### Managing the end of the China resources boom

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## 1. Three periods of China's reform era

- Expansion of Agricultural Incomes and Rural Transformation 1979-85.
- Uninhibited Investment Expansion 1985-2011.
- Transition to Modern Economy 2012 onwards.

### 2. Uninhibited investment expansion

- Searching for Ideological and Political Basis for Deep Reform 1985-92.
- Full Steam Ahead 1992-2011.
- Full Steam Ahead a fabulous period in world economic history, with the fastest longsustained growth ever, more energy and metals intensive than ever and anywhere in an internationally open economy, in the world's most populous country on the way to becoming the world's largest economy.

## 3. Chinese growth and world commodity prices

- China accounted for a high proportion of world growth in energy and metals demand 2001-2007 and nearly all (for oil, iron ore, coal) or more than all (aluminium, nickel, copper) 2007-2011.
- Uninhibited Investment Expansion ended in 2012 with China's New Growth Model.
- Meanwhile global commodity supply expanding rapidly with huge forward momentum.
- Fall in commodity prices from late 2011, continuing and likely to overshoot while high cost production is shaken out (differs across commodities).

### 4. Australia's terms of trade



## 5. Stages of Australia's China resources boom

- Stage 1: High and rising terms of trade 2003-07 (Investment rising strongly from about 2005; terms of trade and investment broken by Global Financial Crisis late 2008 to late 2009).
- Stage 2a: High terms of trade, high investment (2009–11).
- Stage 2b: Falling terms of trade, high investment, growing exports (2011-13).
- Stage 2c: Falling terms of trade, falling investment, growing exports (2013–16).
- Stage 3: Normal terms of trade (closer to historical than to current levels; possibly very low export prices while excess supply is diminished by closure of high cost capacity), normal investment, high exports (2016 onwards for a number of years).

NOTE: Terms of trade fall again when RER falls because Australian services price set substantially in \$A.

## 6. Effects on economy's capacity to support expenditure:

- Stage 1: Huge positive effect on "expenditure capacity", mainly through Government revenue (becomes huge expenditure increase only through tax cuts or Government spending). Peak of expenditure capacity at end of Stage 1 and early in Stage 2.
- Stage 2: Initially high but declining "expenditure capacity"

Note:

(i) Investment deductions reduce Government revenue.
(ii) High resources investment exhausts part of expenditure capacity: constant real expenditure in this stage requires reduction of other expenditure eg budget tightening.

Stage 3: "Expenditure capacity" greatly reduced because higher royalties on increased production offset by lower profit-based taxes from higher income tax deductions for earlier capital expenditure (Parkinson, May 2013), to levels much closer to preboom than to Stage 1 and early Stage 2 peaks.

# 7. Why expenditure capacity only normal (much closer to pre-boom than peak) in Stage 3:

- Contribution to economy and expenditure in this stage almost entirely from Government revenue.
- Resource export volumes up about one third 2013– 16 and continuing to grow.
- Export prices in foreign currency may settle moderately higher than before boom, while much lower than current let alone peak levels, but may be substantially lower for a while as excess global supply capacity "shaken out".
- Capital expenditure and interest deductions from tax up \$30-40 billion plus per annum for a number of years after investment peak.

8. Two variables jointly determine internal balance (unemployment or inflation) and external balance (whether there is Unsustainable Current Account Deficit (UCAD) or Unsustainable Current Account Surplus (UCAS)):

- Real exchange rate (times ratio of foreign to domestic productivity increase).
- Real domestic expenditure.

- Joint determination explained in Swan Diagram.
- Exclusive focus on expenditure in assessing macro policy (budget and interest rates) misses the point.
- Emerging combination of unemployment and UCAD will require fall in RER but could require increase or reduction or no change in Real Expenditure.

#### 9a. Swan diagram 1: Before Resources Boom



**Real Expenditure** 

Note: A marks expenditure and competitiveness (RER) combination that generate Internal Balance and External Balance. B marks situation of economy at transition from Housing and Consumption Boom to China Resources Boom.

#### 9b. Swan Diagram 2: (Stage 1)



#### **Real Expenditure**

Note: The increase in the terms of trade raises the level of real expenditure that is consistent with external balance. External Balance curve shifts from (1) to (2). The increased capacity to support expenditure is spent; firm monetary policy maintains internal balance; real expenditure rises and RER rise to points corresponding to C.

#### 9c. Swan Diagram 3: (Stage 2a)



Real Expenditure

Note: Resources Investment Boom increases expenditure to D without substantially raising expenditure capacity. Firm monetary policy maintains Internal Balance and raises RER to point corresponding to E.

# Real Exchange Rate

#### 9d. Swan Diagram 4: Effect of extreme developed country monetary easing



**Real Expenditure** 

Note: Extreme monetary easing in developed countries raises RER to point corresponding to F.

#### 9e. Swan diagram 5: Fundamentals back towards Swan Diagram 1 (Stage 3)



**Real Expenditure** 

Note: In Stage 3, External Balance line (3) settles well below resource boom peak, and above pre-resources boom position. To restore internal and external balance, RER must fall from point corresponding to F to point corresponding to G.

### 9f. Swan Diagram summary:

- 1. Tendency towards UCAD towards end of consumption and housing boom.
- 2. Stage 1 Resources Boom: temporarily higher expenditure capacity is spent, raising RER.
- 3. Stage 2: High resources investment without further increase in expenditure capacity requires cutback in other expenditure to maintain short-term balance: partially implemented (disrupted by Great Crash of 2008) leading to further increase in RER.
- 4. 4.Stage 3: falling terms of trade, lower resources investment, high exports together take equilibrium back towards A powerful tendency to Higher RER without other changes generates moderate tendency to UCAD and unemployment.
- 5. Large reduction in RER ESSENTIAL; reductions in expenditure MAY be required.

#### 10. Australian increase in Real Exchange Rate in this Resources Boom is Extreme

- McLean ("Why Australia Prospered", p.217) citing Pagan: "real exchange rate appreciation (1972 to 1974) was disastrous...quickly brought the long (postwar) boom to an end".
- Real trade weighted appreciation June 1970 to peak in Sept 1974 was 16% and RER back near 1970 levels by 1977.
- Tiny and much shorter than RER real appreciation in China resources boom.
- RER appreciation 69 per cent Dec 2002 to peak in March 2013.

### 11. Real Effective Exchange Rate 1983-2013



Sources: ABS; RBA; Thomson Reuters; WM/Reuters

Source: Reserve Bank of Australia chart pack released 8 May 2013

### 12. Qualifications about long term RER comparisons over long periods

- Real effective exchange rate 69 per cent Dec 2002 to 2013, but contains high weight for China, a catch-up economy experiencing strong productivity growth against which all developed countries SHOULD be depreciating. So "competitiveness" deteriorated much more than RER appreciated.
- "Catch-up" factors for Japan, Korea, Taiwan, HK, Singapore China understate RER appreciation over long period from 1970 to 2013; higher productivity growth in Catch-up economies means all developed countries SHOULD be depreciating against them: competitiveness deteriorated much more than RER appreciated.
- Also, Australian financial and trade liberalisation 1983-2000 should have been associated with large depreciation of RER. "Competitiveness" deteriorated more than RER appreciated, although modestly offset by Australia's higher productivity growth in 1990s but not other decades.
- Therefore "economic RER" at much higher levels now than at highest point in 1974.

## 13. Bilateral RER against developed countries:

- Comparisons with developed countries avoids "developing countries catch-up effect" (although greater Australian trade and financial liberalisation from 1983 still means RER understates "economic appreciation").
- Developed countries are Australia's main competitors for the services, high-value manufactures and temperate agricultural products which must carry the weight of Australian export expansion after resources boom.
- Huge Australian real appreciation against US, UK, Euro zone, UK even resource exporters Canada, Norway, NZ.
- Against every developed country, RER well above anything since the \$A float, thirty years ago, and more than 50% above the 1983 average for Japan and the United States.
- Even large appreciation against other resource exporting developed countries, Norway and Canada.

#### 14a. Bilateral RER \$A against \$US



#### 14b. Bilateral RER \$A against Euro



#### 14c. Bilateral RER \$A against UK



#### 14d. Bilateral RER \$A against Japan



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### 14e. Bilateral RER \$A against Canada (resource-intensive economy)



### 14f. Bilateral RER \$A against Norway add (more resourceintensive than Australia)



#### 14g. Bilateral RER \$A against NZ (commodity-intensive economy)



### 15. Exports by sector as share of GDP



Note: Real appreciation ended and reversed strong growth in services and manufactures export growth from early in the reform period to the resources boom.

### 16. Business investment by sector as share of GDP

#### Capex as a % of GDP



Source: Australian Bureau of Statistics



Note: Manufacturing Investment share much lower than low point pre resources boom, in recession of 1990–91.

#### 17. Stock of On–Going Future Resources Investment (RG: Likely not necessarily Likely at high RER)



Source: Bureau of Resources and Energy Economics, Resources and Energy Major Projects, released 22 May 2013.

#### 18. Education



#### 19. Tourism

#### Tourism Levels: Arrivals to Departures (Rolling Annual)

Source: Australian Bureau of Statistics



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#### 20a. Net Exports by sector: beverages



#### 20b. Net Exports by sector: Automobiles



#### 20c. Net Exports by sector: STM



### 20d. Net Exports by sector: processed food



#### 20e. Net Exports by sector: metals



### 21. Adjustment Required Mainly From Real Exchange Rate NOT Expenditure

- Expenditure from fiscal and monetary expansion alone to remove unemployment would lead to unsustainable current account deficit.
- Australian Current Account Deficit already nearly 4% with high terms of trade in December quarter 2012. Fell significantly in March quarter 2013. Sustainably?
- Normalisation of global interest rates adds a percentage point or two.
- Lower terms of trade adds several per cent, higher at worst point.
- Replacing resources investment with less import-intensive expenditure deducts half to 1 per cent.
- Need to add at least several per cent of GDP to net exports of services, manufactures, agricultural products.
- Lower fall in contribution of resources with lower RER can also help.

# 22. Is investment and Exports in Non-Resources Tradables Enough for Full Employment?

- Increased investment and exports in non-resources tradables (with some help from modest moderation of decline in resource investment) the main game in period ahead, induced by sustained fall in RER.
- Signs of growth in non-tradables like housing and retail may not be helpful to post-boom adjustment.
- Switching to tradables production helps employment as well as external constraint.
- Fine tune budget if too little or too much expenditure expansion expenditure, but external constraint means big lift in exports through lower RER essential.

#### 23. How to Lower Real Exchange Rate

- Easing monetary but not fiscal policy (standard international macro).
- Straightforward and uncontroversial first step if there is emerging unemployment and falling general inflation.
- Warranted even if imported inflation from currency depreciation raises inflation above target.
- If RER depreciation induced by lower interest rates, may need higher capital adequacy risk weighting for housing to control housing boom.
- Earlier the better because adjustment lags long in non-resource tradables.

Consider other measures if exchange rate stubbornly high.

#### 24. Making Nominal Dollar Depreciation Real Without Deep Recession

- Reserve Bank looks through import price effects of depreciation.
- Public expenditure not adjusted for higher average prices unless emergence of unemployment says increased expenditure required.
- Avoid pass-through of import prices to incomes: restraint all round.
- Uninhibited productivity-raising reform to minimise fall in living standards.

#### 25. Fall in general living standards and rise in unemployment minimised by:

- Rational investment in productive infrastructure
- Removal of entitlement to benefits of bad regulatory policies
- Efficient taxation of normal business income and rents
- Even handed taxation of all income

- Reform of middle class welfare without reducing incentives for participation
- Economically efficient environmental policies
- Maintain immigration with high skill content
- Good progress on productivity requires reform of Federal financial relations