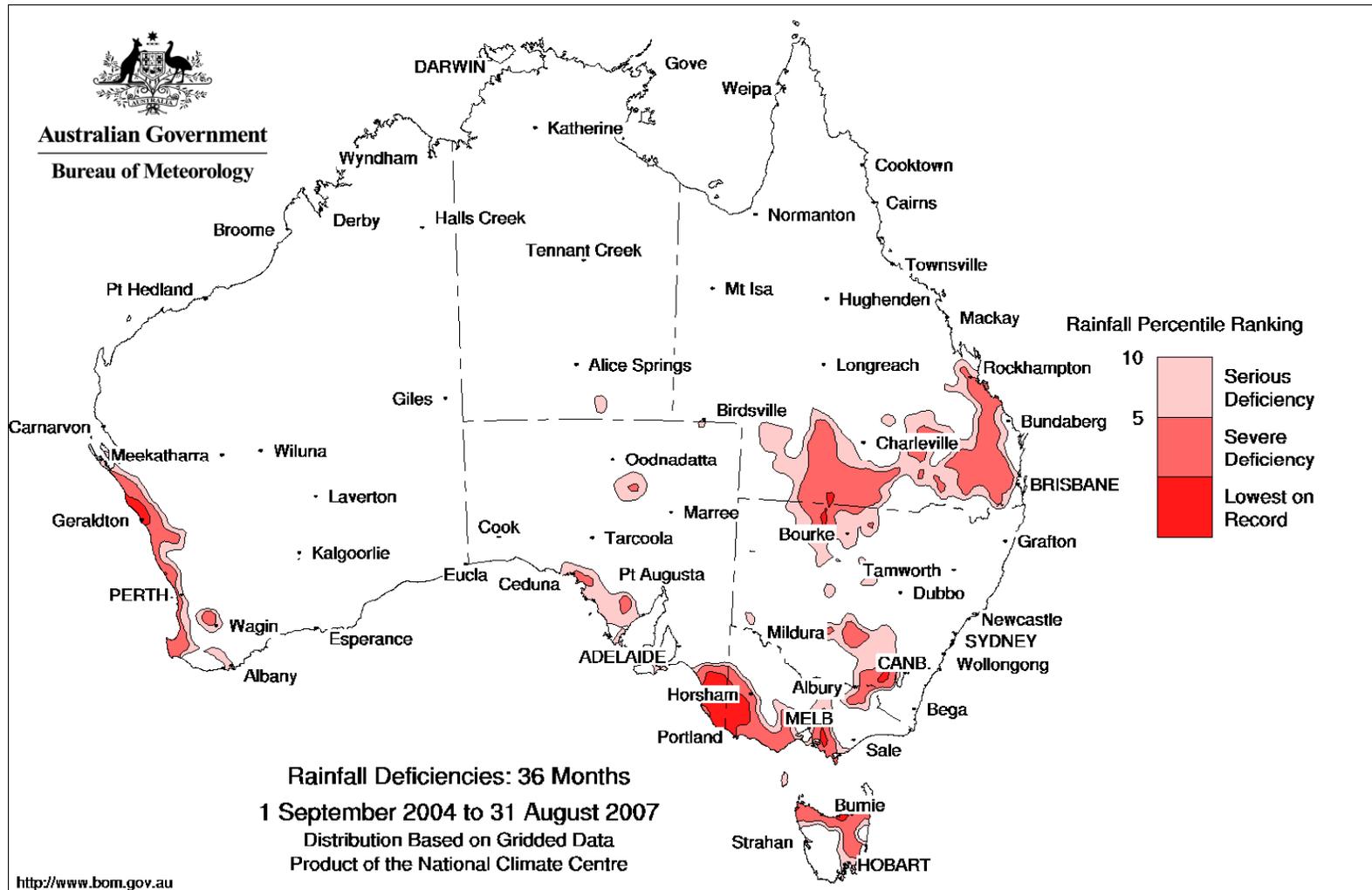
### In Australian dollars



Source: Reserve Bank of Australia.

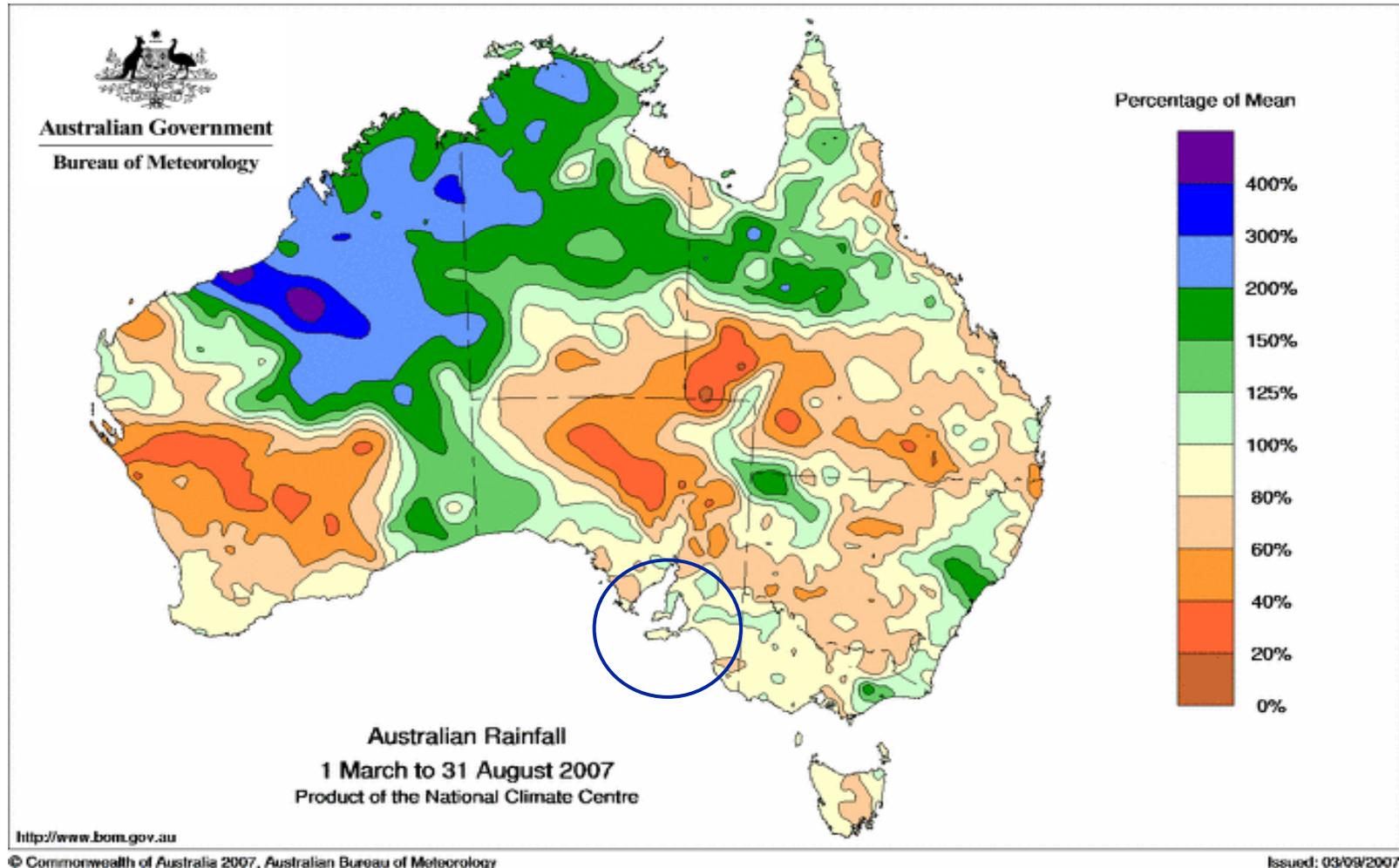
# Most of Australia's grain-producing areas have experienced drought for three years

## Rainfall deficiencies over the past three years



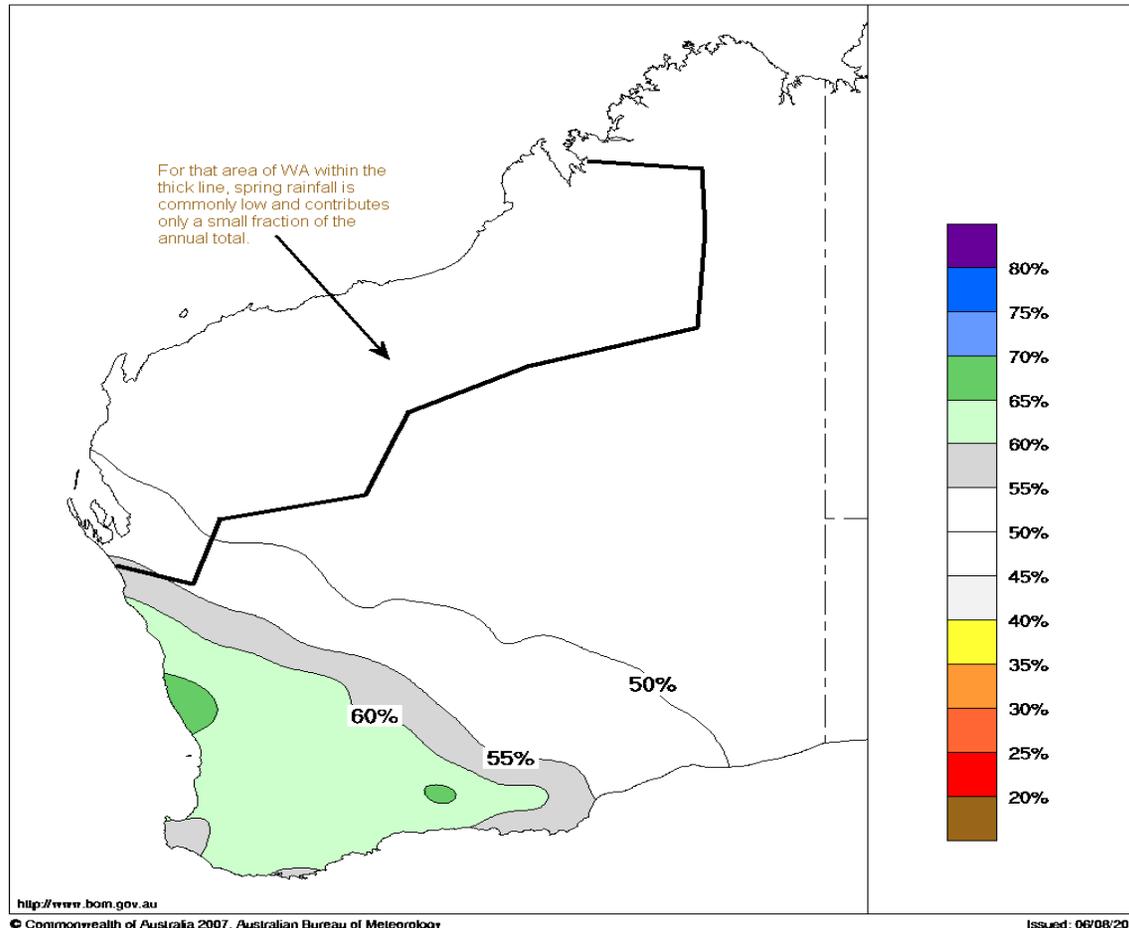
# Drought is persisting across most of Australia's major agricultural areas

Past six months' rainfall as a pc of long-term average



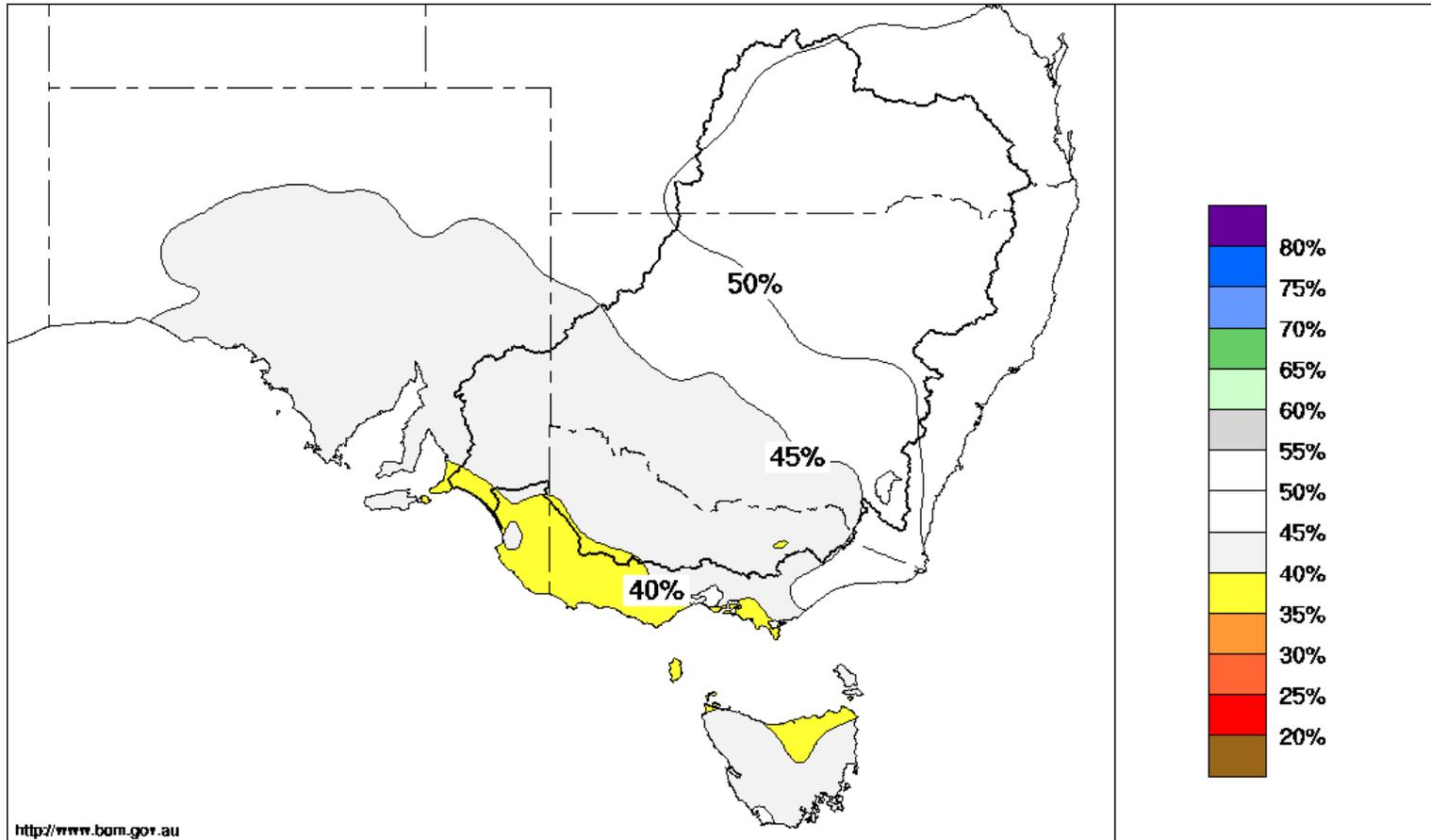
# Weather Bureau says there's a 55-60% chance of above-average rainfall this spring

## Probability of exceeding the median rainfall September to November 2007



# Weather Bureau says there's a less than 50% chance of above-average rainfall this spring

Probability of exceeding the median rainfall  
September to November 2007



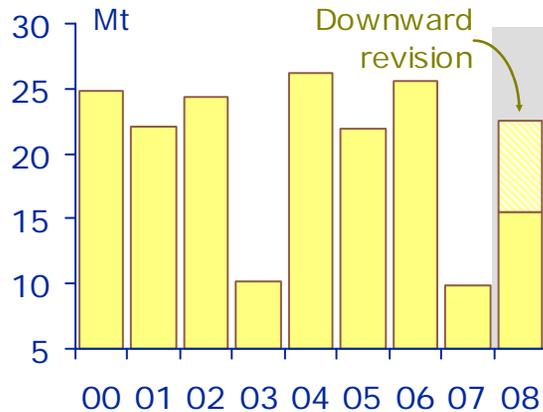
© Commonwealth of Australia 2007, Australian Bureau of Meteorology

Issued: 06/08/2007

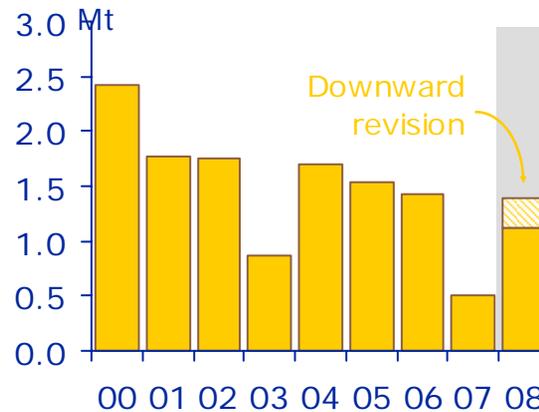
# The volume of agricultural production is unlikely to rebound this year as previously expected

## Australian production of agricultural commodities

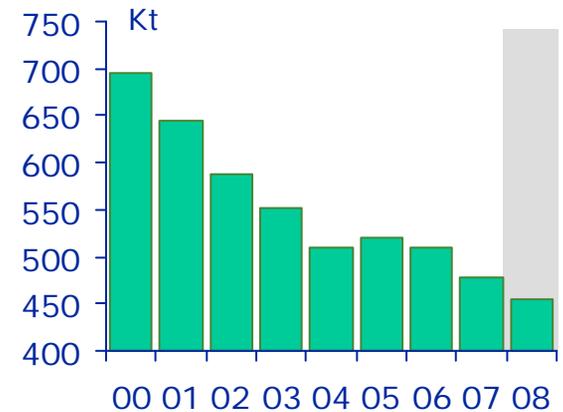
### Wheat



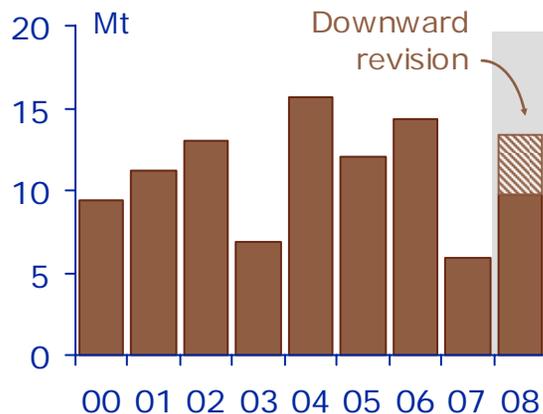
### Canola



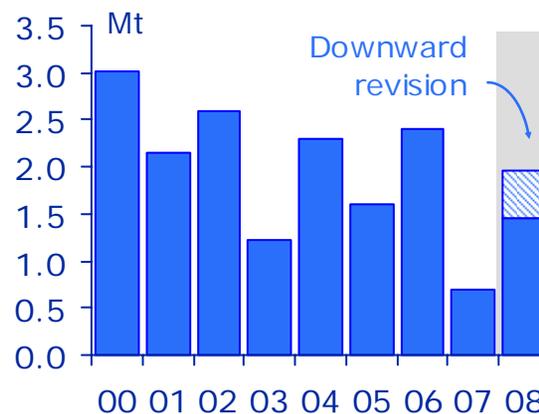
### Wool



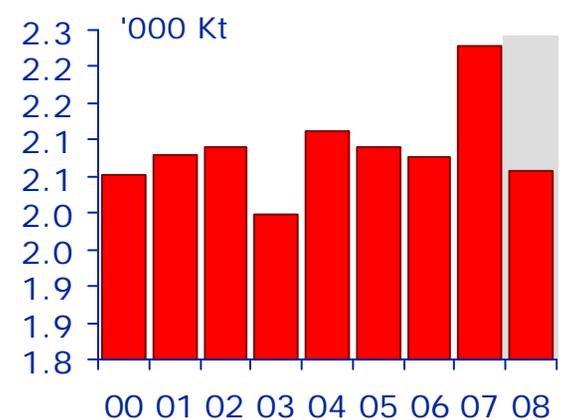
### Coarse grains



### Pulses



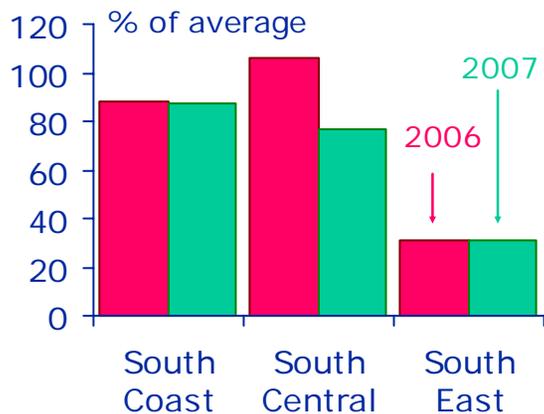
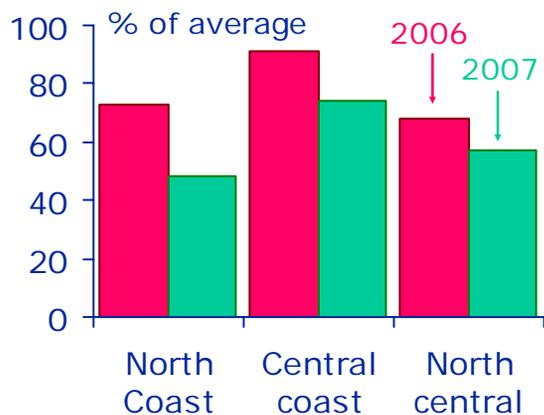
### Beef



Sources: ABARE (revisions from Crop Report published 18 September 2007).

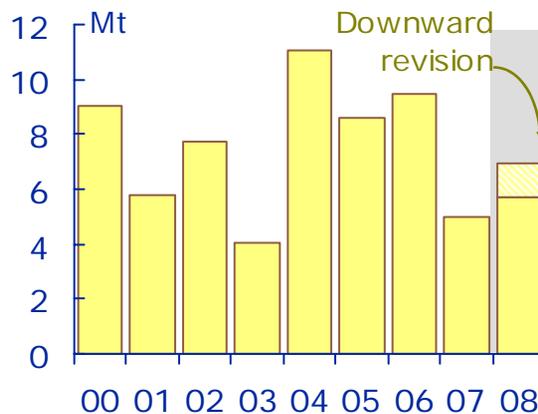
# Dry conditions in principal WA cropping districts have seen production forecasts revised down

## May-August rainfalls in principal WA cropping districts

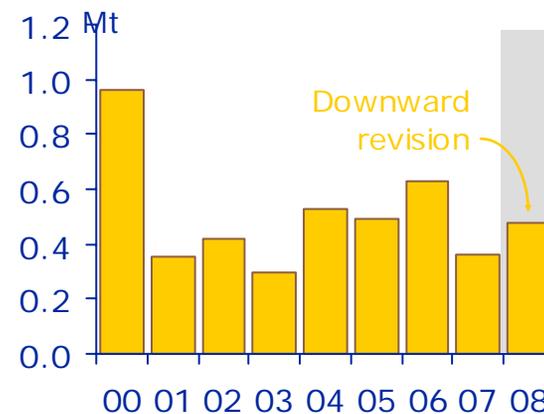


## Western Australia crop production

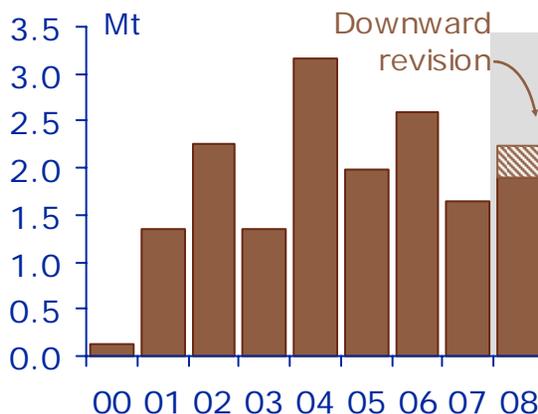
### Wheat



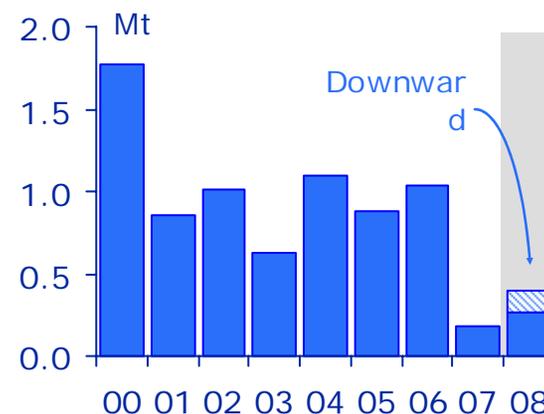
### Canola



### Barley



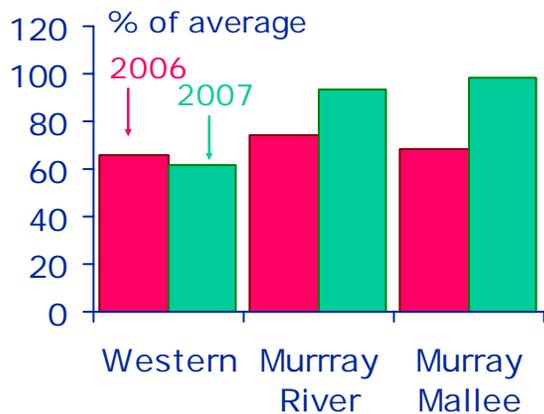
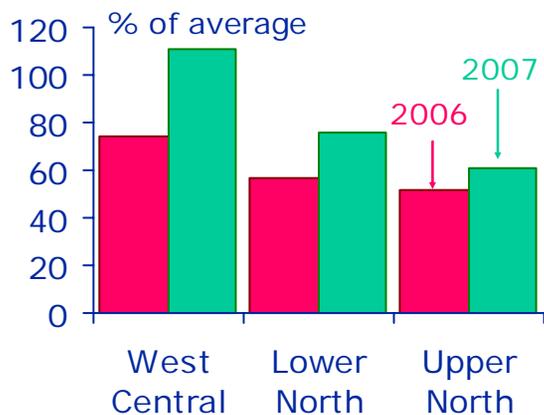
### Pulses



Sources: ABARE (revisions from Crop Report published 18 September 2007).

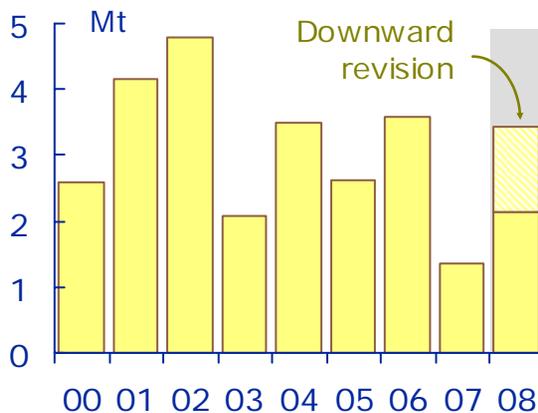
# Dry conditions in principal SA cropping districts have seen production forecasts revised down

## May-August rainfalls in principal SA cropping districts

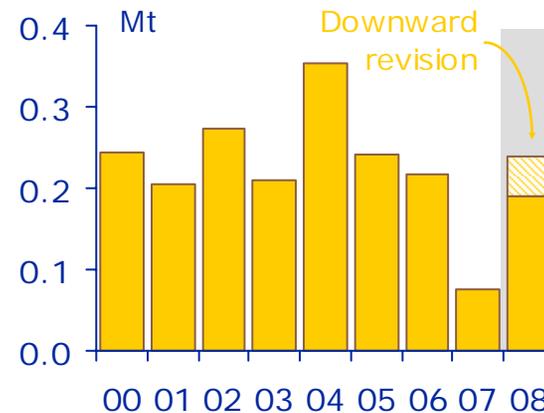


## South Australia crop production

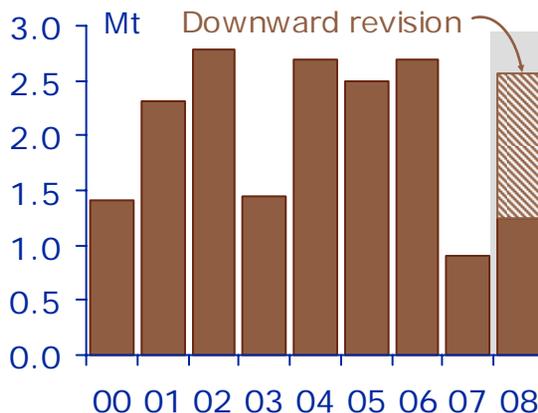
### Wheat



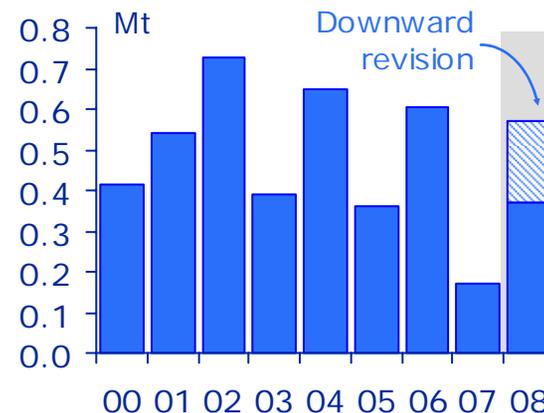
### Canola



### Barley



### Pulses

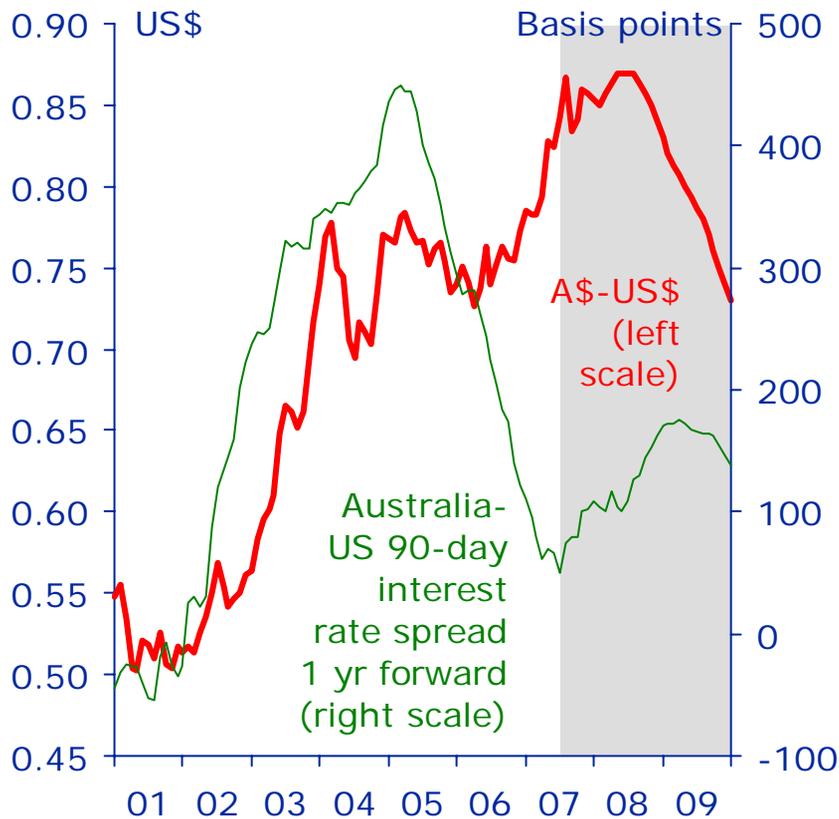


Sources: ABARE (revisions from Crop Report published 18 September 2007).

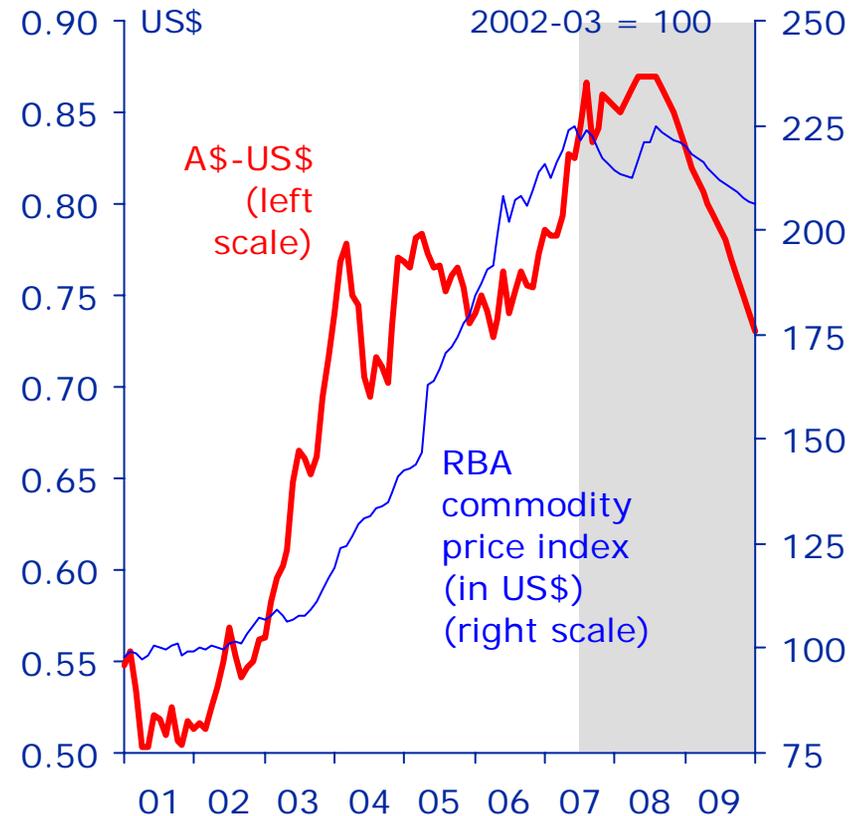
# Commodity prices and relatively high interest rates will keep the A\$ above its long-run average

## Economic influences on the value of the A\$

### Interest rate spreads



### Commodity prices

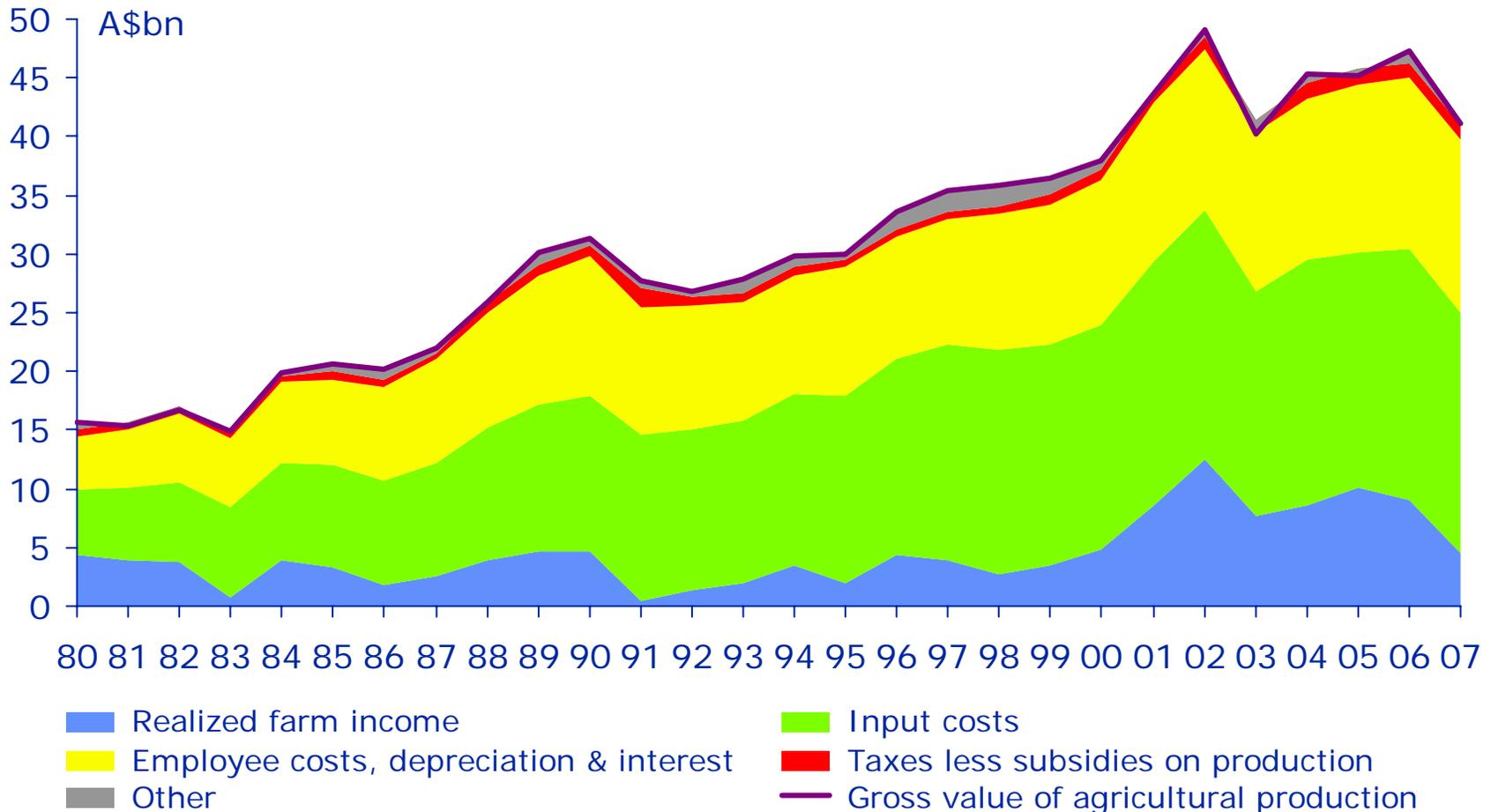


Shaded areas denote forecasts.

Sources: Datastream; RBA; Economics@ANZ.

# Sharply lower production and higher costs mean farmers see little or no benefit from higher prices

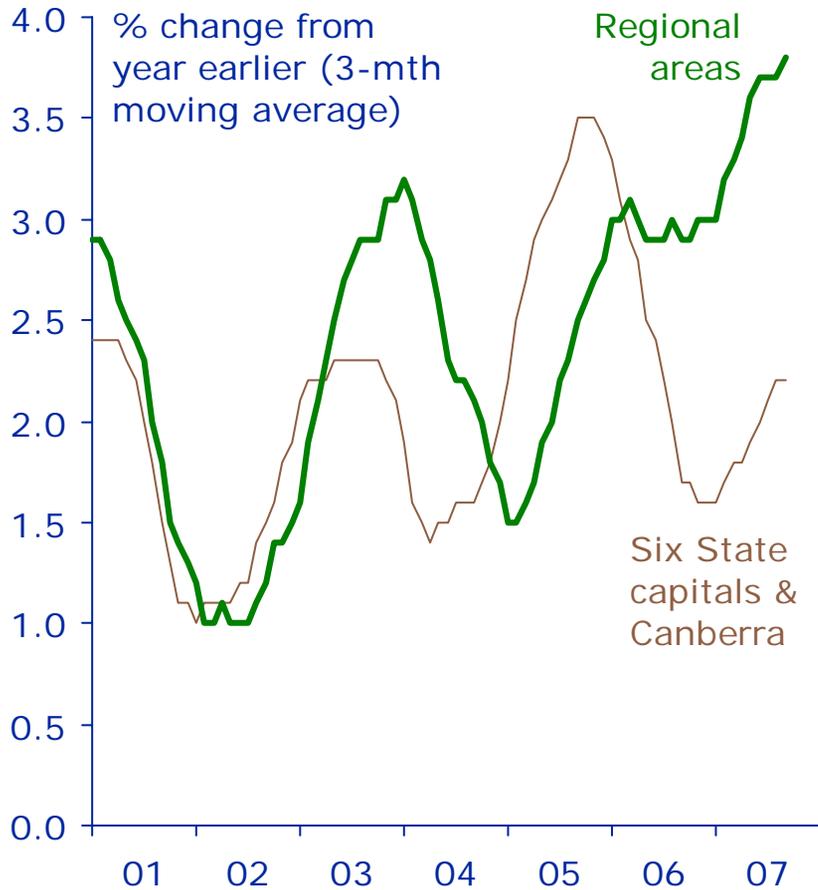
## Break-down of gross value of agricultural production



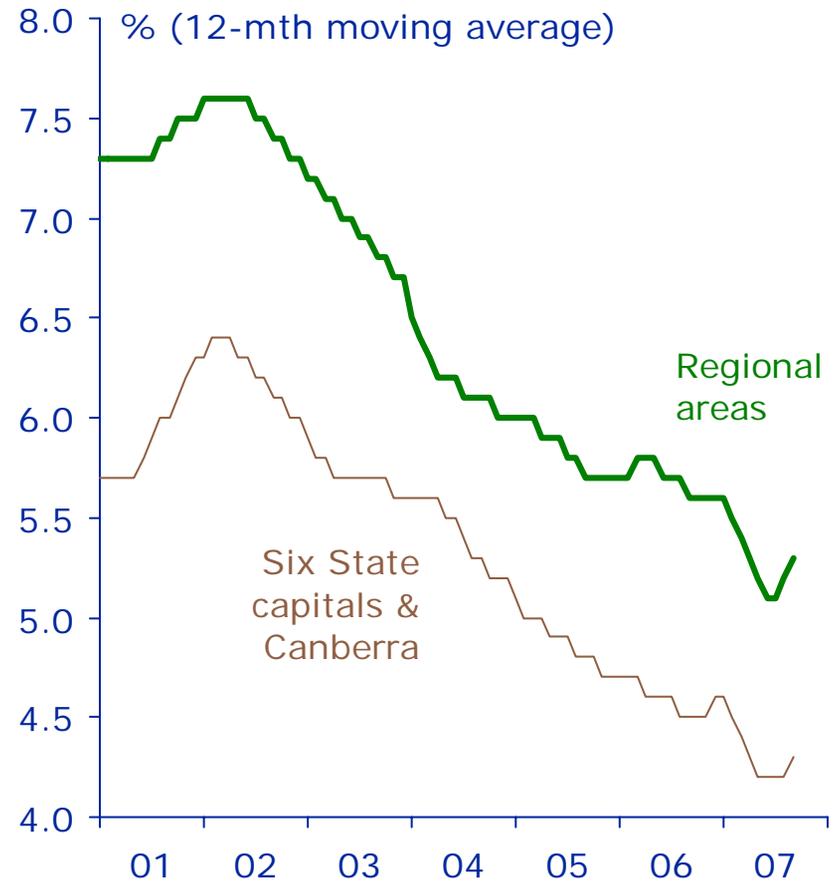
Source: ABS; Economics@ANZ.

# Despite drought and other problems, rural areas are experiencing strong employment growth

## Employment growth



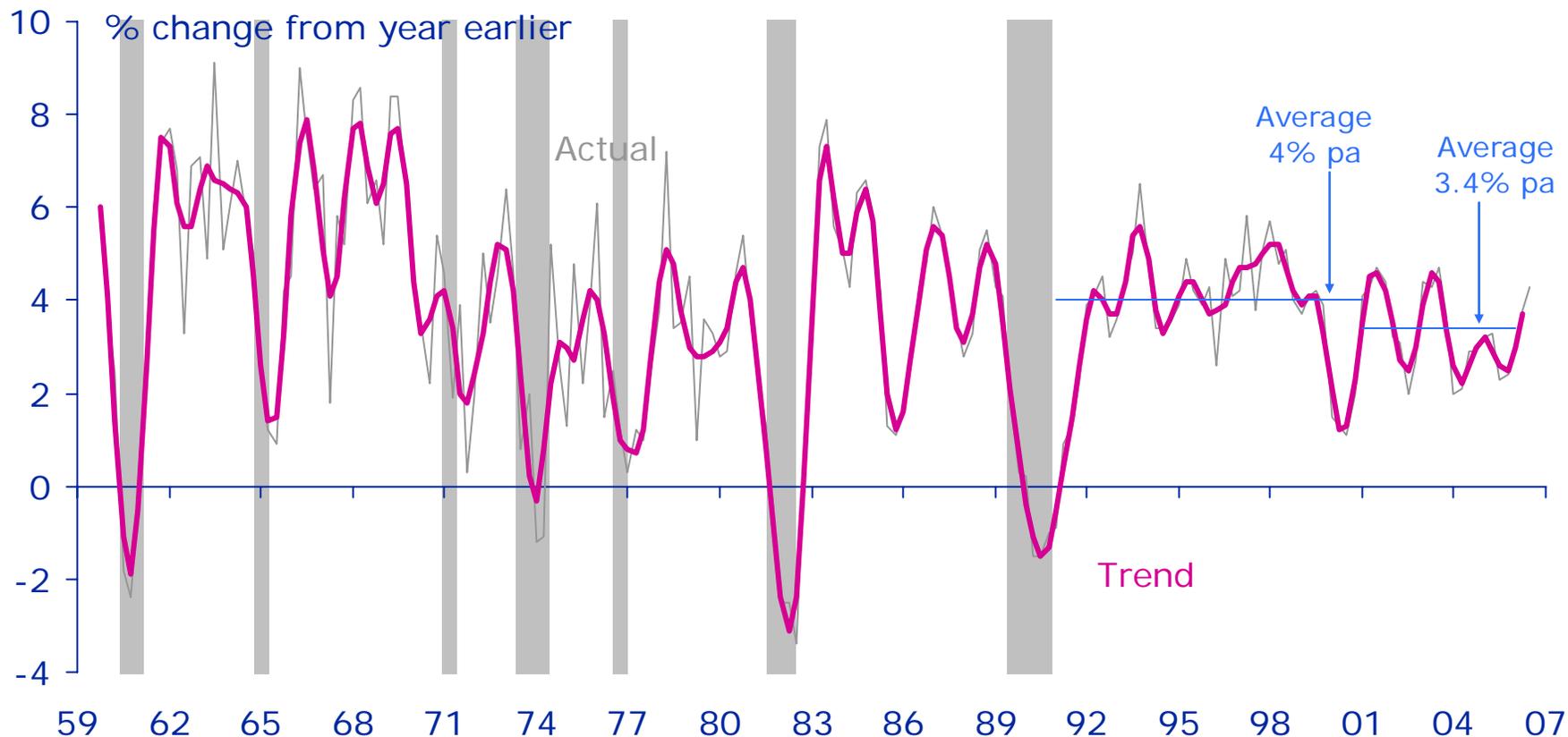
## Unemployment rates



Source: ABS; Economics@ANZ.

# Australia has now gone nearly 16 years without recession, the longest in its history

## Real GDP growth

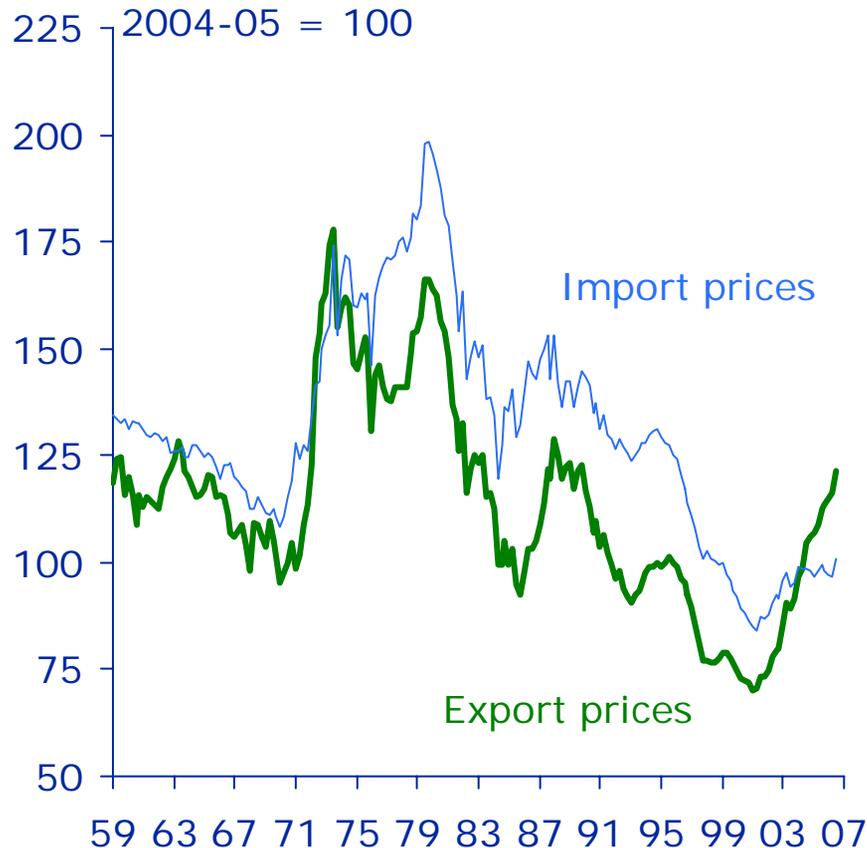


*Note:* shaded intervals denote periods in which real GDP growth was negative for two or more quarters, or during which real GDP declined from the year-earlier quarter.

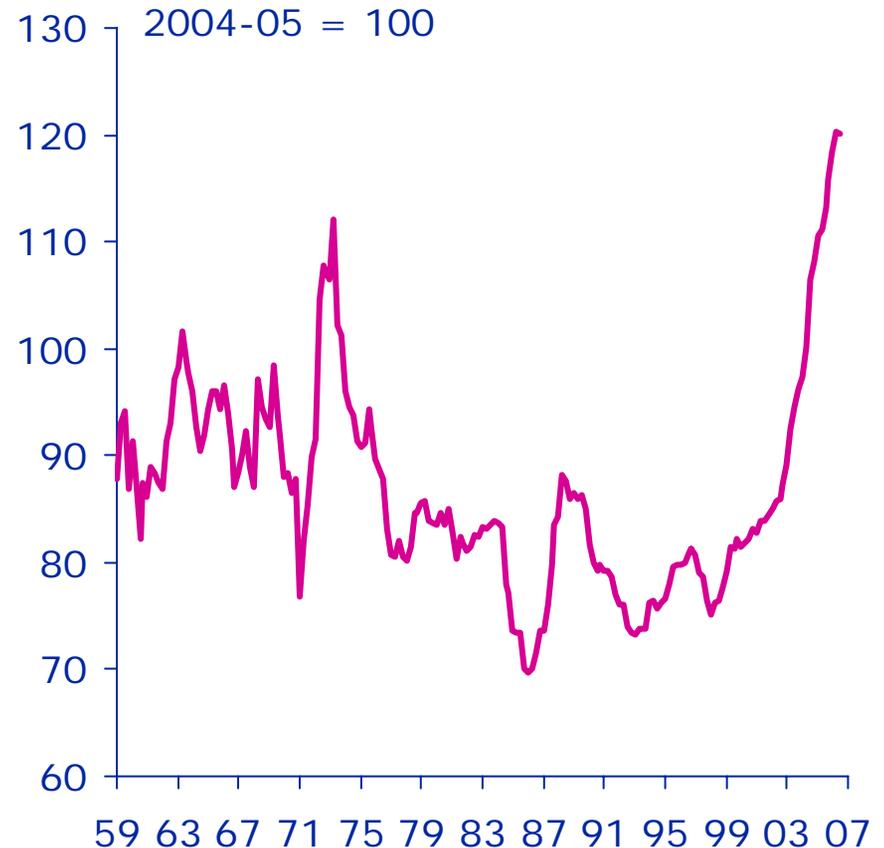
*Sources:* Australian Bureau of Statistics; Economics@ANZ.

# Australia's terms of trade have improved since the early 90s, reversing the decline of the 70s and 80s

## Australian export and import prices in real US\$ terms



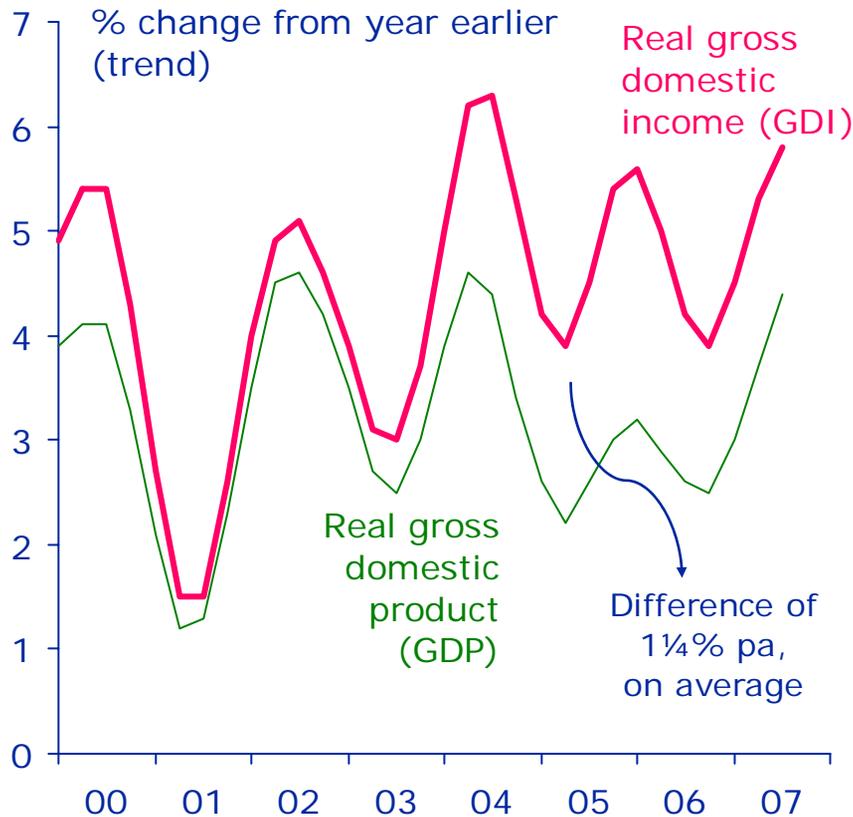
## Australia's 'terms of trade'



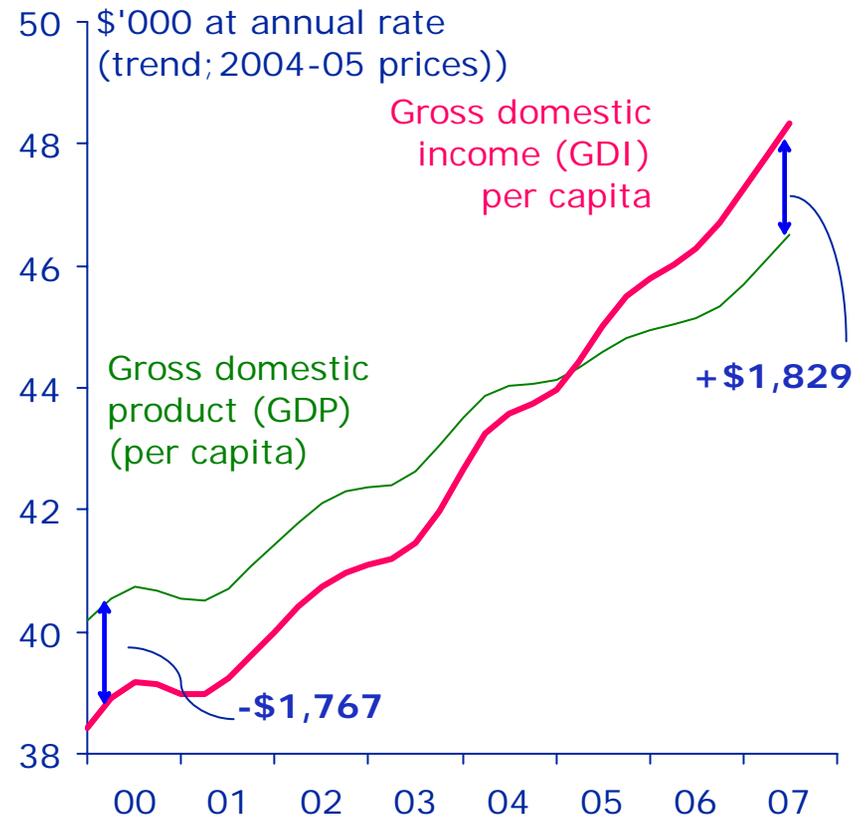
Sources: Australian Bureau of Statistics; US Bureau of Economic Analysis; Economics@ANZ.

# 'Terms of trade' gains since 1999 have been worth \$3,600 pa to each Australian, on average

## Real gross domestic product and income



## Real gross domestic product and income per capita

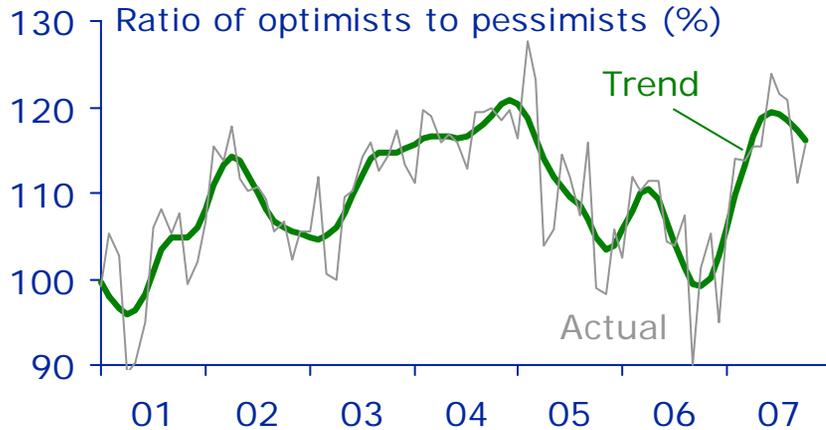


Note: Gross domestic income (GDI) is GDP adjusted for changes in the terms of trade (ratio of export to import prices).

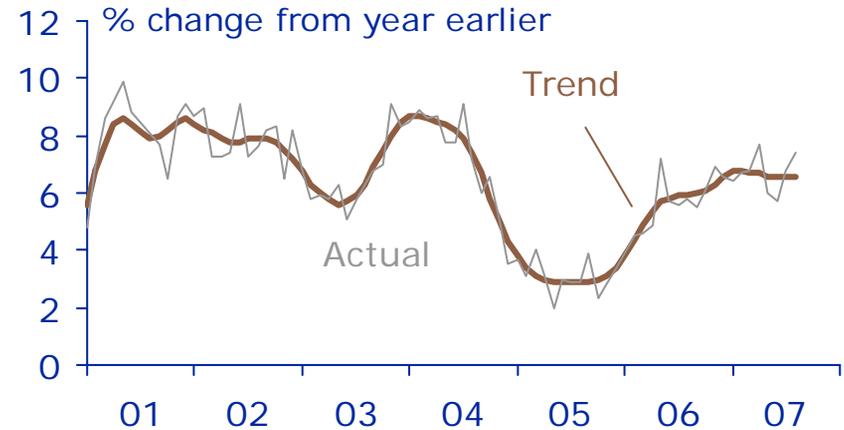
Sources: ABS; Economics@ANZ.

# Momentum in the domestic economy has picked up over the past year despite rising interest rates

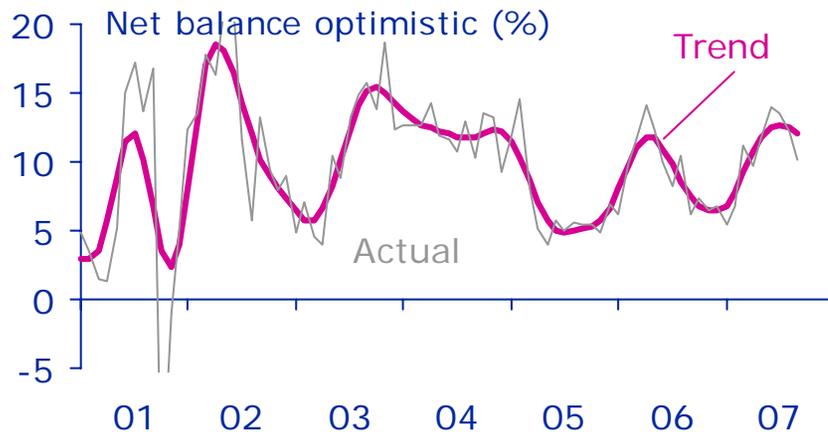
## Consumer confidence



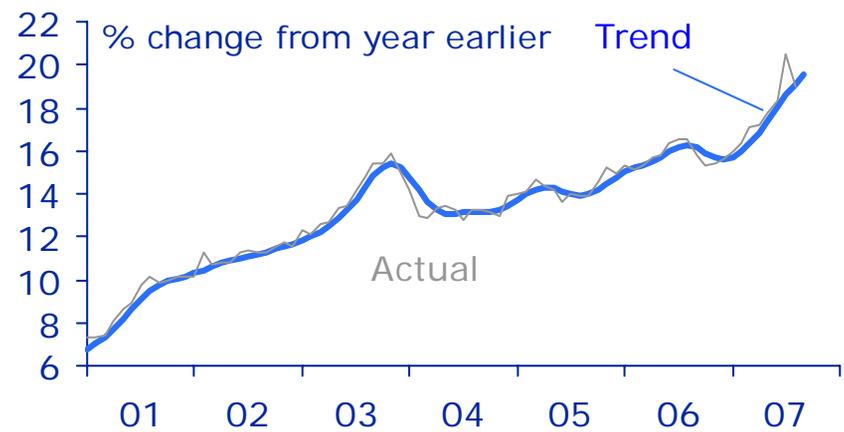
## Retail sales



## Business confidence



## Housing finance commitments



Sources: Westpac-Melbourne Institute; National Australia Bank; ABS.

# The Australian economy is bumping up against 'capacity constraints'

## Unemployment rates



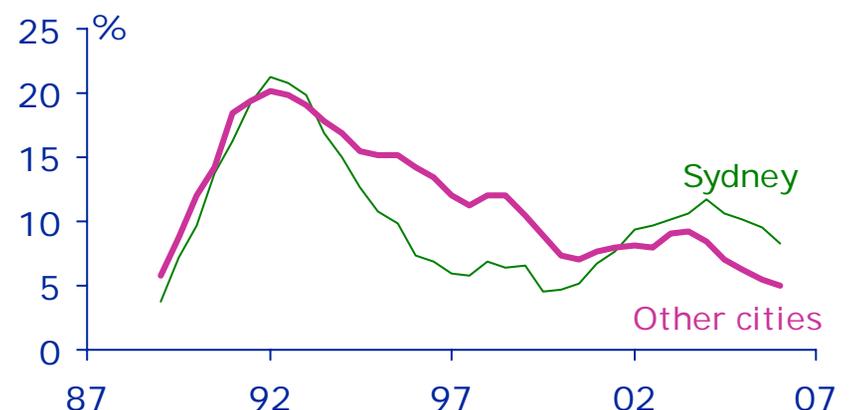
## Capacity utilization



## Labour shortages



## Office vacancy rates



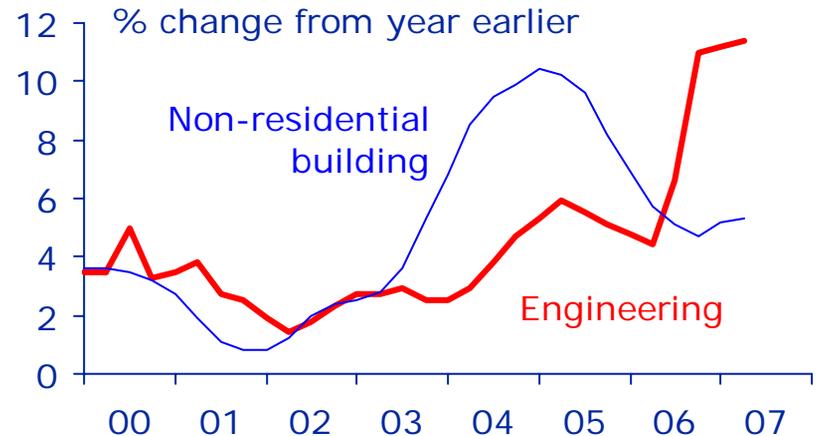
Sources: Australian Bureau of Statistics; National Australia Bank; Property Council of Australia.

# Historically, these are the circumstances in which inflation typically starts to accelerate

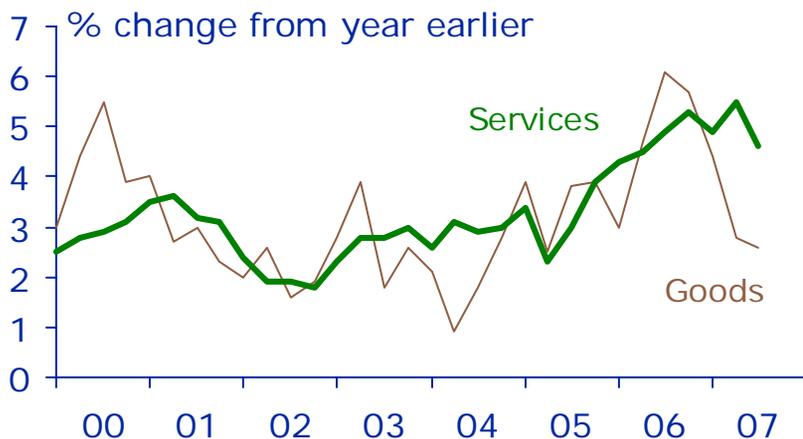
## Wage cost index



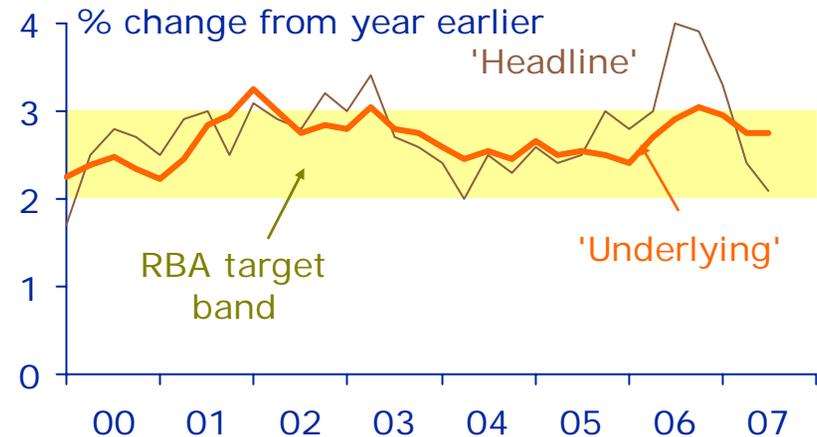
## Construction costs



## Domestic producer prices



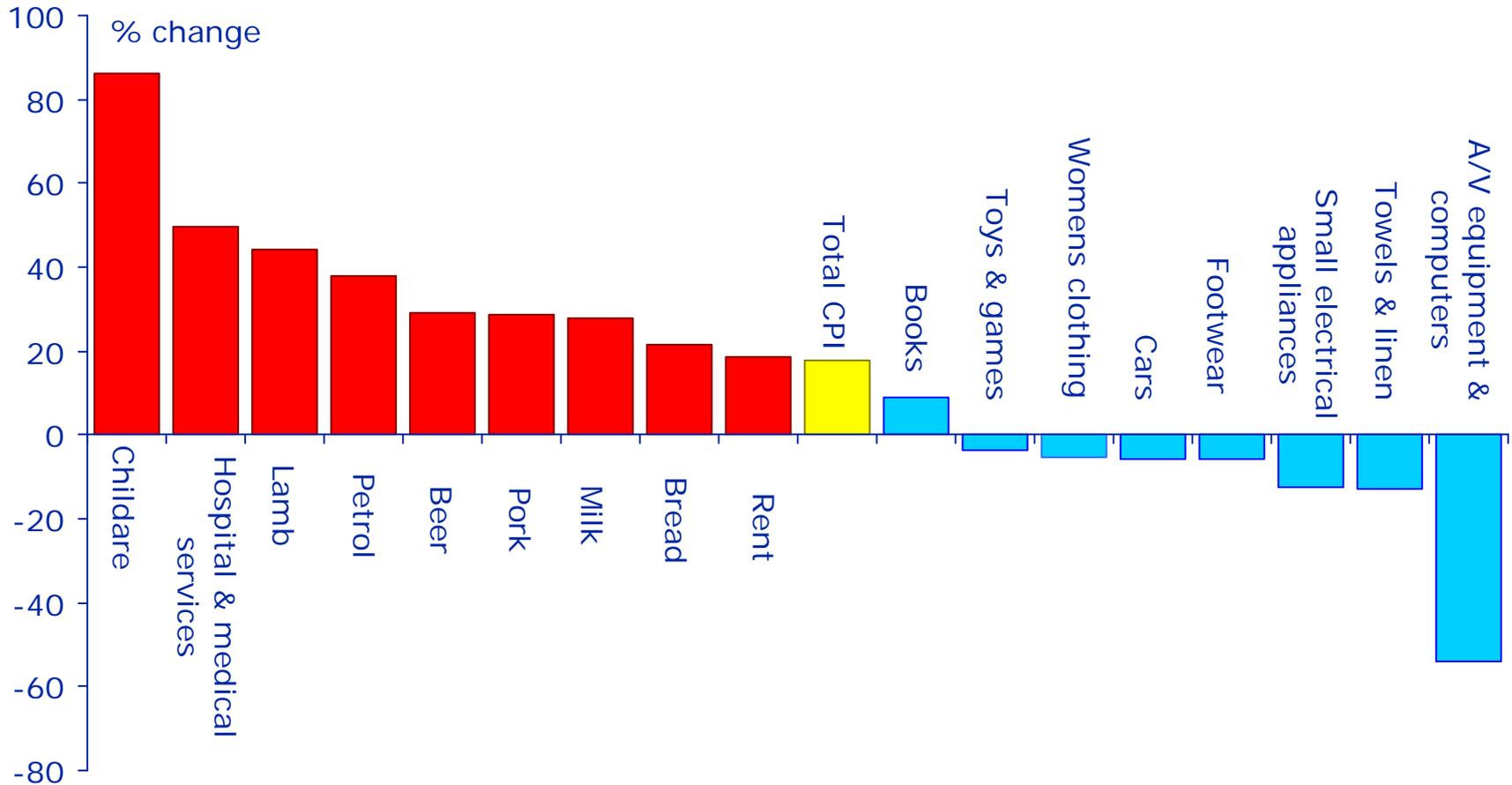
## Consumer prices



Sources: ABS; RBA.

# Inflation expectations may reflect rises rising faster for things which are bought more frequently

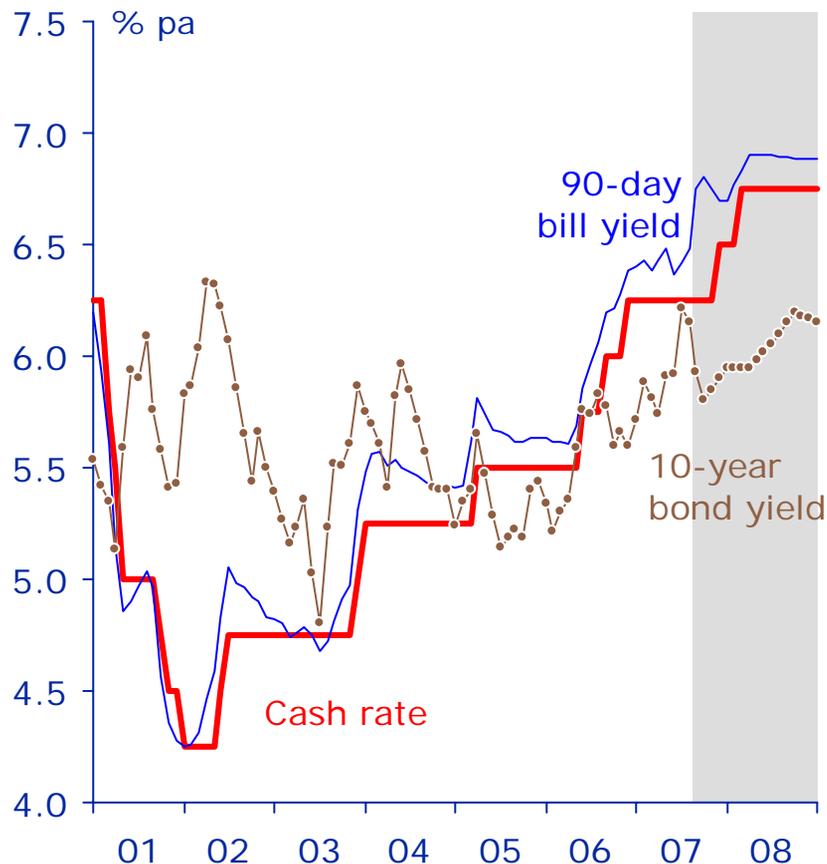
Change in price of selected items in the CPI  
June quarter 2001 to June quarter 2007



Sources: ABS; Economics@ANZ.

# The Reserve Bank will remain 'on hold' for the remainder of 2007 but raise rates again next year

## Australian interest rates



Shaded areas denote forecasts.

Sources: RBA; Datastream; Economics@ANZ.

- Last month's rate increase was prompted by the higher-than-expected June quarter inflation result and strengthening domestic demand against a background of limited spare capacity and ongoing stimulus from high commodity prices
- RBA Governor Glenn Stevens last month firmly indicated a willingness to raise rates in November 'if needed' ...
- ... although on 18 September he hinted that such a move would be less necessary given that market pressures have had the same effect as a rate rise
- The RBA is likely to leave the cash rate on hold until next year

# US rate cuts are warranted by slowing growth and inflation – that isn't the case in Australia

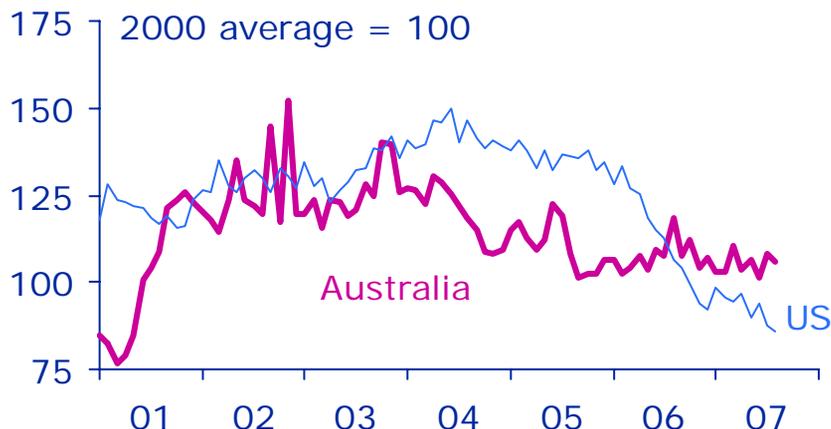
## Employment



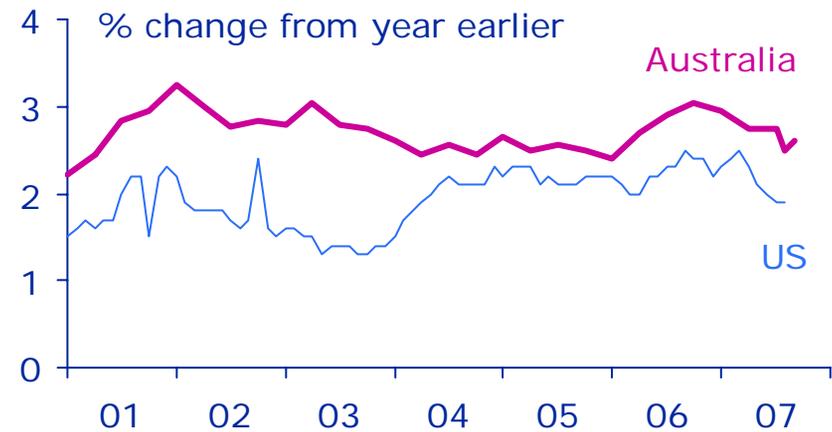
## House prices



## Housing starts



## 'Underlying inflation'\*



\* As defined by US Fed and RBA, respectively. Sources: ABS; US Bureau of Labor Statistics; Bureau of Economic Analysis; S&P.

# Some basic facts concerning the forthcoming Federal election

## Current state of the parties

### House of Representatives

Liberal-National	87
Labor	60
Independent	3
Total	<u>150</u>

### Senate\*

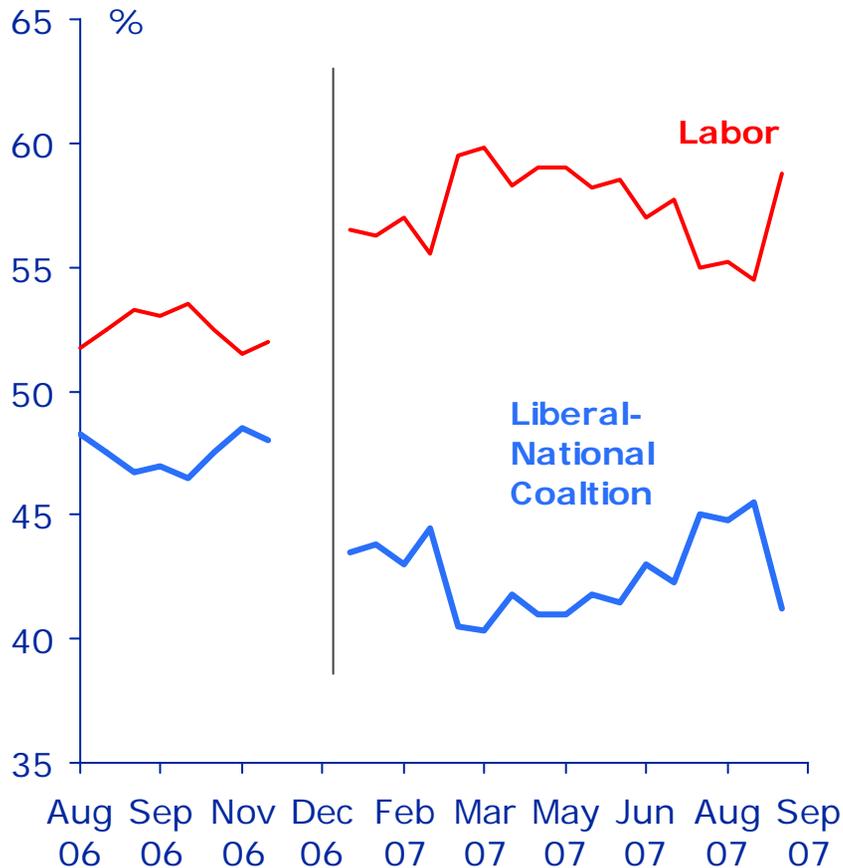
Liberal-National	39
Labor	28
Australian Democrats	4
Greens	4
Family First	1
Total	<u>76</u>

\* Of these, 40 (20 Liberal-National, 14 Labor, 4 Democrats and 2 Greens) will be up for re-election at the forthcoming poll, with the winners taking their places on 1 July 2008.

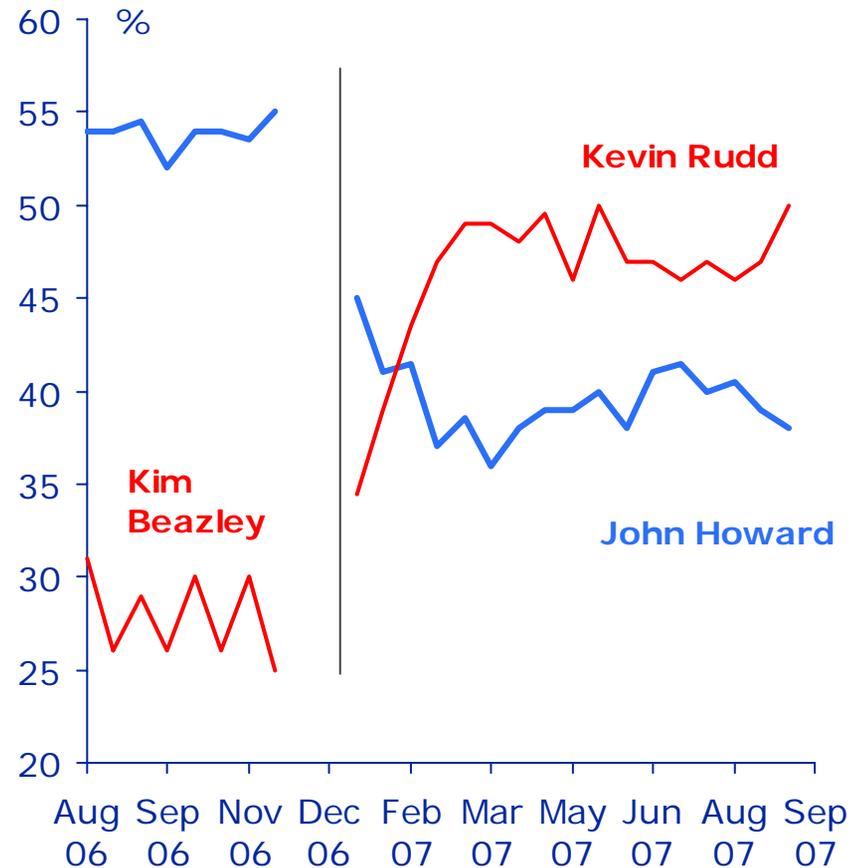
- An election must be held on a Saturday no later than 19 Jan 2008 and with 33-68 days' notice - but otherwise the timing is at the discretion of the Prime Minister
- The most likely dates are between 20 October and 8 December
- Labor needs to win a further 16 House of Representatives seats to form a majority government
- That would require a uniform 'two-party preferred' swing of 4% (which by historical standards is quite large)
- Swings are rarely uniform – the seats Labor needs to win are concentrated in Qld, SA and NSW
- Even if it wins government, Labor has almost no chance of controlling the Senate after 1 July next year

# Opinion polls suggest that a change of government at this year's election is distinctly possible

## 'Two-party preferred' vote



## Preferred Prime Minister



*Note:* The series are averages of three leading opinion polls smoothed using the moving weighted average procedure devised by the ABS to calculate trend estimates.

*Sources:* Newspoll, Morgan, AC Nielsen, Reuters.

# How would a Rudd Labor Government differ from a Howard coalition government

## Similarities

- Reserve Bank would remain independent as at present
- Budget to remain in surplus (of about 1% of GDP) whilst economy continues to grow – anything in excess of that would be spent or used to cut taxes
- Strong commitment to US alliance – though would withdraw combat troops from Iraq
- Strong commitment to engagement with Asia
- Vigorous support for multi-lateral trade negotiations (though Labor probably less keen on bilateral deals)

## Differences

- Industrial relations – Labor would re-instate 'unfair dismissals' laws, abolish 'Australian Workplace Agreements' (but allow higher-paid employees to opt out of awards) and make collective bargaining easier
- Climate change – Labor favours mandatory (60%) target for reduction in CO<sub>2</sub> emissions
- Nuclear energy – Labor opposed to nuclear power stations in Australia and uranium exports to India
- Education and health – greater role for Federal government
- Infrastructure – greater role for Federal government (incl provision of 'broadband')

# Summary of Australian forecasts

	Years ended December			
	2006	2007	2008	2009
Real GDP growth (%)	2.7	4	4¼	4
Employment growth (%)	2.1	2¾	2¾	2
Unemployment rate (%) <sup>(a)</sup>	4.6	4½	4	4
Housing starts ('000s)	152	150	155	180
CPI inflation (%) <sup>(b)</sup>	3.3	2.7	2.7	3.1
Current account deficit (A\$bn)	55	66	70	74
RBA cash rate (%) <sup>(a)</sup>	6.25	6.50	6.75	6.75
10-year bond yield (%) <sup>(a)</sup>	5.88	5.95	6.15	6.35
A\$-US\$ <sup>(a)</sup>	0.79	0.85	0.83	0.73
A\$-¥ <sup>(a)</sup>	91	99	93	84
A\$-€ <sup>(a)</sup>	0.60	0.60	0.61	0.58
A\$-Yuan <sup>(a)</sup>	6.16	6.31	5.85	5.17

(a) December (b) Year to December quarter; all other forecasts are year-average