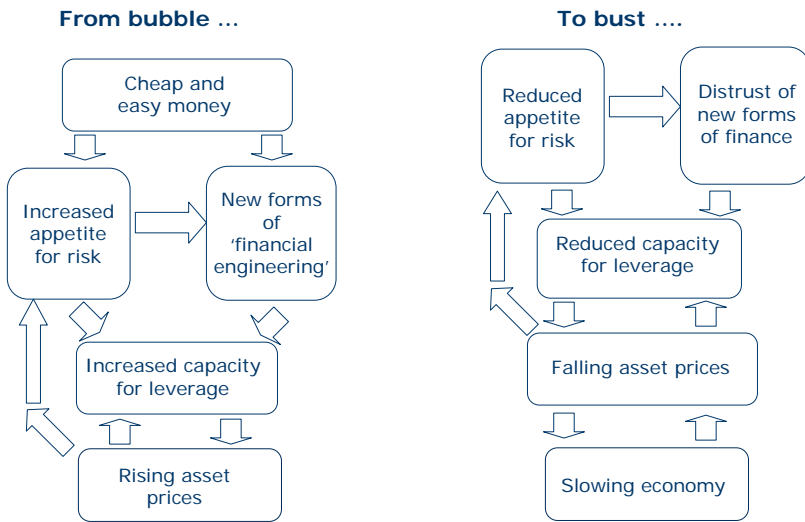


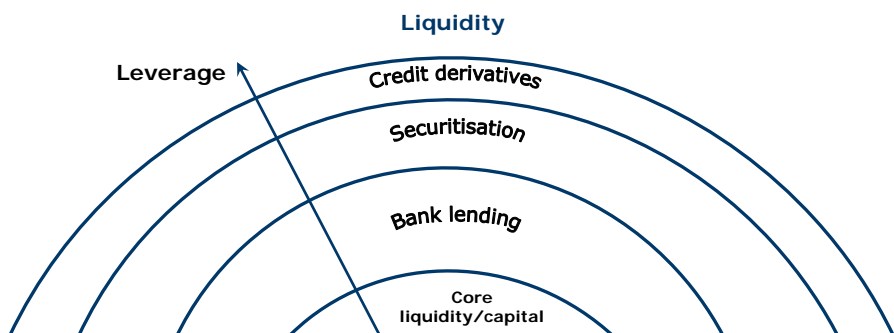
Global Liquidity and Its Impact on Asia

Dr. Robert John Edgar
Deputy Chief Executive Officer
ANZ Banking Group

Booming liquidity inflated asset prices and the current global financial crisis stems from the bursting of a 'credit market bubble' ¹



Low interest rates, high growth lending, expanded securitisation and derivatives all boosted liquidity and asset prices ²



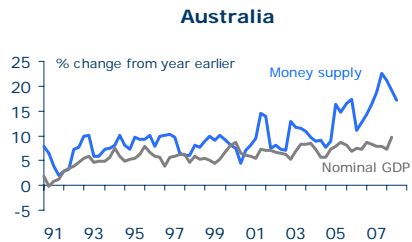
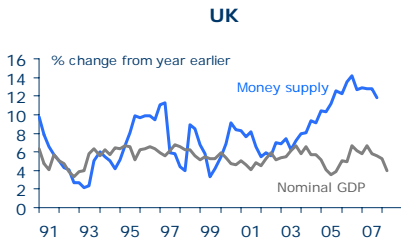
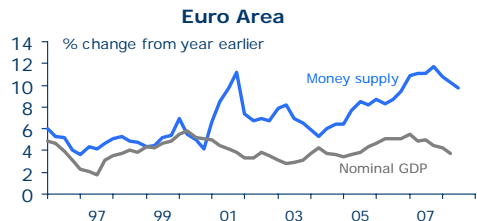
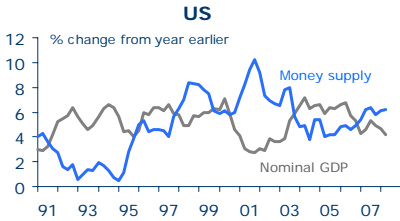
- Booming liquidity (and low risk aversion) drove a surge in credit availability
- The flow-on to asset prices has been dramatic



Marked expansion in global liquidity

3

Money supply vs nominal GDP



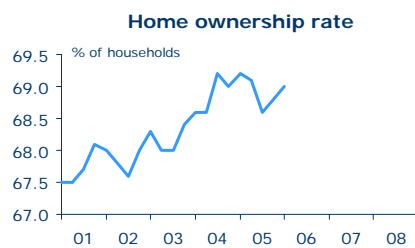
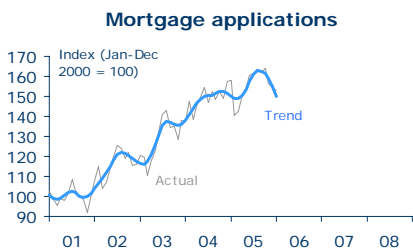
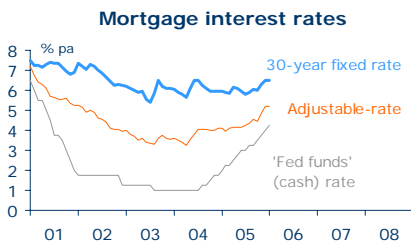
Sources: Datastream, Bloomberg



For a time, low interest rates and the explosion in 'sub-prime' lending created boom conditions in the US housing market...

4

US housing market indicators up to 2005

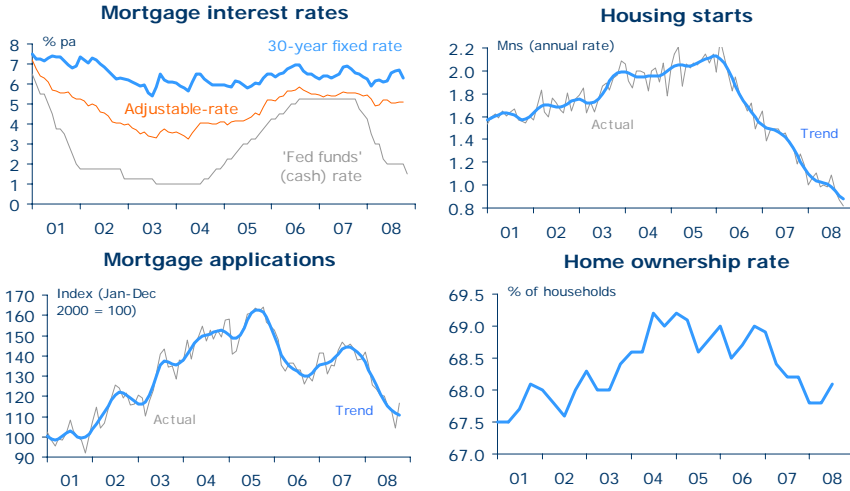


Sources: Mortgage Bankers' Association of America; US Commerce Department.



...but eventually the bubble burst, as bubbles always do

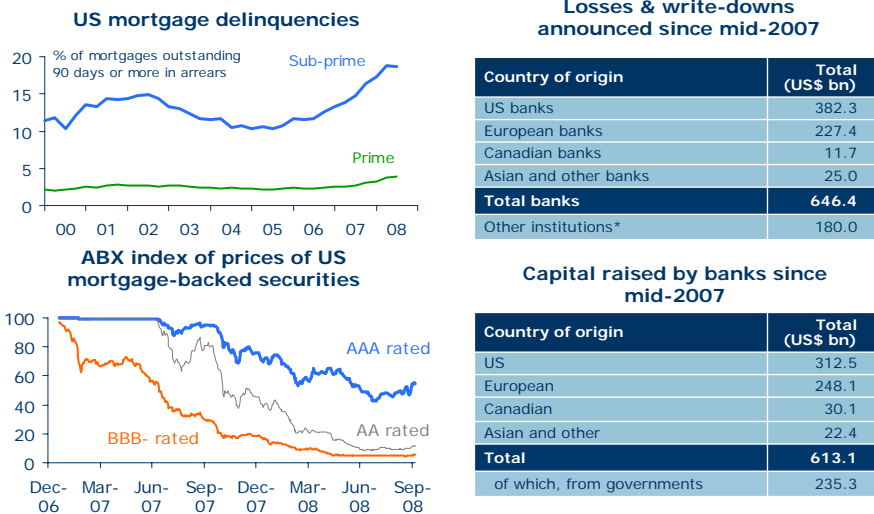
US housing market indicators up to 2008



Sources: Mortgage Bankers' Association of America; US Commerce Department.



The US mortgage market meltdown has prompted a tidal wave of losses and write-downs by banks around the world



* 'Other institutions' include insurance companies, pension funds and hedge funds. Sources: US Mortgage Bankers' Association; IMF; Bloomberg; ANZ Economics & Markets Research.



The IMF now estimates losses and write-downs will eventually reach US\$1,405 bn, with banks losing US\$950-1,110 bn 7

Potential ultimate losses on unsecuritized loans

Type of loan	US\$bn	
	Out-standing	Estimated losses
Sub-prime	300	50
'Alt-A'	600	35
Prime	3 800	85
Commercial real estate	2 400	90
Consumer loans	1 400	45
Corporate loans	3 700	110
Leveraged loans	170	10
Total	12 370	425
of which, banks		225-290

Potential ultimate mark-to-market losses on securities

Type of security	US\$bn	
	Out-standing	Estimated losses
ABS	1 100	210
CDOs	400	290
Prime MBS	3 800	80
Commercial MBS	940	160
Consumer ABS	650	0
High-grade corporate	3 000	130
High-yield corporate	600	80
CLOs	350	30
Total	10 840	980
of which, banks		725-820

Notes: 'Alt-A' means 'low-doc' or 'no-doc' mortgage loans. ABS = asset-backed securities; CDOs = collateralized debt Obligations; MBS = mortgage-backed securities; CLOs = collateralized loan obligations.

Source: IMF Global Financial Stability Report 7 September 2008, p. 9.



Absorption of excess liquidity 8

1. Growth in real GDP

- **Impressive growth over the last 5 years in most major economies**
- **set to slow sharply, particularly in developed world**

2. Inflation

- **rising rapidly, but will slow in year's ahead**

3. Write-offs/capital raising

- **US\$826bn written off so far by banks & other institutions – on way to eventual US\$1.4tn (IMF)**
- **But it is not just banks**
- **i.e. plenty more ahead!**

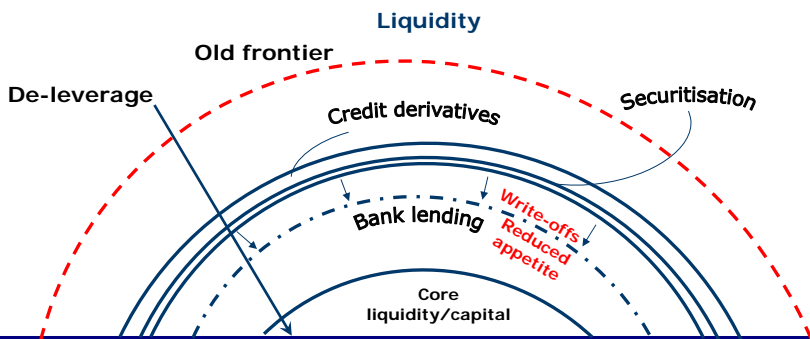
4. Decreased leverage

- **Reduced appetite for new borrowing & lending**



What's happened since : securitisation market closed, credit derivatives sharply reduced, write-offs soar

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- But credit crisis has seen securitisation market close and the credit derivatives sector at least sharply reduced in significance
- Some re-intermediation, but constraints on capital due to write-offs and difficult capital raising environment
- De-leveraging of banks is becoming a feature

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Beyond Financial Analysis

10

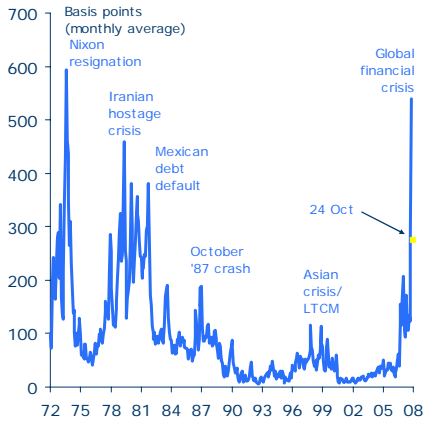
- Fear
- Uncertainty

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Indicators of 'fear' in financial markets reached all-time record highs in recent weeks

11

'TED' spread between 3-month inter-bank US\$ rates and 3-month US Treasury bill yields



'VIX' index of implied volatility of the US S&P 500 share index



Sources: US Federal Reserve; Datastream; ANZ.



Investors around the world have lost US\$23.2 trillion since the end of October 2007

12

Capitalization of world equity markets

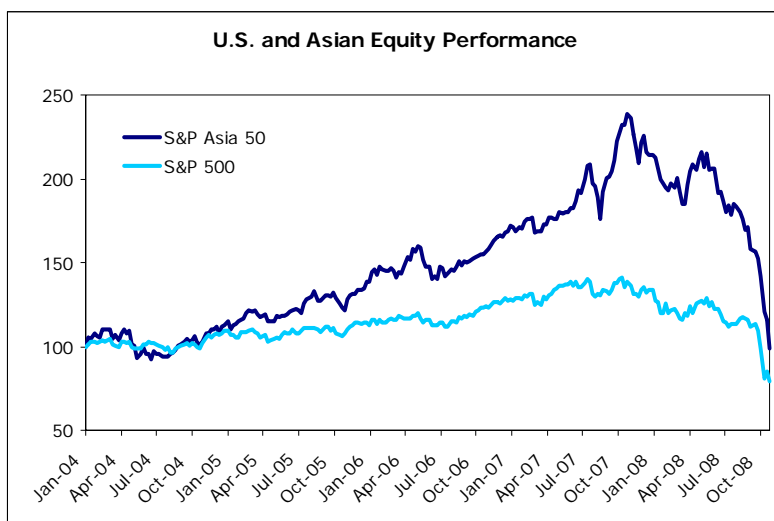


Source: Datastream.



Reflecting Their "High Beta" Status, Asian Equity Markets Rose and Fell Faster than their U.S. Counterpart

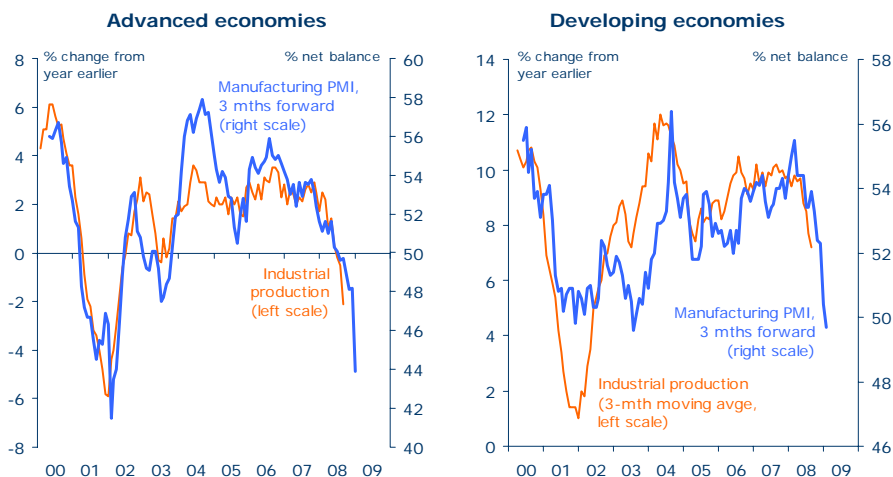
13



Sharpest slowdown will be in the advanced economies, but the developing region is not immune

14

Manufacturing purchasing indices (PMIs) and industrial production

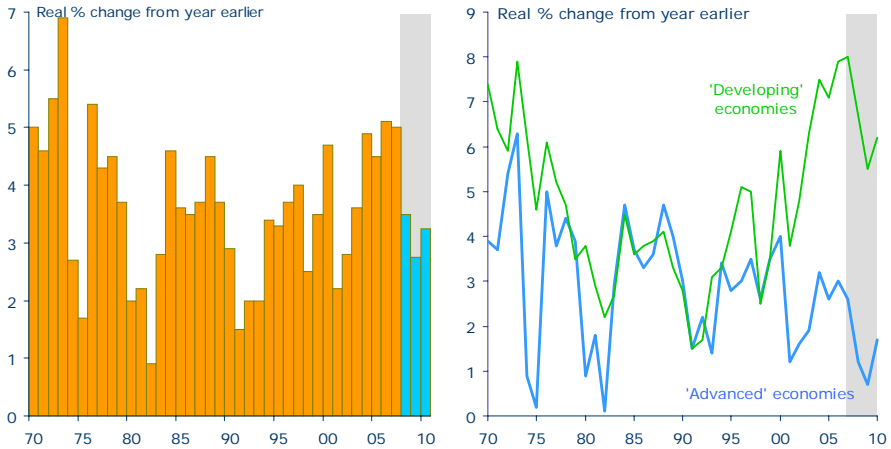


Sources: IMF World Economic Outlook October 2008 database; ANZ.



Global growth will weaken sharply with 2009 looking like the worst year for 'advanced' economies since 1982

Global economic growth

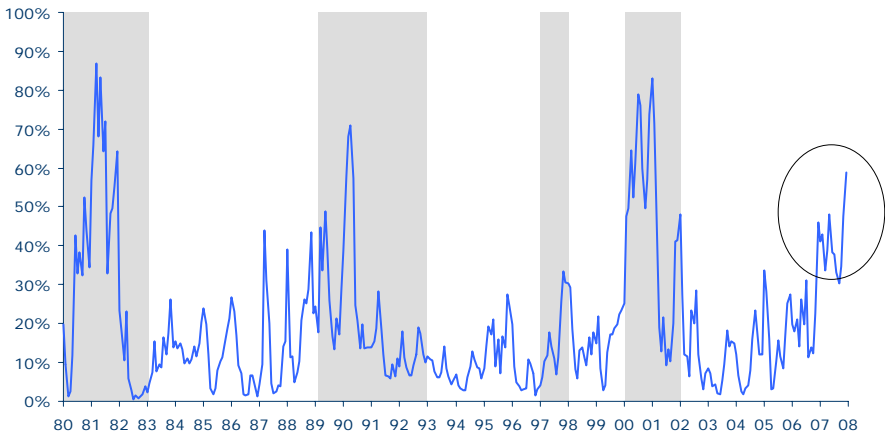


Note: GDP is measured in US\$ at purchasing power parities.
 Source: IMF World Economic Outlook October 2008; ANZ Economics & Markets Research.



The worst of the financial crisis *may* be behind us, but the full impact on the real economy lies ahead

**Probability of global recession
 (based on a combination of financial and cyclical variables)**



Note: Probability measure based on slope of the US yield curve and S&P 500 returns, US industrial production and the IMF metal price index. Shaded areas denote 'global recessions' as designated by the IMF based on global industrial Production. Sources: IMF World Economic Outlook October 2008 p. 44.



Corporate gearing levels are off their lows in the developed world but are not overly constrained...

Non-financial corporate sector, Debt to equity ratio



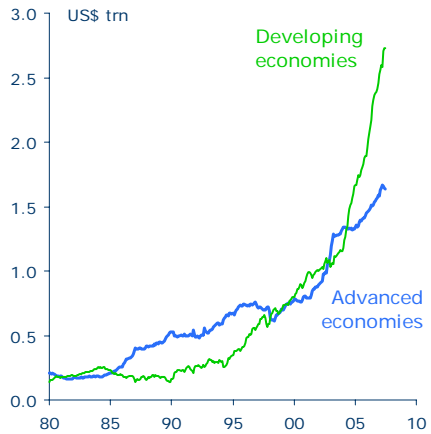
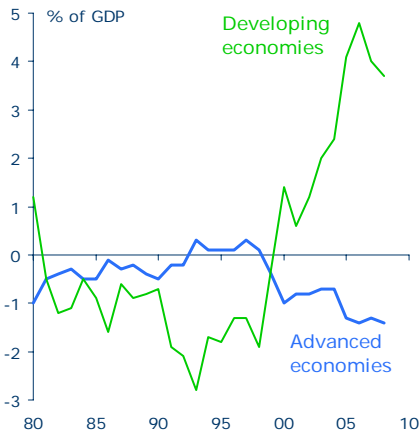
Sources: Datastream, Australian Bureau of Statistics



Developing countries far better placed to withstand global financial upheavals/liquidity crisis

Current account balances

Foreign exchange reserves



Sources: IMF; ANZ.



Consumer sentiment

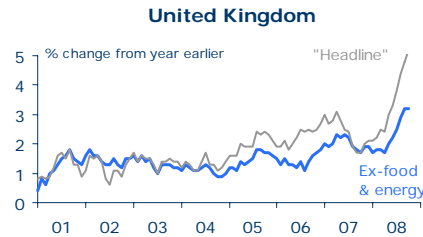
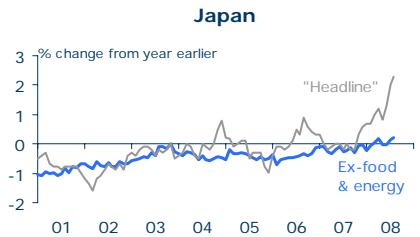
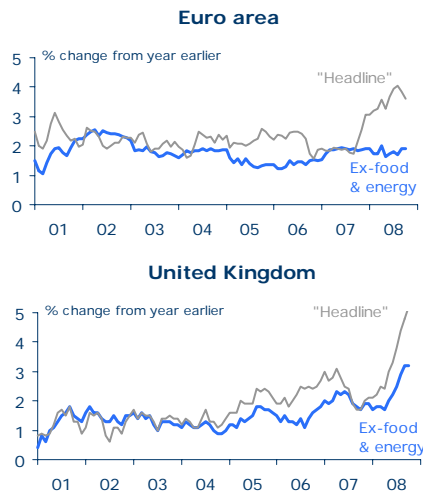
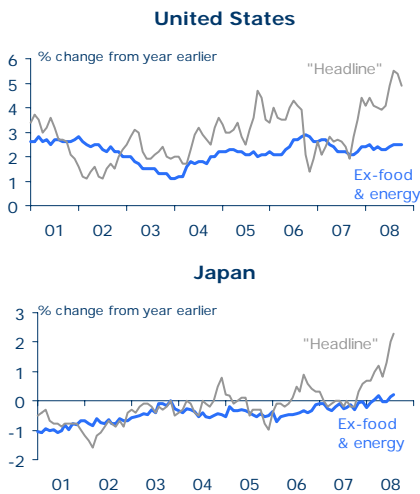


Sources: Datastream, Bloomberg



'Headline' inflation has peaked in most OECD countries and 'core' inflation should also start falling soon

Consumer prices



Sources: US Bureau of Labor Statistics; Eurostat; OECD.



Inflation now appears to have peaked in most Asian economies as food and energy prices start to ease ²¹

Asian economies – consumer prices



Sources: national statistical agencies; ANZ.



Asian banks are in reasonably good health and any effects from the global credit crisis should be limited to an "earnings event" ²²

- > Banking systems in Asia range from money centres like Hong Kong and Singapore to emerging systems such as Laos; difficult to generalize
- > For the most part, Asian banks avoided exposures to "toxic assets" – banks in the region only hold about 4% of the world total (Bloomberg)
- > This fortuitous outcome reflects: (i) natural conservatism; (ii) legacy of the Asian crisis; (iii) ample investment opportunities in Asia; (iv) luck
- > We expect to see the weaknesses in the Asian banks' performance mainly in terms of weak earnings and deteriorating credit quality
- > Unlike their counterparts in the U.S. and Europe, the effects of the credit crisis on Asia banks should be limited to earnings: not capital!



Asian banks (ex-Korea) do not rely on wholesale funding, suggesting some degree of resilience going forward

Loan-to-Deposit Ratio of Commercial Banks

Banking System	Loan-to-Deposit Ratio (As at June 2008)
China	65.20
Hong Kong	58.70
India	74.53
Indonesia	72.74
Malaysia	72.20
Philippines	73.90
Singapore	83.85
South Korea	126.53
Taiwan	87.80
Thailand	87.80
Vietnam	86.35
US	135 [^]
Australia	164 ⁺

Source: CEIC, Central Banks' websites

[^]: as at September 2008; ⁺: as of August 2008



Asian Central Banks Have Taken a Range of Measures to Respond to the Global Credit Crisis and Slower Growth Prospects

- Concerns about deposit runs given deposit guarantees by central banks outside the region and in light of Lehman-related risks led the monetary authorities in Hong Kong, Indonesia, Singapore, and Malaysia to guarantee deposits in their respective banking systems in mid-October
- With inflation having peaked in most of the region, and in light of the downside risks to growth, a number of central banks have cut their policy rates and/or lowered reserve requirements in the past two months
- In Korea, where the effects of the global credit crisis have been felt hardest, the authorities recently guaranteed the external debt of local banks.
- As an additional measure to shore up the Asian financial markets, 13 Asian countries (South Korea, Japan, China and ASEAN) have committed to establish a US\$80bil currency swap scheme by June 2009 to supply funds to any member nation via the pooled foreign exchange reserves in event of a financial emergency.

Major Policy Measures Adopted:	Central Bank:
Cut in Reserves Requirement	China, Indonesia, Taiwan, India
Government Guarantee for Banks' Deposits	Hong Kong, Indonesia, Singapore, Malaysia
Cut in Benchmark Policy Rate	Thailand, Hong Kong, Taiwan, South Korea, China, Taiwan, India, Vietnam
Government Guarantee for Banks' external debts (up to US\$100 billion)	South Korea

Source: Bloomberg



- Excess Liquidity on a global scale did lead excess credit
- This did support a prolong period of economic growth but also an asset price bubble
- The collapse of the asset price bubble has been the key factor behind the current financial sector crisis that has developed into a global phenomenon
- The impact on the real sector is following the same pattern – beginning in North America/Europe and spreading to the global economy
- The impact on confidence has been a key driver of the economic downturn and this also looks to have a global character - what will turn this around? - nothing soon!