



Australian Government
Bureau of Resources
and Energy Economics



The Westpac–BREE

China Resources Quarterly

Southern summer ~ Northern winter 2014





Australian Government
Bureau of Resources
and Energy Economics



The Westpac – BREE

***China
Resources
Quarterly***

Southern summer ~ Northern winter 2014

bree.gov.au

© Commonwealth of Australia 2014



This work is copyright, the copyright being owned by the Commonwealth of Australia. The Commonwealth of Australia has, however, decided that, consistent with the need for free and open re-use and adaptation, public sector information should be licensed by agencies under the Creative Commons BY standard as the default position. The material in this publication is available for use according to the Creative Commons BY licensing protocol whereby when a work is copied or redistributed, the Commonwealth of Australia (and any other nominated parties) must be credited and the source linked to by the user. It is recommended that users wishing to make copies from BREE publications contact the Executive Director, Bureau of Resources and Energy Economics (BREE). This is especially important where a publication contains material in respect of which the copyright is held by a party other than the Commonwealth of Australia as the Creative Commons licence may not be acceptable to those copyright owners.

The Australian Government acting through BREE has exercised due care and skill in the preparation and compilation of the information and data set out in this publication. Notwithstanding, BREE, its employees and advisers disclaim all liability, including liability for negligence, for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying upon any of the information or data set out in this publication to the maximum extent permitted by law.

ISSN 978-1-921516-05-4 (Print)

ISSN 978-1-921516-07-8 (PDF)

Postal address:
Bureau of Resources and Energy Economics
GPO Box 1564
Canberra ACT 2601 Australia

Email: info@bree.gov.au
Web: www.bree.gov.au

Acknowledgements

This publication was jointly undertaken by the Bureau of Resources and Energy Economics (BREE) and Westpac Institutional Bank, a division of the Westpac Group. The relationship is non-commercial.

Editors

Westpac: Huw McKay.

BREE: Kate Penney and Tom Shael.

Design and production

Julie Doel and Tom Shael

Cover image

Shutterstock

This report was finalised on 10 February 2014.

Contents

Acknowledgements	iii	Nickel	46
Contents	iv	Zinc	49
Acronyms and abbreviations	v	Lead	52
Foreword	vi	Tin	54
Executive summary	1	Molybdenum	55
Recent developments in the Chinese economy	2	Tungsten	56
General macroeconomic indicators	10	Cobalt	57
Resource related macroeconomic indicators	12	Antimony	58
Steel	14	Platinum and Palladium	59
Iron ore	16	Mineral sands	60
Metallurgical coal	20	Rare earth oxides	61
Energy overview	22	Manganese and Cadmium	62
Thermal coal	24	Diamonds and Magnesium	63
Oil	27	Mineral and energy import summary	64
Gas	30		
Uranium	32	Provincial distribution of energy and resource related activity	
Gold	34	Electricity output & consumption	66
Silver	37	Coal and gas	67
Copper	38	Ferrous metals	68
Aluminium	41	Alumina and aluminium	69
Alumina	43	Copper and gold	70
Bauxite	44	Nickel and zinc	71

Acronyms and abbreviations

ABS	Australian Bureau of Statistics
ASEAN	Association of Southeast Asian Nations
AUD, \$A	Australian dollar
bcm	billion cubic metres
BREE	Bureau of Resources and Energy Economics
CEIC	Chinese Economic Information Company
CFR	Cost including freight
CNY	Chinese yuan
cm	cubic metres
dltu	dry long tonne unit
FDI	foreign direct investment
FOB	free on board
FX	Foreign exchange
G3	United States, Europe and Japan
GDP	gross domestic product
GFC	global financial crisis
GFCF	gross fixed capital formation
GCF	gross capital formation
IEA	International Energy Agency
IMF	International Monetary Fund
koe, mtoe	kilogram of oil equivalent, million tonnes of oil equivalent
kgpp	kilograms per person
kWh	kilowatt hour
LNG	liquefied natural gas
Mt	million tonnes
na	not available
NAR	net as received
NIEs	Newly Industrialised Economies (Singapore, Taiwan, Hong Kong, South Korea)
ODI	outward direct investment
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
PMI	Purchasing Managers Index
PPP	purchasing-power parity
ppt	percentage point
RMB	Chinese Renminbi
SHIBOR	Shanghai Interbank Offered Rate
sqkm	square kilometres
USD, US\$	United States dollar

Growth rate conventions and abbreviations.

"Year-ended growth", abbreviated %yr, is the level of an indicator in a single period (a month or quarter) versus the corresponding period in the prior year, expressed as a percentage.

The term "smoothed growth" should be understood to represent a 3 month moving average (3mma) of the year-ended growth rate.

"Year-to-date growth", abbreviated %ytd, is the accumulated level of an indicator at a point in the calendar year (for example year-to-June, year-to-Sep) versus the corresponding point in the prior year, expressed as a percentage.

"Annual average growth", abbreviated %ann, is the level of an indicator over four quarters, versus the previous four quarter period, expressed as a percentage.

"Month-on-month and quarter-on-quarter growth", abbreviated %mth or %qtr, is the level of an indicator in one period, versus the immediately prior period, expressed as a percentage.

"Annualised growth or annualised rate", is the change in an indicator in a single period grossed up to a year, expressed as a percentage. If seasonally adjusted, this may be rendered as %saar.

Foreword

Welcome to the Southern summer ~ Northern winter edition of the Westpac–BREE **China Resources Quarterly** – hereafter the **CRQ**. The **CRQ** is a ‘first of its kind’ collaborative research venture between the Westpac Institutional Bank (hereafter Westpac) and the Bureau of Resource and Energy Economics (hereafter BREE).

The **CRQ** is the primary reference point for public and private sector decision makers seeking to understand developments in the Chinese economy, with special reference to its demand for resources.

We are pleased to announce that the commodity coverage in the **CRQ** has been expanded to include a significantly wider range of materials. The new additions include rare earth oxides, mineral sands, bauxite, alumina, diamonds, platinum and cobalt, among others.

This edition has been compiled against a backdrop of anxiety in the China watching universe, with a mild slowdown in the real economy coupled to the perception of growing financial risks. Now more than ever it is vital to trade in fact rather than rumour. The **CRQ** aims to do its part in this regard by making available rigorous and empirically grounded analysis of macroeconomic and resource demand trends.



Bill Evans

Chief Economist, Westpac



Bruce Wilson

Executive Director, BREE

Executive summary

The Chinese economy grew at a rate **close to its potential** in 2013 as a whole and in the December quarter alone. The general impression left by the flow of data since the previous edition of **CRQ** has been one of modest deterioration. The respectable performance observed in the **September quarter** is now looking very much like the peak for growth momentum in the current cycle phase.

Growth in **heavy industrial capacity** stabilised in the second half of the year, having slowed markedly in the first. Countering that, **investment in transport infrastructure** has been on a decelerating trajectory. Transport projects had been in the vanguard of the 2012/13 recovery, but the pipeline is no longer being replenished at a rate sufficient to maintain strong growth rates deep into 2014.

Real estate investment has improved throughout the year, with **housing starts** now showing clear signs of responding to the upswing in property sales. Housing prices and sales turnover have proved resilient to direct and indirect policy pressure up to the time of writing.

Heavy industrial output has just completed a strong second half with power generation, steel, cement and auto production all accelerating from their first half growth rates. **Inventories are not as lean as they were a quarter ago**, but they remain at perfectly manageable levels.

China's exports to advanced markets are now growing faster than its total shipments, with Europe's contractionary influence lessening and the US and Japan both now growing at reasonable rates. **China's imports from commodity producing countries** are rising faster than its overall import bill, while machinery imports have been sluggish throughout the year.

In the monetary and financial sphere, **interbank funding markets have presented a fragile facade** ever since the policy induced squeeze of June 2013. One consequence of tighter liquidity has been that **credit supply to the corporate sector has been inconsistent**. Another has been **rising stress in the trust sector**. New estimates of the public debt stock have also been released, with the **gross figure of 58% of GDP** split roughly 40/60 between central and local government.

In terms of external finance, the **second half saw strong capital inflows**, which contributed to a 7.8% real trade weighted currency appreciation over the year. The People's Bank has indicated that its preference is to withdraw from the onshore foreign exchange market, given its assessment that the **marginal costs of reserve accumulation now exceed the benefits**.

Despite the moderation in economic growth rates, **China's resources and energy use maintained an upward trajectory in 2013**. Steel production increased by 9% to a record 775 Mt, contributing to iron ore imports reaching a record 820 Mt. Notwithstanding the implementation of policies to curb coal use, coal consumption also increased 2.6% to 3.61 billion tonnes in 2013.

Australia continued to play an important role in meeting the growth in China's consumption, with increased export volumes registered across most commodities. Australia exported a record 442 Mt of iron ore and 42 Mt of thermal coal to China in 2013. Imports are playing an even more important role in meeting China's overall mineral and energy demands, and **in many commodity markets Australian producers have increased their market share** in volume terms. This factor has mitigated the impact of lower prices on overall export earnings.

Recent developments in the Chinese economy

The Chinese economy grew at a rate close to its potential in 2013. The general impression left by the flow of data since the previous edition of **CRQ** has been one of modest deterioration. The respectable performance observed in the September quarter is now looking very much like the peak for growth momentum in the current cycle phase.

Real GDP expanded by 7.7% in the calendar year and by 7.7% year-on-year in the December quarter alone. That latter pace compares to 7.8% year-on-year in the September quarter, 7.8% in calendar 2012 and 9.3% in 2011. Nominal GDP improved narrowly, following the steep uplift of the previous quarter. The second half improvement broke a run of five consecutive quarters where nominal activity failed to expand at a double digit pace – the first such episode since the deflationary late 1990s.

Looking at the breakdown of real activity from the production side of the accounts, primary output improved (4.0%ytd from 3.4%ytd in Q3) while both secondary (7.80%ytd from 7.85%ytd in Q3) and tertiary activity (8.35%ytd from 8.30%ytd in both Q1 & Q2) shed a tiny bit of altitude. The tertiary activity share of GDP has increased by 1.4ppts from the position at the end of 2012, principally at the expense of secondary industry.

Contributions to full year economic growth in terms of expenditure were 3.9ppts from final consumption (3.5ppts in the first three quarters); 4.2ppts from investment (4.3ppt in the first three quarters); and net exports at -0.3ppt (-0.2ppts in the first three quarters).

Real urban fixed investment (the monthly series deflated by the relevant national accounts price index) slowed abruptly in Q4, from 20.3%yr in Q3 to 18.7%yr. In terms of the sectoral composition, on a nominal basis, growth in heavy industrial capacity levelled out in the second half following a material slowdown in the first. Investment in transport projects slowed further, confirming conclusively that growth in this category of capex has peaked. The growth of utilities investment increased over the December quarter. Real estate investment has accelerated a little, with housing starts gradually improving in lagged response to strong sales (of which more below). State-owned enterprises contributed 29.1% of the growth in fixed investment in 2013, up from 26.8% in 2012.

Figure 1: Key economic indicators

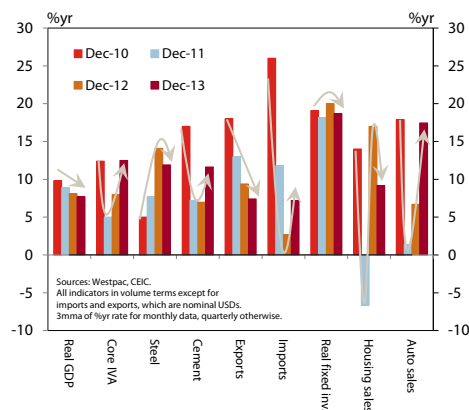


Figure 2: Various elements of the national accounts

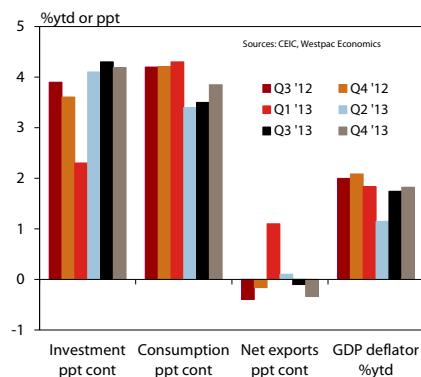
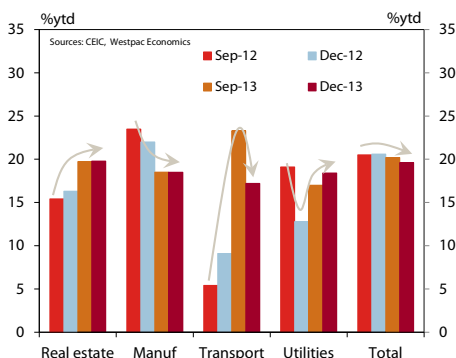


Figure 3: The investment cycle: a sectoral view



Rather than relying on GDP alone to assess the state of the Chinese economy, it is prudent to complement the national accounts with a range of alternative indicators that correlate with overall activity. Doing so provides a richer and more complete picture of macroeconomic trends. For the real economy (as opposed to the monetary–financial sphere, which will be dealt with subsequently) these data fall into three broad categories. They are (1) nationwide surveys (2) economy wide measures of intermediate input, and (3) bellwether industry sectors that map the broader economic cycle. Additionally, balance sheet information from the government and corporations contain relevant insights on underlying growth.

In the previous edition of **CRQ** we argued that the ‘proxies’ implied that activity growth was no weaker than the GDP figures indicated, and was possibly a little stronger. At present, a balanced reading of the alternative indicators suggests that the official GDP figures, abstracting from quarterly volatility, are providing a reasonable approximation of the true underlying state of affairs. In other words, the first clause remains apt but the final clause - ‘possibly a little stronger’ - is no longer required.

The People’s Bank of China’s corporate survey is the most valuable resource in category (1). The largest firms in the country gauge that business conditions were narrowly above their long run average in the December quarter. The two previous surveys described conditions as marginally below average.

In category (2), alongside the traditional proxy of electricity output, logistics volumes provide additional insight. As of December 2013, the smoothed year–ended growth rate of these proxies was 11.5% (electricity); 9.7% (terrestrial freight) and 6.2% (aquatic freight).

In category (3), the real estate industry – especially its construction arm – is the bellwether of choice. It is considered in detail on the following page.

Regarding balance sheets, the smoothed year–ended growth rate of central government revenues was 10.2% in Q4. The profit margins of industrial enterprises (manufacturing, mining and utilities) widened late in the year. Corporate revenue growth has been steady in the low double digit range.

Figure 4: Business conditions, orders & GDP

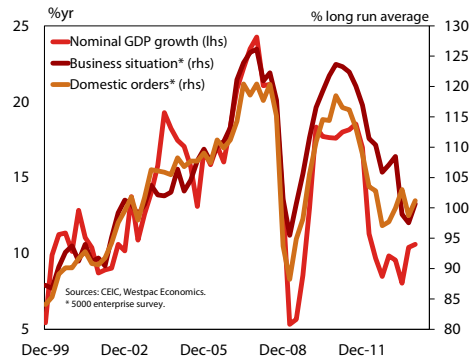


Figure 5: Selected aggregate activity proxies

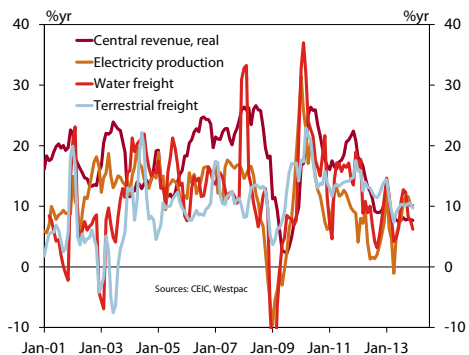
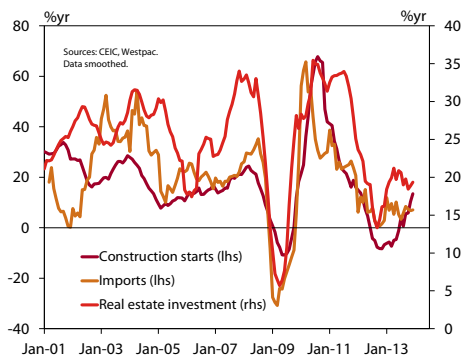


Figure 6: Selected aggregate activity proxies



The real estate sector

Real estate represents around one quarter of nominal urban fixed investment. Real estate investment itself is split roughly 70/30 between residential and non-residential. State-owned enterprises represent around 15% of the total.

Nominal real estate investment grew by 19.8% in 2013 as a whole. In year-ended terms it was expanding at a 22.3% clip in December 2013. That compares to 19.4% in June 2013 and 12.4% at the end of 2012. Dwelling investment alone grew at 22.5%, 18.7% and 7.1% at those respective points.

Housing sales and prices have both enjoyed a considerably stronger year than might have been reasonably supposed in the wake of the controls announced following the National People's Congress in March. These measures did bring about a short-lived pause in the June quarter. However, an accommodative shift in the overall policy stance as the leadership moved to defend their growth target led to strong turnover outcomes across all regions in the second half of the year. While the year-ended pace of sales has come off somewhat (see figure 7) the growth rate has been very resilient given the challenging base effects at play. Prices have responded accordingly. Residential land prices have accelerated to a double digit 6 month annualised growth pace, while the net balance of cities seeing monthly price appreciation has been consistently high, in both the new and secondary markets.

It is likely that Beijing will soon prevail upon all local authorities, not just those in the tier 1 cities, to reinvigorate their efforts to limit further deteriorations in affordability for those on average incomes. We note that 37.8% of respondents to the January MNI China Consumer Sentiment Survey felt it was now a "bad time to buy a house". That is the highest reading since Dec-12.

Regarding construction, new starts have lagged well behind sales for much of this cycle, as private developers used the sales rebound to clear inventory and bolster balance sheets, rather than to finance new building. However, the catch-up in starts predicted in previous editions of **CRQ**, which tentatively began in Q3, took genuine hold in Q4, such that residential building has some positive momentum moving into 2014.

Figure 7: Housing sales: national & regional

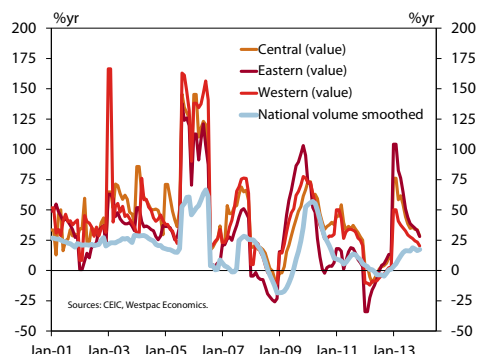


Figure 8: Land prices: total & residential

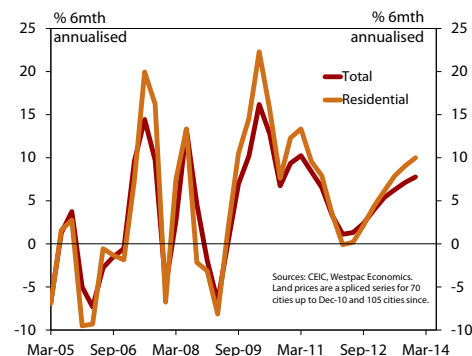
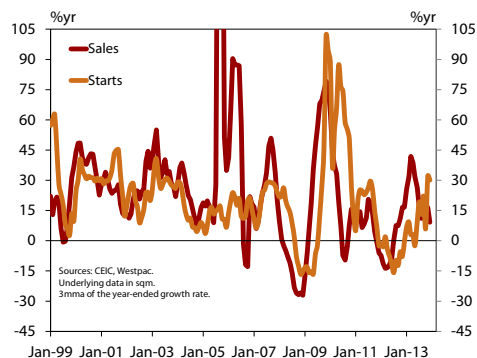


Figure 9: Residential sales & starts: volume



International trade

Gross value-added attributable to the export sector accounts for approximately 17% of China's GDP. So while exports are secondary in importance to the domestic construction cycle as a source of economic growth (and ultimately resource demand) they are far from irrelevant. Indeed, given the large amplitude of historical swings in export growth, at certain times external demand can outweigh the domestic story.

Total exports were mixed in Q4, with a lesser drag from Europe and rebounds in Japan and the US boosting G3 shipments, while intra-Asian and extra-regional emerging markets were less supportive. As of the December quarter, China's exports to the G3 were running at a faster pace than China's overall global shipments. That is a rare occurrence.

The business surveys have been describing an external environment where demand has been contracting modestly, or moving sideways, for most of the year. The "new export orders" sub-index in the two most watched manufacturing surveys (where 50 signifies the dividing line between expansion and decline) averaged 48.0 in Q2, 49.3 in Q3 and 50.1 in Q4. However, the December-January average fell back to 49.1, implying little aggregate progress over the year despite the shifting composition of demand by destination.

Imports of machinery and transport equipment have endured an underwhelming year, expanding at an average rate of 4.4%yr between July and December. The inability of this sector to exhibit something closer to its trend growth derives from weak processing export volumes, excess capacity in the onshore machinery sector and sub-trend equipment outlays by local customers. The value of food imports, which averaged growth of 31% in the three years to December 2012, slowed to a single digit percentage pace in the first three quarters of the year, but were last seen re-accelerating in Q4. Import volumes of crude oil and iron ore are both above their trend paths. Overall imports from commodity producing countries are rising faster than the total import bill; imports from the G3 are growing just above 8%yr; while imports from the NIEs (a proxy for the component and assembly trade) are well below their level of a year ago.

Figure 10: Trade flows by source and destination

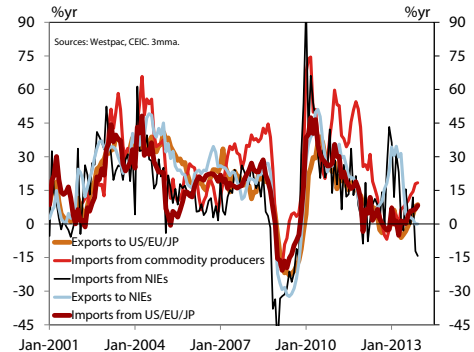


Figure 11: Export orders: survey measures

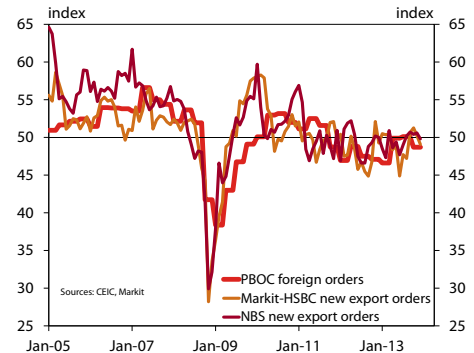
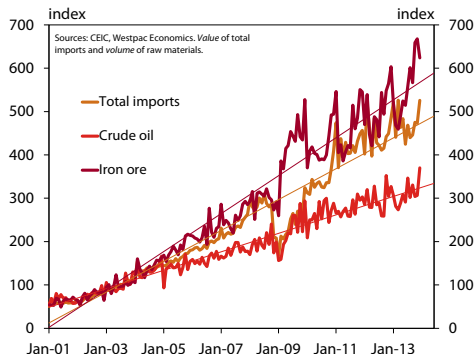


Figure 12: Imports – total & key raw materials



The monetary & financial sphere

China's monetary policy has been in constant flux since 2011. Credit supply reached a very low ebb in 2011Q3, with 'shadow banking' going into reverse and sectoral lending controls in place. Direct loan controls were eased soon after, but other forms of finance remained weak throughout the first half of 2012. However, with growth beginning to gain traction from the middle of that year, 'shadow banking' re-engaged and total credit rebounded smartly. That situation persisted through early 2013, when policy tilted back towards restraint, which led to the dramatic squeeze of late June. Interbank markets have presented a fragile facade ever since.

As for the People's Bank's liquidity operations, it injected a net 114 billion yuan in 2013, a measly portion relative to the 1438 billion injected in 2012. One consequence of less abundant financial system liquidity has been that the supply of credit to the corporate sector has been highly variable in the last half year. In the immediate aftermath of the June disruption, credit took a major hit. August and September were firmer though, encouraging some observers to declare that the earlier stresses had completely receded. The previous edition of the **CRQ** argued that this was unlikely to be the case. Subsequently, it has been observed that new credit supply less local currency bank loans has slowed from 129%yr in April to just 11%yr in December.

Another consequence of tighter liquidity has been rising stress in the trust sector, which sells high yielding, potentially risky products to savers looking to earn more than the still regulated deposit rate. A default-cum-restructuring of one such product received wide coverage at both home and abroad in the month of January.

Separately, China's National Audit Office has released an update on public debt as of June 2013. Interest bearing debt now amounts to 20.7 trillion yuan (40% of GDP). Including guarantees and contingent liabilities the stock rises to 58% of GDP, split roughly 40/60 between central and local government. This puts China at the upper end of the observed range for emerging economies, which is not good; however, there has never been an emerging economy with such a formidable international balance sheet, which provides some rational cause for comfort.

Figure 13: Total credit supply growth – new flows

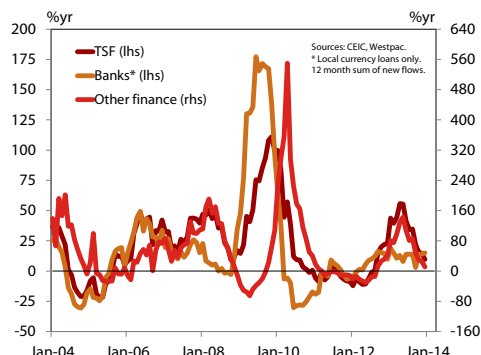


Figure 14: Interbank markets: volume & price

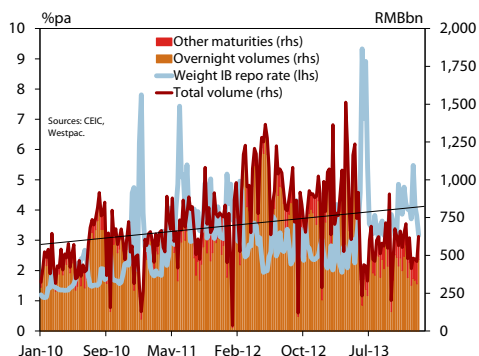
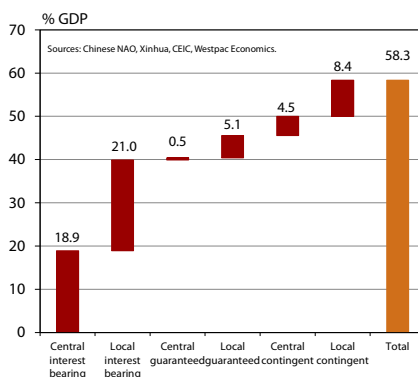


Figure 15: China's public debt as of June 2013



External finance & the currency

The bilateral exchange rate with the US dollar has appreciated by a cumulative 33% since the peg exit in June 2005. The real effective exchange rate, which measures the nominal trade weighted move in the CNY while also accounting for relative inflation, has appreciated by 40% over the same time frame. The real effective CNY has appreciated by 7.9% over the year to December 2013, while USD/CNY has fallen by 3.0% (an appreciation of the yuan). Around $\frac{3}{4}$ percentage points of that gap is attributable to higher relative inflation in China over the year (note that this contribution was above 1ppt ahead of a December drop in food price inflation). The remainder is due to appreciation against China's non-US trading partners, most notably the Japanese yen (due to Abenomics) and the emerging markets universe (particularly those currencies 'supported' by current account deficits, which found the going very tough through the "QE tapering" episode).

The observed strengthening of the spot exchange rate is consistent with both the overall bias to tighten monetary policy and China's structural balance of payments surplus. Modest appreciation has been accommodated by the authorities despite a soft performance by the export sector, as described on page 5. Despite the appreciation trend, non-deliverable forward markets (NDFs), which represent market expectations of the future level of USD/CNY, continue to predict yuan depreciation over a 12 month horizon. These expectations reached a peak of negativity in late June, when depreciation of almost 3% was anticipated. Depreciation expectations gradually receded from there, falling below 1% on October 3rd. The 12 month NDF has averaged 0.985% since.

The capital flow backdrop passed through three distinct phases in 2013. Inflows were very strong from January to April, while large outflows occurred in May and June. Reserve accumulation then picked up again in Q3 and Q4, rising by \$US166bn in the former and by \$US159bn (to \$US3822bn) in the latter. The People's Bank of China has announced that it would like to withdraw from active participation in the onshore foreign exchange market, arguing that the marginal costs of reserve accumulation now exceed the benefits.

Figure 16: The exchange rate: broad & bilateral

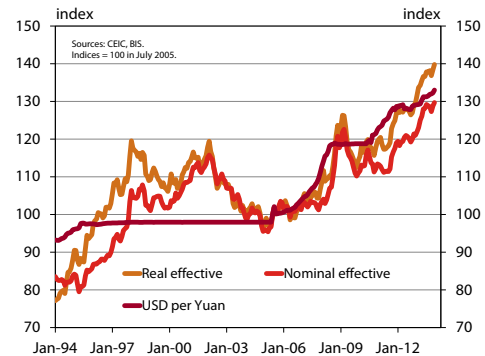


Figure 17: Currency movements & food inflation

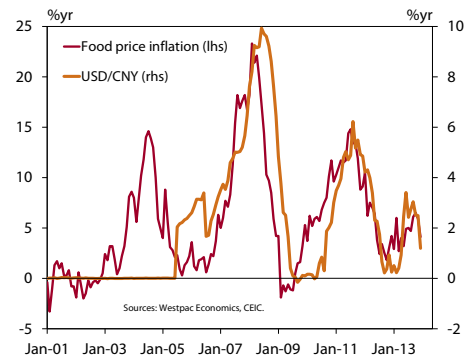
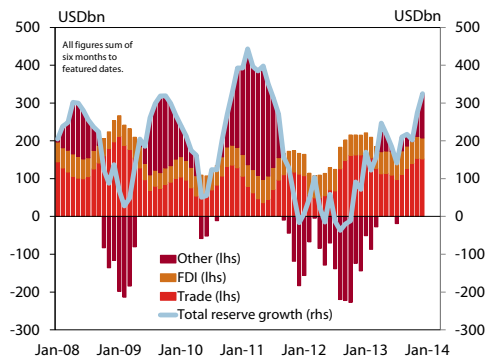


Figure 18: FX reserves: contributions to change



Heavy industry

As heavy industrial output (and investment in new capacity) is essentially a measure of 'derived demand' from other sectors, it is a reactive variable in the medium term forecasting framework. However, when the time horizon is shorter, swings in heavy industrial activity can be responsible for much of the volatility observed in the aggregate data. As the major direct consumer of raw materials and a key provider of intermediate goods for use elsewhere in the supply chain, an understanding of heavy industry is vital to a full comprehension of China's resource demand.

Total industrial value-added expanded at a year-ended rate of 10.0% in the December quarter, which compares to 10.1% three months ago, and an even 10% at the end of 2012. The comparison growth rates for a weighted sub-set of heavy industries, (see the 'core' time series in Figure 19), are 12.5%, 11.8%, and 8.0% respectively. We feel that this 'core' measure tells a more realistic story of the volatile course taken by industrial activity over this period. The rebound in the 'core' index from its 2012 lows was broad based. In the most recent observations auto production is leading the way, reflecting a firmer sales environment. As of December 2013, the smoothed growth rates of power generation, cement and steel output are grouped in a narrow range from 10% to 12%.

The two manufacturing PMI surveys are sending discordant signals on the inventory cycle at present (figure 20). Data from the various industry associations is more reliable than the business surveys but it is also less timely. This information points to a less favourable inventory-to-sales environment for basic materials firms in late 2013 than was evident when we compiled the previous edition of the **CRQ**, but the situation appears very manageable (see figure 30 on page 15 for steel product inventory-to-sales). The improving dynamic in downstream manufacturing evident three months ago persists, although the sales environment is unlikely to support a strong uplift in production any time soon. Official figures on inventories are broadly in line with that characterisation, as are anecdotes from global machinery firms. Capital equipment and machinery prices have been falling for two years now, but the rate of deflation has lessened considerably recently, a sign that excess inventory is no longer present.

Figure 19: Core & headline industrial production

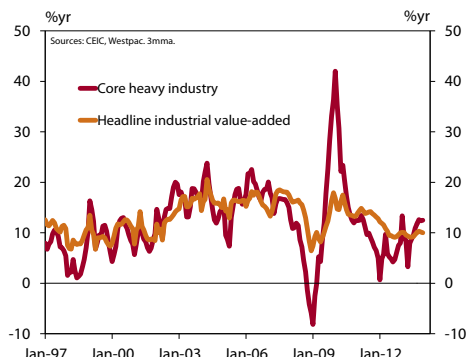


Figure 20: Manufacturing inventories & orders

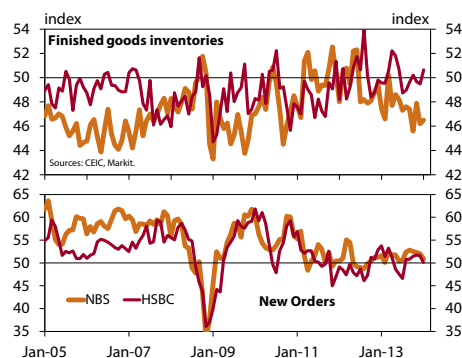
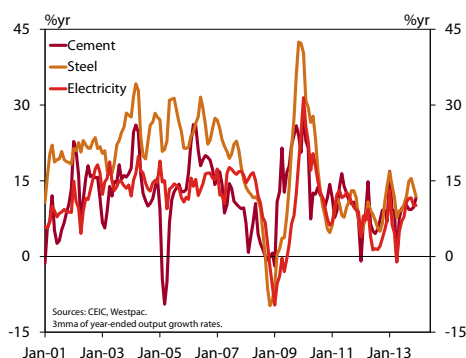


Figure 21: Heavy industrial bellwethers



The household sector

China's urban consumers had shown distinct signs of animation in late 2012 and early 2013, with housing and auto sales moving along nicely, healthy demand for credit and a tangible shift towards greater optimism in survey responses. Surveyed levels of confidence reversed course in Q2 though, as sentiment towards current income moved adversely and confidence in future income fell. The downbeat assessment of current income spilled into Q3, but expectations of future income lifted, consistent with tentative evidence that the labour market firmed a little in Q3. Subsequently, overall sentiment lifted in material fashion in Q4, with current perceptions of personal finances and the labour market both turning higher.

Housing and auto sales are the two most reliable gauges of household activity available on a monthly basis. The development of the housing sales cycle was covered on page 4. As for surveyed purchasing intentions, the same proportion of consumers were planning a housing purchase in both Q3 and Q4. House price expectations (six months ahead) have been above their long run average in every month since July (inclusive). Regarding autos, sales have been running at an average annualised pace of 22.0 million units in the second half of this year. That compares to a 19.0 million pace in the second half of 2012. In year-ended percentage terms, Q4 sales increased by 17.5%, up from 13.3%yr a quarter ago. Surveyed car purchase intentions had diminished sequentially for three straight quarters (Q1-Q3), but they turned higher in Q4, which proved to be a reliable signal. Further, 'durables buying conditions', a sub-indicator of the MNI Consumer Sentiment Survey that has a strong relationship with auto sales, rose from below average to above in October, and stayed there through January.

Official labour demand-supply ratios imply that the national job market improved a little in Q4, on top of the modest gain reported for Q3. Conditions are now back where they were at the outset of the year. An alternative measure of labour market conditions, from MNI, shows that consumer perceptions of the employment outlook were substantially below average in June and July; back at average in September; and clearly above average from October to December.

Figure 22: Housing and auto purchases

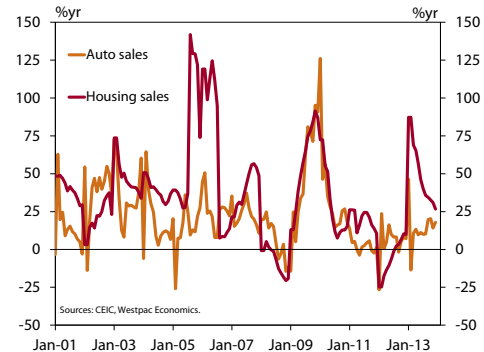


Figure 23: Household income, spending & retail

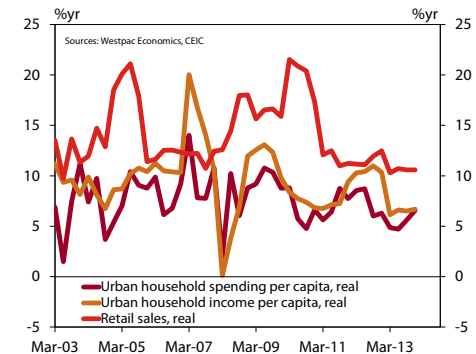


Figure 24: Consumer sentiment: income & jobs

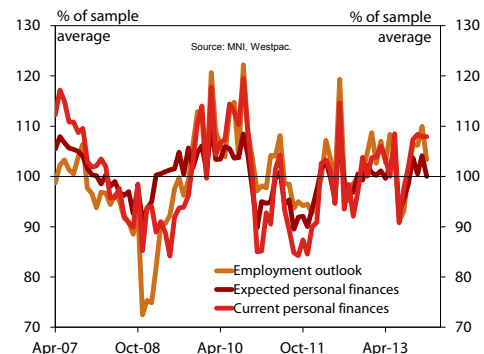


Table I: General macroeconomic data

Quarterly	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Real GDP %yr	9.8	9.7	9.5	9.1	8.9	7.9	7.6	7.4	7.9	7.7	7.5	7.8	7.7
Nominal GDP %yr	17.6	18.0	18.1	18.5	17.0	11.2	9.6	8.4	10.1	9.6	8.0	10.6	10.6
Contributions to real GDP percentage points ytd													
Final consumption expenditure	4.5	6.1	5.1	5.0	5.3	6.4	4.7	4.2	4.2	4.3	3.4	3.5	3.9
Gross capital formation	5.5	3.8	4.6	4.4	4.4	2.4	4.0	3.9	3.6	2.3	4.1	4.3	4.2
Net exports	0.4	-0.1	0.1	0.1	-0.4	-0.7	-0.9	-0.4	-0.2	1.1	0.1	-0.1	-0.3
Secondary industry %ytd	12.3	10.8	10.6	10.6	10.3	8.9	8.2	7.9	7.9	7.8	7.6	7.8	7.8
Tertiary industry %ytd	9.8	9.7	9.7	9.5	9.4	7.4	7.7	7.9	8.1	8.3	8.3	8.4	8.4
Current Account %GDP	3.9	3.4	3.2	2.5	1.8	2.1	2.1	2.5	2.3	2.6	2.5	2.1	2.6
GDP deflator %yr	7.8	8.3	8.6	9.4	8.1	3.2	2.0	1.0	2.2	1.8	0.5	2.8	2.9
Fixed investment deflator %yr	5.4	6.5	6.7	7.3	5.7	2.3	1.6	0.2	0.3	0.2	-0.1	0.0	0.9
Land price index %yr	11.1	8.5	8.9	8.4	5.8	3.8	2.3	1.7	2.6	3.9	5.1	6.2	7.0
Consumer price index %yr	4.7	5.1	5.7	6.3	4.6	3.8	2.9	1.9	2.1	2.4	2.4	2.8	2.9
Non-food %yr	1.9	2.5	2.9	2.9	2.3	1.8	1.5	1.5	1.7	1.8	1.6	1.6	1.6
Central revenue 4qma %yr	21.3	21.9	24.1	27.1	25.0	20.2	14.7	10.9	12.8	10.7	10.1	10.8	10.2
Central expenditures 4qma %yr	17.8	20.3	23.7	22.5	21.6	23.2	18.1	18.2	15.1	11.6	10.8	7.5	11.2
Central operating position 4qma %GDP	-1.7	-1.0	-0.9	-0.7	-1.1	-1.6	-1.6	-2.2	-1.6	-1.8	-1.8	-1.5	-1.9
Money supply M2 %yr	19.7	16.6	15.9	13.0	13.6	13.4	13.6	14.8	13.8	15.7	14.0	14.2	13.6
Bank loans (stock) %yr	19.9	17.9	16.9	15.9	15.8	15.7	16.0	16.2	15.0	14.9	14.2	14.3	14.1
Total credit supply (new, rolling annual) %GDP	34.9	32.9	31.6	28.4	27.1	25.8	26.0	29.2	30.3	34.0	33.6	32.6	30.4

Table 1 continued on page 11

Table I: General macroeconomic data

Quarterly

	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Exports %yr	24.9	26.4	22.0	20.5	14.3	7.6	10.5	4.5	9.4	18.3	3.7	3.9	7.4
to G3	23.3	19.7	16.3	16.6	11.5	7.0	6.8	-4.9	-1.6	3.4	-4.9	2.6	9.4
to Asia ex Japan	23.8	30.9	25.8	22.5	14.6	9.2	12.1	13.4	21.7	36.7	15.2	7.5	6.9
to Australia	29.9	26.5	32.2	26.2	15.6	10.5	15.1	7.6	12.4	5.7	-5.3	3.0	-1.5
to non-Asian emerging markets	39.2	29.7	32.4	29.4	24.7	15.5	16.7	11.7	10.2	22.2	0.4	-1.4	5.9
Imports	29.5	32.8	23.1	24.8	20.6	7.1	6.5	1.6	2.7	8.5	5.0	8.4	7.2
from G3	27.2	29.7	18.4	16.9	10.6	4.3	1.6	-0.9	-4.3	-0.8	-0.1	4.3	8.1
from Asia ex Japan	26.1	27.9	21.9	23.5	19.9	10.7	3.2	3.8	10.9	17.5	8.1	7.3	1.5
from Australia	63.0	48.5	34.5	39.9	29.7	18.0	19.0	-8.3	-8.1	7.5	9.1	19.0	33.5
from non-Asian emerging markets	30.6	45.0	26.8	38.5	42.4	26.0	24.6	4.9	-1.7	-0.9	-6.8	4.9	6.3
Trade balance USDbn	63.1	-0.7	46.7	63.8	48.1	1.1	68.8	79.5	83.3	43.5	65.7	61.5	90.5
Change in FX reserves USDbn	199	197	153	4	-21	124	-65	45	26	131	54	166	159
Enterprise survey – net balance													
Business conditions	71.4	71.1	70.6	69.3	67.5	64.4	63.7	61.1	61.8	62.6	57.1	56.3	58.1
Profitability	61.1	58.2	58.7	57.6	55.5	51.2	52.6	51.4	53.1	52.8	55.6	55.1	57.6
Domestic orders	57.9	56.9	56.7	55.3	53.2	50.5	50.2	47.4	47.7	48.8	50.3	48.2	49.4
Foreign orders	52.0	51.1	52.5	51.6	48.7	46.9	48.8	47.5	47.1	46.6	49.9	50.1	48.7
Banking climate – % of long run average													
Demand for loans	102.6	105.2	102.3	102.5	98.6	98.3	87.4	82.5	87.8	95.6	89.5	92.2	91.9
Ease of policy stance	94.2	70.7	63.8	64.0	76.6	106.3	121.8	130.2	134.5	140.2	142.2	127.7	131.5
Willingness to lend (corporate perception)	106.0	96.1	89.0	84.1	82.0	90.6	94.5	100.9	103.6	107.1	128.6	124.8	–
MNI Consumer Sentiment – % of long run average													
Headline composite	93.4	97.2	97.7	91.0	93.6	100.9	106.8	93.9	100.3	99.0	102.3	97.1	102.5
Real estate composite	104.9	103.0	103.4	99.1	96.5	97.9	106.2	93.6	98.8	102.2	101.0	104.2	101.2
Auto composite	95.8	88.8	93.2	96.0	101.1	96.9	98.7	101.3	98.2	105.7	105.7	101.4	102.0
Employment outlook	97.1	104.2	98.6	95.0	92.7	107.2	119.3	98.6	104.5	107.0	104.6	100.7	109.9

Source: Westpac Economics, CEIC, MNI.

Table 2: Resource related economic indicators

Monthly	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Industrial production %yr 3mma	10.1	10.0	9.6	9.4	9.1	9.1	9.1	9.3	9.7	10.1	10.3	10.2
Electricity	13.2	6.3	4.6	-1.1	4.9	6.9	6.9	7.9	10.8	11.5	11.6	10.1
Processed crude oil	8.9	6.5	5.6	4.2	4.0	5.2	5.2	6.4	7.5	4.0	2.6	-0.3
Cement	16.9	9.0	9.1	-1.1	7.6	9.5	9.5	10.0	10.2	9.3	9.3	9.8
Steel products	16.8	14.0	11.7	7.7	9.1	9.1	9.1	10.3	12.0	14.9	15.5	13.6
Non-ferrous metals	15.7	13.7	13.2	11.4	11.3	9.3	9.3	8.3	6.8	7.5	8.1	10.5
Automobiles	18.7	12.1	14.8	4.1	13.7	12.4	12.4	12.1	12.5	14.4	17.6	20.9
Civilian ships	-18.1	-18.3	-12.5	-18.8	-22.3	-34.2	-34.2	-27.3	-20.6	-11.2	-22.2	-21.7
Metal cutting tools	50.3	57.5	52.9	36.0	30.9	11.2	3.1	-4.0	4.2	2.0	3.6	6.5
	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Fixed asset investment %yr 3mma	20.0	20.4	21.3	20.8	20.3	19.8	19.9	20.5	20.4	20.1	18.8	18.0
Manufacturing, of which	16.7	15.9	18.0	18.2	18.1	16.5	16.3	18.2	20.6	22.7	19.9	16.4
Heavy industry	16.0	15.4	18.9	19.4	19.3	15.8	14.9	16.8	19.5	22.2	18.4	15.6
Hard infrastructure, of which	18.4	22.0	24.7	24.1	24.5	22.8	23.9	25.5	25.2	22.3	20.6	20.2
Highways	36.9	32.3	22.2	20.1	20.5	19.0	23.3	27.3	29.9	23.6	20.5	15.2
Railways	14.0	10.5	5.7	24.6	30.9	34.1	15.2	11.0	1.4	-6.4	-12.6	-0.3
Utilities	3.0	9.9	16.9	14.0	9.8	13.3	20.4	23.1	21.1	16.6	19.1	25.3
Real estate, of which	20.1	22.6	25.1	18.9	15.7	13.0	13.2	12.8	13.6	15.6	19.4	18.8
Dwellings	21.2	19.3	21.1	21.2	20.1	20.7	20.0	17.9	18.9	16.8	19.8	19.8
Non-residential	24.8	31.4	36.0	30.6	27.9	24.8	25.0	26.8	28.2	27.5	30.8	30.9
Off-market urban construction	26.7	37.5	16.4	17.4	21.1	20.5	11.6	11.4	-1.8	2.1	29.5	59.4
	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
Value of new project starts	28.2	15.2	12.0	14.6	16.3	27.1	18.4	14.5	4.1	13.6	8.8	15.0
Number of new project starts	14.6	18.4	10.9	9.3	8.8	17.5	15.5	6.7	1.0	6.2	16.0	9.2
Local government projects	22.0	22.4	22.0	21.6	20.9	20.5	20.2	21.0	21.0	20.9	18.6	17.7
Central government projects	0.5	0.1	10.0	9.6	11.6	8.5	15.3	13.0	11.7	8.1	21.9	23.7
State owned enterprise investment	15.0	15.5	18.0	18.1	17.6	16.4	16.9	18.3	17.7	15.7	13.8	14.6

Table 2 continued on page 13

Table 2: Resource related economic indicators

Monthly	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
%yr 3mma unless otherwise specified												
Volume of housing starts	6.8	9.4	3.1	3.0	-2.4	9.1	19.3	13.1	22.1	5.9	32.2	30.1
Volume of housing sales	25.4	31.8	41.9	38.8	31.7	26.5	17.2	11.1	15.1	15.0	16.6	9.2
Value of housing sales – Nationwide	35.8	61.5	81.1	73.8	63.7	56.0	47.6	40.5	36.7	34.3	32.7	30.1
Eastern provinces	43.5	73.8	97.0	87.7	74.6	64.1	53.3	44.5	39.7	36.8	34.8	31.9
Central provinces	32.1	54.1	70.3	65.4	58.3	53.6	45.9	39.2	36.3	34.8	34.4	32.0
Western provinces	18.2	34.1	47.0	42.8	37.8	35.2	32.4	29.9	27.9	26.2	24.8	22.7
Volume of land sales	1.2	-10.6	-21.4	1.4	-0.5	8.0	27.6	22.2	40.2	1.4	49.5	32.0
70 city new house prices net % rising m-o-m	71.4	92.9	95.7	94.3	88.6	84.3	85.7	90.0	84.3	91.4	91.4	88.6
Auto sales	20.6	13.3	14.5	3.5	11.2	11.4	10.2	10.5	13.3	16.8	18.1	17.5
Excavator sales	-13.8	-26.6	-24.0	-20.7	1.8	4.2	4.9	7.2	12.3	18.3	20.6	22.4
Bulldozer sales	40.0	23.5	0.7	-1.6	9.7	1.5	-1.4	1.0	3.8	-8.3	-17.0	-
Terrestrial freight	14.0	10.9	9.2	7.4	9.0	9.8	10.3	10.2	10.1	10.5	10.5	9.7
Aquatic freight	12.8	9.9	7.8	4.2	4.7	6.5	10.8	12.7	12.3	8.3	7.6	6.2
International air freight	40.5	12.4	16.2	-14.7	11.7	9.8	6.6	4.3	1.1	7.6	9.0	11.8
Manufacturing PMI – index – of which												
Output	50.1	50.9	50.6	50.8	50.1	50.3	51.0	51.1	51.4	51.4	51.0	50.5
New orders	51.2	52.7	52.6	53.3	52.0	52.4	52.6	52.9	54.4	54.5	53.9	53.0
New export orders	50.1	52.3	51.7	51.8	50.4	50.6	52.4	52.8	52.5	52.3	52.0	50.9
Order backlog	47.3	50.9	48.6	49.4	47.7	49.0	50.2	50.7	50.4	50.6	49.8	49.3
Raw material inventories	44.4	47.1	43.6	44.9	42.9	44.7	44.8	46.2	45.5	45.3	45.1	45.7
Finished goods inventories	49.5	47.5	47.5	47.6	47.4	47.6	48.0	48.5	48.6	47.8	47.6	47.8
Purchases of inputs	46.6	50.2	47.7	48.6	48.2	47.3	47.6	47.4	45.6	47.9	46.2	46.5
Imports	50.2	51.9	51.0	51.5	49.5	50.0	52.0	52.5	52.7	53.6	52.7	51.0
New orders to finished goods inventories ratio	48.1	48.9	48.7	50.3	47.9	48.4	50.0	50.4	50.0	50.5	49.0	48.2
	1.08	1.04	1.08	1.07	1.05	1.07	1.10	1.11	1.15	1.09	1.13	1.09

Source: Westpac Economics, CEIC.

Steel

- Average prices for steel in China were down in Q4, with steel plate recording the heaviest slide of 3.7%qtr. Rebar and wire rod prices were flat for the quarter, coming off a comparatively poor Q3 relative to other steel products. Prices ended the quarter at around RMB3500 (RMB4300 for cold-rolled sheet).
- Steel production in China was 188 Mt in Q4, the lowest quarterly total for the year, but still higher than every quarter of 2012.
- CISA forecasts that China's steel production will total 810 Mt in 2014, up from 775 Mt in 2013, with apparent demand (output minus net exports) expected to total 750 Mt.

Figure 25: Benchmark steel prices

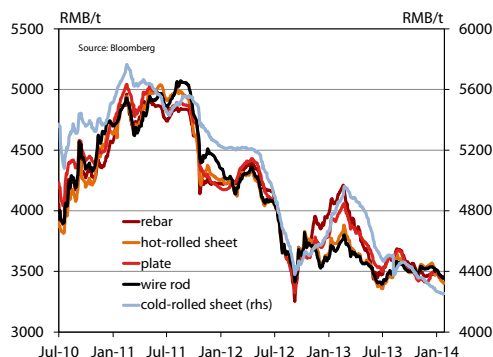


Figure 26: Crude steel output: level & growth

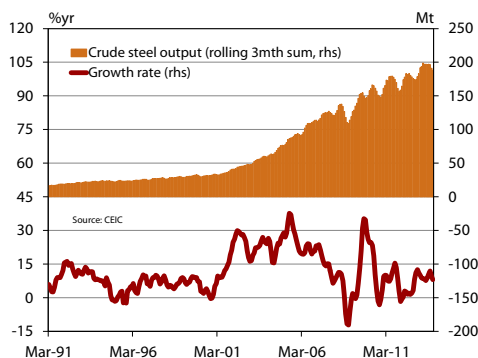


Figure 27: The rebar price and input costs

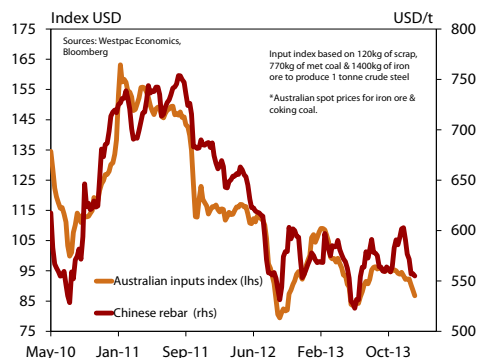


Table 3: Steel prices (quarterly averages).

Domestic RMB/t	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Rebar	4922	4319	4240	4160	3676	3683	3749	3527	3507	3498
Hot-rolled sheet	4801	4268	4272	4255	3663	3849	4043	3623	3609	3521
Cold-rolled sheet	5510	5322	5214	5099	4599	4565	4865	4697	4460	4390
Plate	4853	4312	4273	4255	3655	3703	3934	3676	3599	3466
Wire rod	4979	4466	4257	4179	3686	3653	3697	3526	3509	3503
Benchmarks USD/t										
Rebar benchmarker	643	575	561	551	485	495	503	476	474	474
HRC benchmarker	629	568	567	564	483	513	545	493	494	488
CRC benchmarker	719	703	689	670	601	612	647	629	613	615

Source: Bloomberg.

- The steel industry saw the year-ended growth rate of inventories increase in the December quarter. This came after a period of contraction through the middle part of the year, where producers used an uplift in the pace of sales to shed stock.
- The year-ended growth rate of end demand has been firm since the prior edition of the **CRQ**, moving in the 10-12% range.
- Outside of the usual driver of construction investment (real estate plus infrastructure), an acceleration in auto production has underpinned sales for the steel industry of late.

Figure 28: Steel end-use by sector

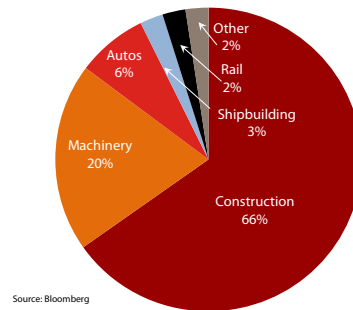


Figure 29: Steel inventories by product type

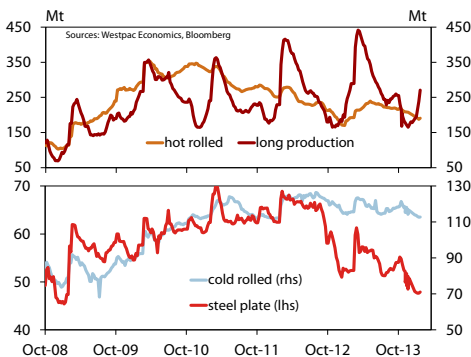


Figure 30: Steel inventory-to-sales scatter plot

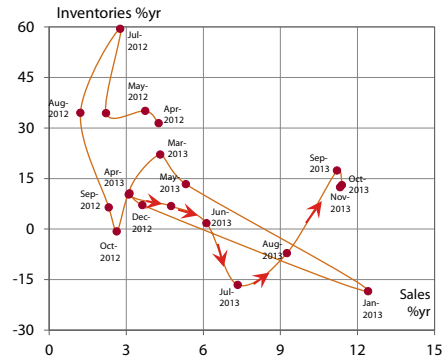


Figure 31: Steel demand per head

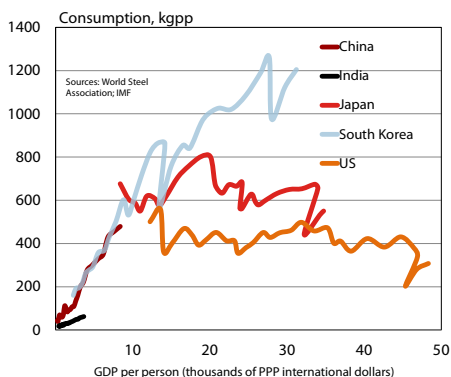
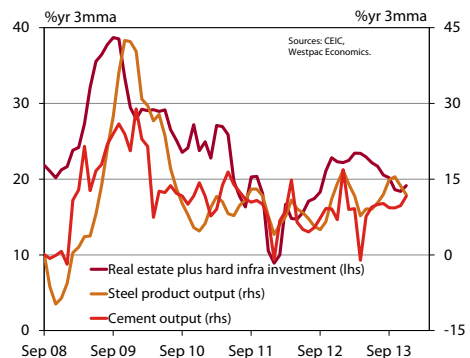


Figure 32: Construction, cement and steel



Iron ore

- The Steel Index (TSI) 62% spot iron ore price CFR Tianjin averaged US\$135 a tonne in Q4, up 1.7%qtr. Prices increased slowly through the quarter from around US\$131 a tonne at the start of October to just under US\$140 a tonne in mid-December before moderating to end the quarter at US\$134 a tonne.
- Rebuilding of iron ore inventories was the key force behind the price movements in Q4. Inventories at ports increased from around 70 Mt to 81 Mt in mid-December, driving prices higher. Port inventories remained steady at around 81 Mt for the remainder of the quarter, as prices eased.

Figure 33: Iron ore prices: spot and forward



Figure 34: Iron ore prices and rebar steel

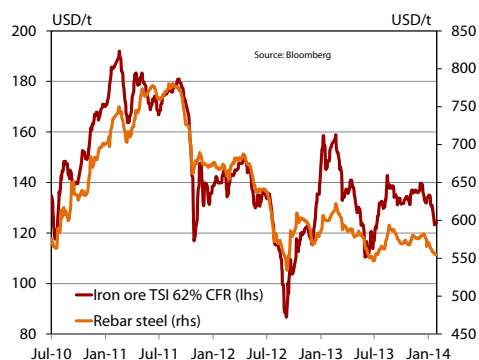


Figure 35: Port inventories versus end demand

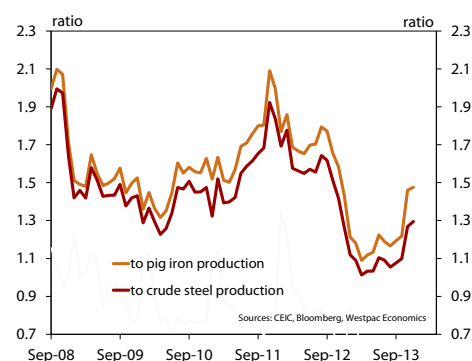


Table 4: Iron ore prices (USD/t, 62% ferrous metal content unless otherwise indicated).

TSI spot price, CFR	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	175.9	140.8	141.8	139.4	112.1	120.6	148.2	125.8	132.6	134.9
Quarter end	171.3	138.5	147.6	134.0	104.2	144.9	137.3	116.5	131.4	134.2
Quarter high	181.0	171.3	147.7	149.4	135.5	144.9	158.9	141	142.8	139.7
Quarter low	167.7	116.9	134.3	129.9	86.7	104.2	132.9	110.4	116.9	131.2
TSI in CNY terms, CFR	1128.9	895.2	894.9	882.0	712.3	752.9	922.4	774.3	812.0	821.4
IODEX Aust FOB	167.5	129.1	134.9	133.2	105.6	112.9	140.5	117.9	122.2	122.6
IODEX Brazil FOB	152.3	110.8	120.9	119.7	93.4	99.5	129.0	106.5	106.9	107.2

Sources: Bloomberg; Platts. CFR is cost including freight. FOB is free on board.

- China imported a record 219 Mt of iron ore in Q4. Imports from Brazil increased by 9.6%qtr to total 44 Mt (down 9%yr). The value of China's imports in Q4 increased by 6.9%qtr to US\$28 billion (up 32%yr).
- China imported a new record of 820 Mt of iron ore in 2013, up 10% on the previous record of 745 achieved in 2012.
- Australia exported a record 127 Mt of iron ore to China in Q4, up 26%yr. Australia exported 442 Mt (of 579 Mt) to China in 2013. Export values increased 66%yr to \$A15.7 billion in Q4 and were \$A53 billion for 2013.

Figure 36: Chinese import volumes by source

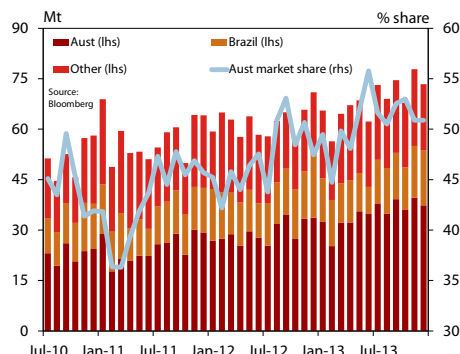


Figure 37: Australian iron ore exports to China

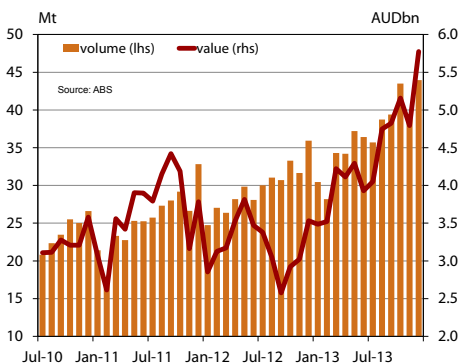


Figure 38: Chinese import values & volumes

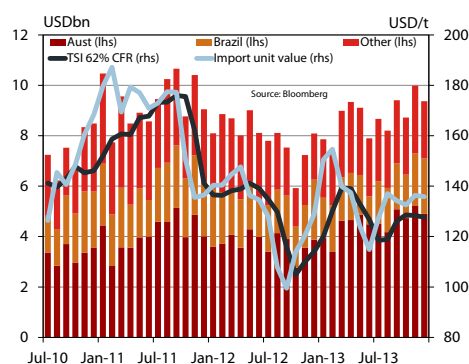


Figure 39: World trade in iron ore – seaborne

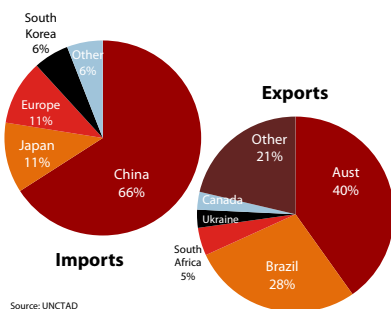
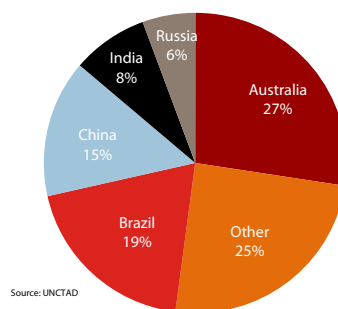


Figure 40: Shares of world iron ore output



- Chinese miners provide the lion's share of total iron ore supply in China. But imports represent about 40% of supply, having risen in trend terms over the last decade. Furthermore, Australia's share of imports has grown.
- Chinese ore reserves are very low grade so local miners face very high costs of production. At current prices, the margins for Chinese miners are very thin. About 17% of miners (by number of firms, unweighted) were making losses one quarter ago. The proportion of loss-makers dropped to around 15% in December.
- Imports are expected to continue to gain market share. For now, Australia is the main source of import growth.

Figure 42: Chinese iron ore miners' margins

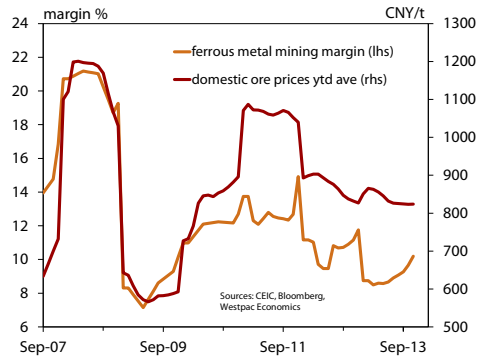


Figure 44: Chinese iron ore miners: loss-makers

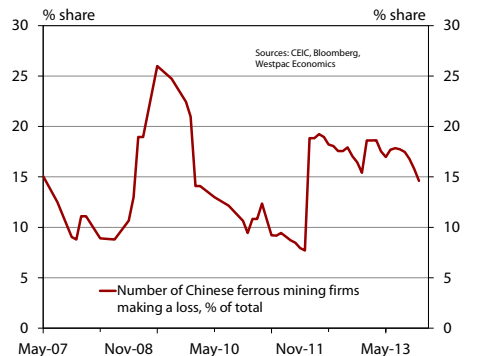


Figure 41: China's total ore supply

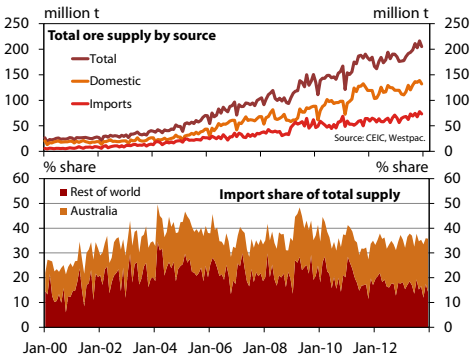


Figure 43: Chinese output, imports & stocks

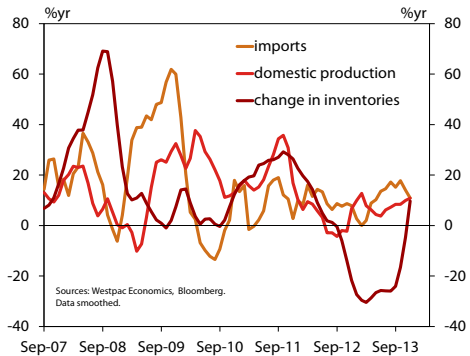


Figure 45: Seaborne iron ore cost curve

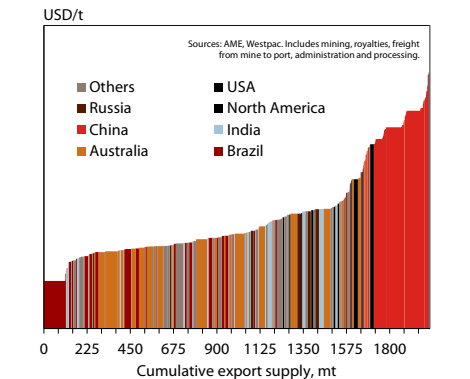


Table 5: Iron ore & metallurgical coal summary data

Iron ore		unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports		Mt	174.2	178.2	187.2	179.8	185.3	193.1	186.5	198.0	216.7	219.1
	Australia	Mt	81.1	82.1	83.0	82.7	91.6	94.3	89.8	102.6	111.8	112.9
	Brazil	Mt	36.2	38.1	41.6	35.4	38.8	48.8	38.4	32.1	40.5	44.4
	value	USDbn	30.3	28.2	25.6	25.1	23.4	21.2	24.2	26.3	26.3	28.1
Raw production *		Mt	372.0	378.0	256.4	342.1	361.1	369.0	287.4	356.6	387.0	na
Iron ore stocks at ports, end of qtr		Mt	92.8	94.8	96.1	94.8	92.6	70.5	68.1	71.5	70.1	81.3
	weeks of imports	weeks	6.9	6.9	6.7	6.9	6.5	4.7	4.7	4.7	4.2	4.8
Australian exports to China		Mt	81.0	88.6	78.1	86.1	91.8	100.9	92.9	107.9	113.8	126.9
	value	AUDbn	12.4	11.1	9.2	10.8	9.0	9.5	11.2	12.3	13.6	15.7
Metallurgical coal												
China imports		Mt	11.2	14.3	12.2	15.4	8.9	17.0	17.2	18.1	19.4	20.7
	value	USDmn	1632	2230	2022	2355	1220	2048	2431	2498	2414	2418
Australian exports to China		Mt	4.3	5.4	6.9	4.8	3.6	13.0	9.1	9.8	12.4	13.9
	value	AUDmn	761	980	1092	751	441	1584	1284	1296	1547	1831

Source: Bloomberg, ABS, CEIC. * Raw mine output with a low iron content.

Metallurgical coal

- Spot prices for metallurgical coal decreased slowly, but consistently throughout Q4. Prices for low volatility HCC started the quarter at around US\$165 a tonne and ended at US\$148 a tonne. Prices averaged US\$156 for Q4, up 1.1%qtr as prices moderated at a slower pace in Q4 than they increased at the end of Q3.
- China imported 20.7 Mt of metallurgical coal in Q4, up 6.4%qtr over the previous record of 19.4 Mt in Q3. Total imports in 2013 were 75 Mt, up 41%.
- Australia's exports of metallurgical coal to China were 13.9 Mt in Q4, up 6.9%yr and 45 Mt for 2013. Export values were \$A1.8 billion in Q4, up 16%yr, and totalled \$A6 billion for the year.

Figure 46: Met coal spot prices

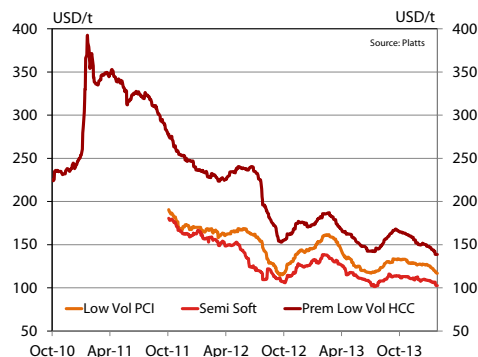


Figure 47: World trade in met coal

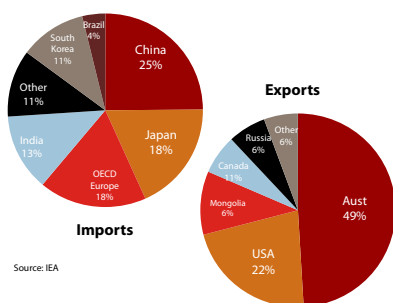


Figure 48: Met coal use and supply by country

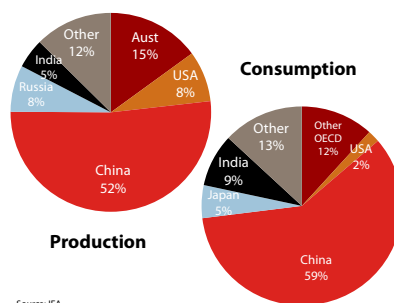


Table 6: Metallurgical coal prices (quarterly average spot prices).

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Prem Low Vol HCC CFR China	USD/t	308.2	255.1	230.1	236.3	188.0	169.0	179.7	155.0	154.7	156.3
Low Vol PCI CFR China	USD/t	na	174.7	165.3	164.9	135.2	136.3	154.9	127.2	125.9	129.0
Semi Soft CFR China	USD/t	na	167.4	156.4	141.3	114.6	120.4	132.6	114.5	109.1	110.9
Prem Low Vol HCC FOB Aust	USD/t	291.1	237.2	214.3	221.0	174.3	155.2	165.9	141.5	140.9	140.5
Prem Low Vol HCC FOB Aust	AUD/t	277.2	234.6	203.0	219.2	168.0	149.4	159.6	142.6	155.4	155.3

Sources: Bloomberg; Platts. CFR is cost including freight. FOB is free on board. HCC is hard coking coal.

- China is far and away the world's biggest consumer of metallurgical coal. It is also the world's biggest producer. Australia remains a major player in the seaborne market but China's land neighbours are significant in the Chinese market. The US has emerged as an opportunistic supplier on global price spikes.
- Australian exports of metallurgical coal returned to pre flood levels in 2013 and spot prices weakened correspondingly. The perpendicular ascent of Queensland exports associated with this rebound has now matured, implying a more sedate volume performance in 2014.
- Not all Chinese and Australian met coal mines are profitable at current prices.

Figure 49: Chinese met coal import volumes

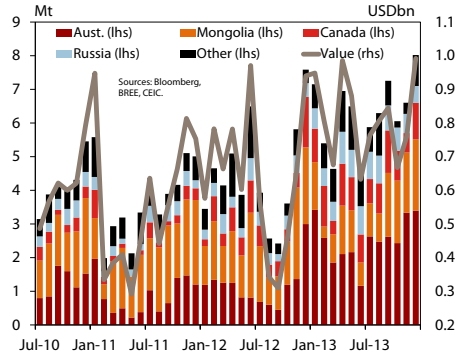


Figure 50: Aust met coal exports to China

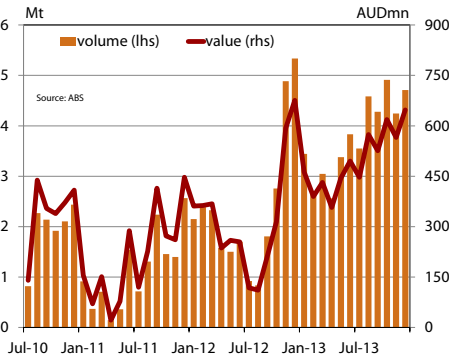


Figure 51: Queensland met coal exports – total

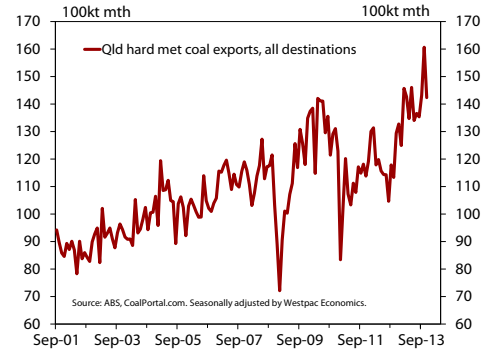


Figure 52: Seaborne met coal cost curve

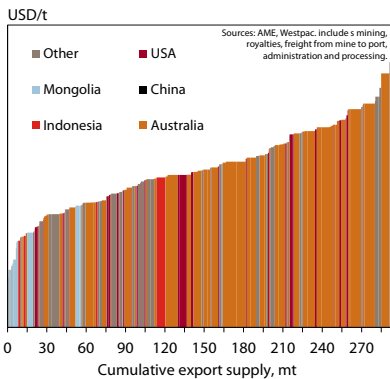
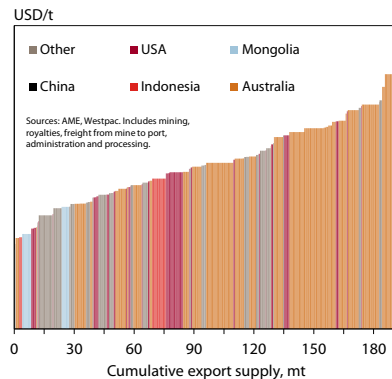


Figure 53 : Seaborne hard coking coal cost curve



Developments in China's energy policy

- In November 2013, the National Development and Reform Commission and National Energy Administration announced proposed reforms to ensure the sustainability of the domestic coal industry. The reforms include tax cuts to relieve the tax burden (currently 25–35% of revenues); increased regulation on imports to prevent cheap supplies flooding the market; accelerating structural adjustment through increased vertical and horizontal integration; improved safety and environmental regulations; and the closure of unprofitable production capacity.
- Following the emergence of gas supply shortages, China will extend a tax exemption offered in 2011 to new sources of imported LNG and some pipeline imports (mostly from Myanmar) in an effort to encourage increased gas imports to meet growing demand.
- In January 2014, the Ministry of Environmental Protection set air pollution targets for each province, municipality and autonomous region. Eleven regions were asked to reduce the concentration of particulate matter with a diameter of less than 2.5 micrometres per cubic metre (PM_{2.5}). The reductions were set at: 25% for Beijing, Tianjin and Hebei; 20% for Shanghai, Jiangsu, Zhejiang, Shandong and Shanxi; 15% for Guangdong and Chongqing; and 10% for Inner Mongolia. Other regions, excluding Hainan, Yunnan and Xizang, are required to reduce PM₁₀ by between 5–15%. To achieve these goals, the Ministry outlined a number of measures such as reducing coal use, eliminating outdated industrial capacity, and improving management and control of boilers, vehicles and dust.
- In January 2014, the Beijing Municipal Government passed a regulation on air pollution control in an effort to improve air quality. A ceiling on annual emissions will be imposed and gradually reduced. They plan to reduce coal use by 2.6 million tonnes and improve the performance of 300 high-polluting companies. The Beijing Government has set aside 15 billion yuan (around US\$2.5 billion) in 2014 to improve air quality.

Electricity trends

- China's electricity generation increased by 8% to 5.2 trillion kWh in 2013, double the rate of growth that was achieved in 2012.
- In line with China's stage of economic development, secondary industry is the largest consumer of electricity, accounting for around three-quarters of total consumption.
- Chinese electricity consumption increased by 7.4% to 5.32 trillion kWh in 2013, driven by strong consumption growth in energy-intensive industries such as steel. Use by secondary industry increased by 7%, while tertiary and primary use increased by 10.3% and 0.7%, respectively. Growth in tertiary sector use was underpinned by efforts to restructure the Chinese economy away from heavy industry.
- Investment in new electricity capacity in China has declined each year since 2010. In 2013, investment in new capacity declined by 1% to 372 billion RMB (around US\$61 billion). Investment fell across all sources, with the largest declines observed in nuclear (down 22% to RMB60.9 billion) and thermal (down 8%, RMB92.8 billion). The National Energy Administration is considering reforms to the electricity, oil and natural gas sectors to encourage more private capital.
- 106 million kW of generation capacity was commissioned during 2013, increasing total installed capacity to 1.25 billion kW.
- Despite investment in expanding China's electricity grid, an estimated 1.2 million people still do not have access to the grid. Limited access is concentrated in several, typically more remote, regions: Xinjiang, Sichuan, Qinghai, Gansu, Inner Mongolia and Xizang (Tibet). The government aims to achieve full coverage by 2015.
- Please refer to the map on page 66 for details on electricity output and consumption by province.

Figure 54: World energy consumption

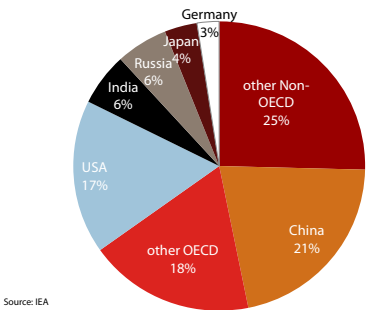


Figure 55: World energy production

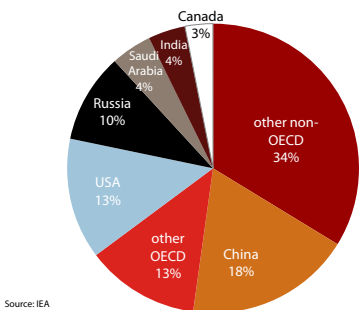


Figure 56: Chinese electricity output by source

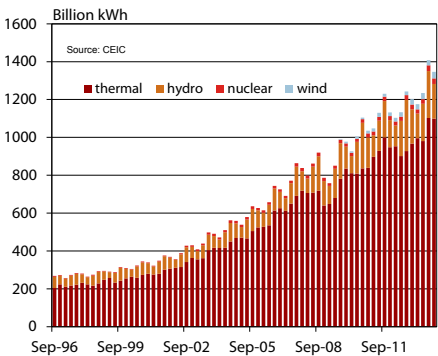


Figure 57: Chinese electricity use by sector

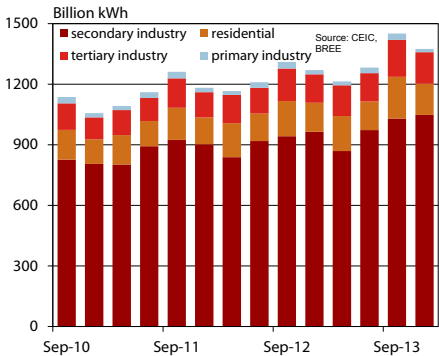


Figure 58: Chinese electricity growth: broad source

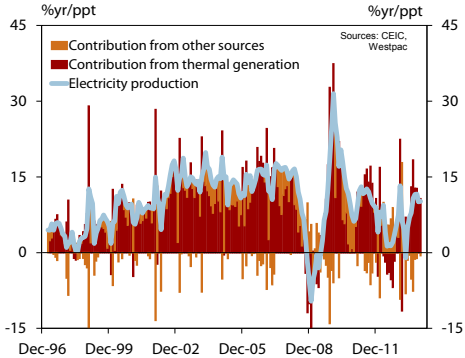
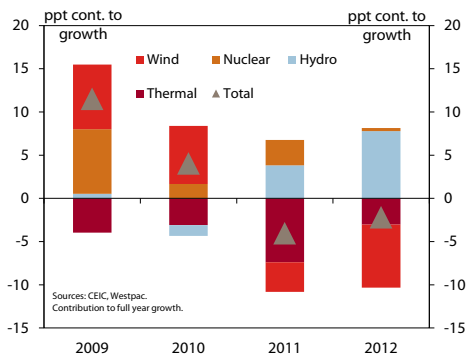


Figure 59: China's investment in new energy capacity



Thermal coal

- Key thermal coal FOB prices increased in Q4 following seasonal purchasing aimed at building supplies for the northern winter through to Chinese New Year. Newcastle spot prices increased 6.4%qtr, Richard's Bay 13.9%qtr, Baltic 9.5%qtr and QHD 0.3%qtr.
- Thermal coal prices declined throughout January in response to expected weaker demand in emerging economies and reduced activity around Chinese New Year.
- Slowing economic growth and policies to reduce coal use have contributed to growth in China's coal consumption slowing to 2.6% (3.61 billion tonnes) from an average of around 9% over the past decade.

Figure 60: Thermal coal prices

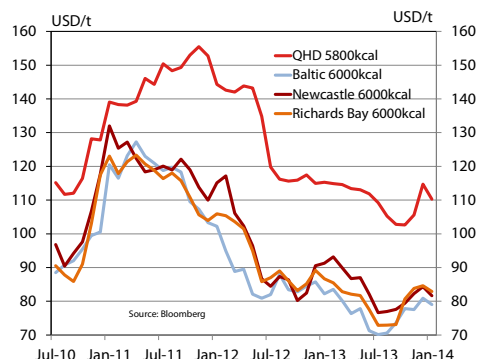


Figure 61: Thermal coal stocks: ports & generators

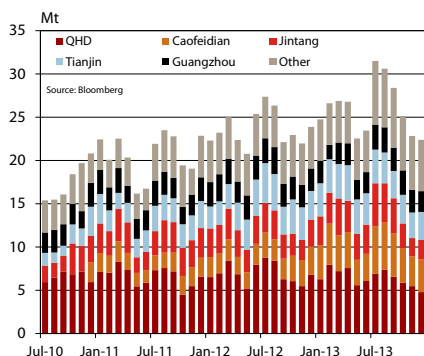


Figure 62: Export thermal coal cost curve

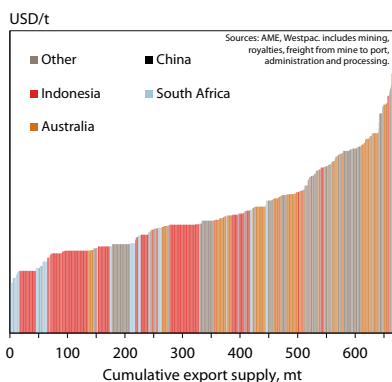


Table 7: Thermal coal prices (USD/t, NAR unless otherwise indicated).

Quarterly averages	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
QHD 5800kcal	149.5	153.8	143.0	139.8	117.2	116.6	114.9	112.8	105.8	106.1
QHD 5800kcal RMB/t	959.5	977.6	901.6	885.5	744.6	728.6	715.2	694.4	647.8	646.8
Newcastle 6000kcal	120.5	113.9	112.3	94.5	86.1	84.3	91.3	85.4	77.1	82.0
Newcastle 6000kcal AUD/t	115.1	112.0	106.4	93.5	82.7	81.2	88.0	86.7	84.3	88.6
Richards Bay 6000kcal	116.6	106.6	104.8	93.5	87.5	85.8	84.8	80.5	73.0	83.1
Baltic 6000kcal	118.9	106.7	95.3	83.7	84.4	84.4	82.0	75.5	71.4	78.2

Sources: Bloomberg. NAR stands for net as received.

- China's imports of thermal coal (including lignite) increased 11%qtr to 68 Mt in Q4 as consumers took advantage of relatively low import prices. Import growth slowed to 7% (252 Mt) in 2013 compared with 32% in 2012 in response to slowing consumption growth.
- Australia and Indonesia are major coal suppliers to China. China is the world's largest coal producer and imports account for only a small proportion of total coal consumption.
- Imports from Australia were up 8%yr to 16 Mt in Q4, and its market share increased to 24% (from 22% in 2012Q4). Imports from Indonesia fell 10%yr to 33 Mt in Q4 as shipments were affected by heavy rain and easing demand.

Figure 63: Thermal coal imports

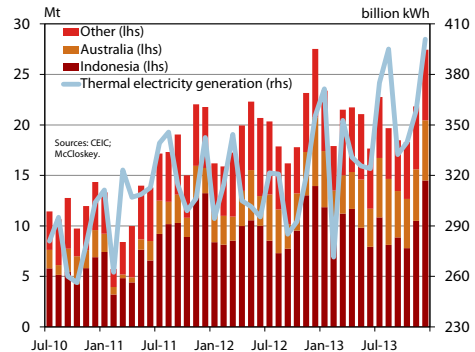


Figure 64: Aust thermal coal exports to China

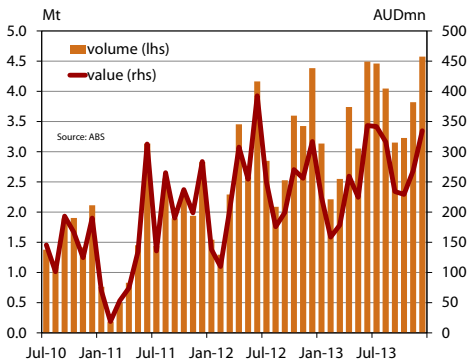


Figure 65: Capex: coal mining vs power generation

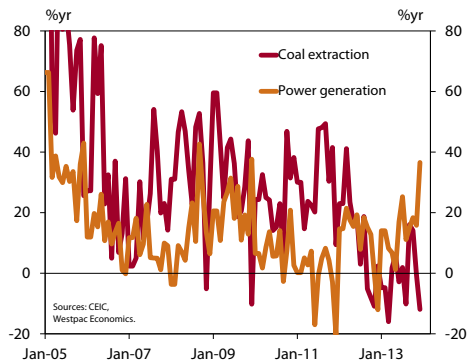


Figure 66: Thermal coal use and supply by country

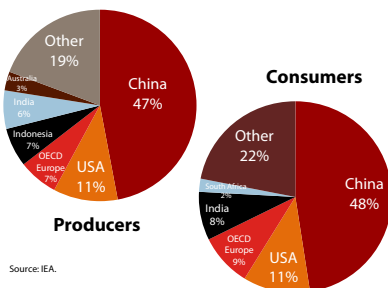


Figure 67: World trade in thermal coal

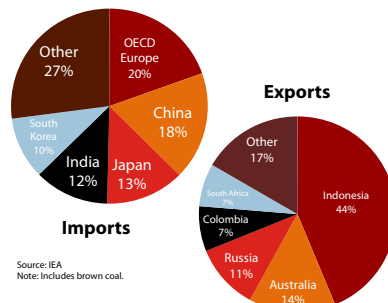


Table 8: Thermal coal summary data

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	Mt	53.5	58.8	49.3	62.9	54.4	68.5	62.8	60.5	60.9	67.6
Indonesia	Mt	29.7	34.9	25.1	30.5	23.6	36.5	33.1	29.4	27.8	32.8
Australia	Mt	8.3	7.6	8.1	11.4	11.3	14.8	12.9	12.2	17.0	15.9
value	USDmn	4533	4829	4940	5969	4885	5291	4846	4679	4647	4973
End of quarter stocks at ports	Mt	19.4	22.3	22.4	27.4	22.9	24.7	26.8	31.5	25.1	22.4
	weeks of imports	4.7	4.9	5.9	5.6	5.5	4.7	5.5	6.8	5.4	4.3
Australian exports to China	Mt	5.9	7.1	5.1	10.3	7.5	11.4	7.9	11.3	11.7	11.6
value	AUDmn	591.1	719.9	451.7	955.0	625.9	843.3	561.7	827.6	892.2	832.8

Source: ABS, Bloomberg, McCloskey.

Oil

- Global oil prices averaged lower in Q4 following an easing of geopolitical tensions, the resumption of production from Libya and increasing non-OPEC supply. In Q4, WTI prices averaged around US\$98 a barrel, Brent prices US\$109 a barrel and Tapis prices \$117 a barrel.
- China's gasoline and diesel benchmark prices were adjusted four times during Q4. Prices were reduced twice in November and raised twice by a roughly equal amount in December so that they were largely unchanged for the quarter.
- Chinese gasoline consumption in Q4 was supported by strong growth in passenger vehicle sales, which increased 20%/yr.

Figure 69: Oil use by sector: China & the World

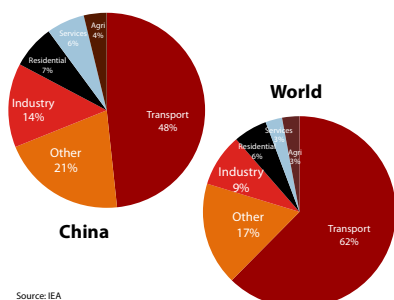


Figure 68: Oil prices

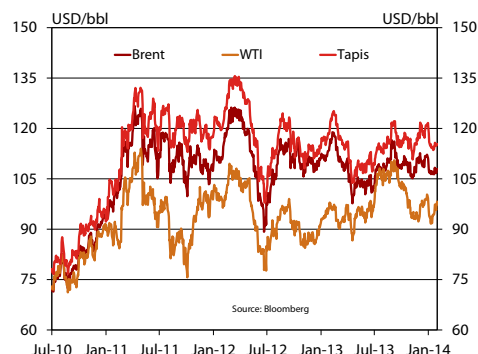


Figure 70: Oil use and supply by country

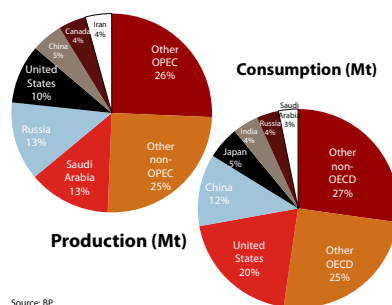


Table 9: Crude oil spot prices (USD/bbl, quarterly).

	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Brent										
Quarter average	112.1	109.0	118.4	108.8	109.4	110.1	112.6	103.3	109.7	109.4
Quarter end	102.8	107.4	122.9	97.8	112.4	111.1	110.0	102.2	108.4	110.8
Quarter high	118.8	115.0	126.2	125.4	116.9	115.8	118.9	111.1	116.6	112.6
Quarter low	102.6	99.8	109.8	89.2	97.3	105.7	107.5	97.7	103.0	103.5
Tapis										
Quarter average	121.0	118.9	128.0	117.2	115.9	113.3	118.3	108.9	115.9	117.2
Quarter end	115.0	117.5	133.0	101.1	119.0	114.1	116.0	109.7	114.5	120.7
Quarter high	127.2	125.5	135.6	133.7	124.5	117.3	125.2	116.1	122.2	121.7
Quarter low	114.3	113.0	119.5	97.9	103.1	108.1	113.7	103.8	109.1	110.8
West Texas intermediate										
Quarter average	89.5	94.0	103.0	93.3	92.2	88.2	94.3	94.1	105.8	97.6
Quarter end	79.2	98.8	103.0	85.0	92.2	91.8	97.2	96.6	102.3	98.4
Quarter high	99.6	102.6	109.5	106.2	99.0	92.5	97.9	98.4	110.5	104.1
Quarter low	79.2	75.7	96.4	77.7	83.8	84.4	90.1	86.7	98.0	92.3

Source: Bloomberg.

- China's petroleum production was temporarily disrupted in November following an explosion at Sinopec's Donghuang II crude oil pipeline (200k b/d) in Shandong province. The pipeline will be shut permanently.
- China imports more than half of its oil requirements and is actively sourcing new suppliers to reduce its dependence on oil from the Middle East. Chinese oil imports were unchanged in Q4 compared with 2012Q4 at around 71 million tonnes.
- China's imports of crude oil from Australia declined 23% to 3 Mt in 2013. In Q4 import volumes decreased by 52%yr to 462 kt and valued declined by 52%yr to US\$393 million.

Figure 72: Chinese imports of Australian oil

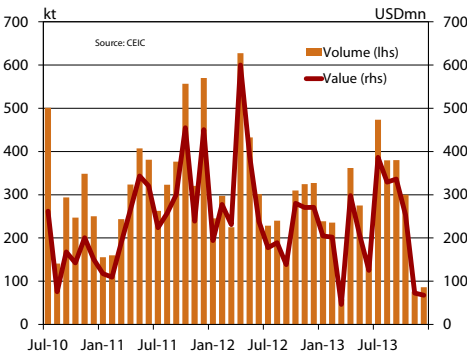


Figure 74: Automobile penetration

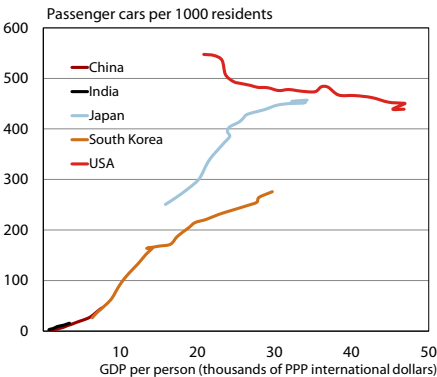


Figure 71: Chinese oil import volumes

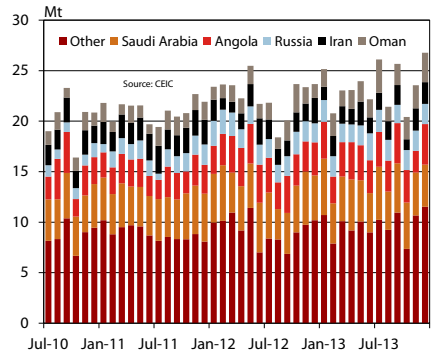


Figure 73: World trade in oil

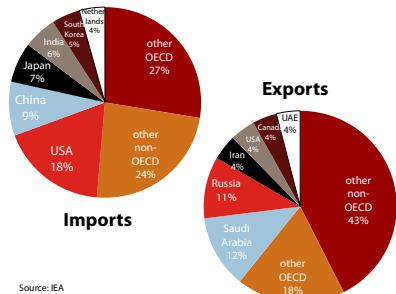


Figure 75: Oil demand per capita

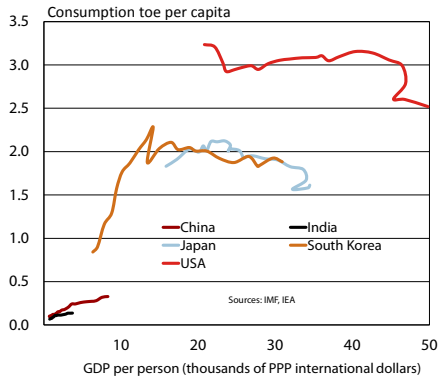


Table 10: Oil and gas summary data

Oil		unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports		Mt	60.9	65.4	70.6	69.5	60.3	70.7	69.0	69.2	73.2	70.8
	Saudi Arabia	Mt	12.0	14.1	14.3	13.7	11.6	14.3	14.0	13.0	13.9	13.0
	Angola	Mt	7.5	8.1	9.5	11.5	9.8	9.4	9.7	10.4	10.5	9.4
	Russia	Mt	4.0	5.7	7.2	5.6	5.5	6.1	6.0	6.4	6.1	6.0
	Iran	Mt	6.8	7.5	4.3	6.4	5.1	6.2	5.0	5.5	5.5	5.4
	Oman	Mt	5.6	4.8	4.3	4.7	4.8	5.8	5.6	5.7	6.8	7.4
	other	Mt	25.0	25.2	31.1	27.6	23.5	28.9	28.7	28.2	30.4	29.5
	China production											
Chinese imports from Australia	Crude	Mt	50.7	50.1	51.0	50.8	52.0	53.2	17.7	52.3	51.4	53.2
	Gasoline	Mt	20.5	21.0	21.5	21.1	22.6	24.1	8.3	24.0	24.0	25.4
	Diesel	Mt	41.1	42.5	42.8	41.8	41.6	44.3	14.8	42.1	42.7	44.0
	value	USDmn	962.5	1447.2	767.5	1361.1	625.6	961.4	531.9	798.3	1233.7	461.8
Gas			781.2	1143.9	702.8	1229.5	505.0	821.7	452.6	630.8	1052.3	393.3
China pipeline imports		Mt	2.7	3.0	3.5	3.7	3.9	4.6	4.5	4.9	5.2	5.4
	China LNG imports	kt	3380	3650	3260	3410	3800	4230	4180	4160	4560	5140
	Qatar	kt	456	1037	1021	1161	1526	1284	1933	1432	1618	1785
	Australia	kt	972	1039	779	908	904	972	842	974	834	906
	Indonesia	kt	597	605	551	666	543	665	363	788	605	677
	Malaysia	kt	410	359	406	426	444	577	648	645	679	685
	other	kt	946	610	503	248	384	733	394	320	823	1087
	China production	Bcm	24.3	27.3	33.2	25.0	24.8	28.7	9.9	26.9	26.4	30.2
Chinese imports from Australia		kt	971.7	1038.5	778.8	907.6	903.6	971.8	842.3	974.2	833.9	906.2
	value	USDmn	166.3	176.6	132.2	160.3	172.9	164.3	143.4	182.9	145.7	159.6

Source: CEIC.

Gas

- LNG import unit values increased by 14%/yr in Q4, while pipeline unit values declined by 12%/yr. Domestic retail prices are regulated and less volatile than import prices.
- China’s gas consumption has been rising rapidly in response to energy policies that target lower growth in coal consumption. Gas consumption is typically higher over winter, i.e. Q4 and Q1, putting pressure on limited supplies.
- Following gas shortages in Q4, a tax exemption on imported LNG from new sources has been extended to help meet continued growth in demand. Pipeline imports from Myanmar have also been included following the completion of a pipeline in August 2013..

Figure 77: Gas use by sector: World

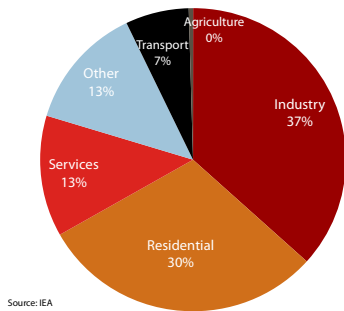


Figure 79: Gas demand per capita

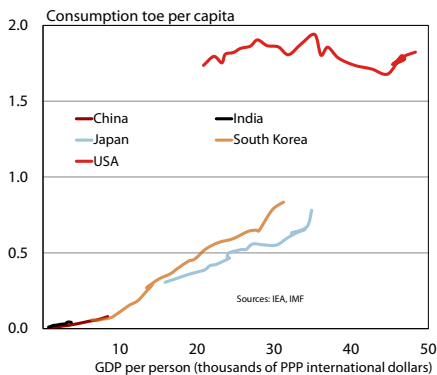


Figure 76: Gas unit values in China

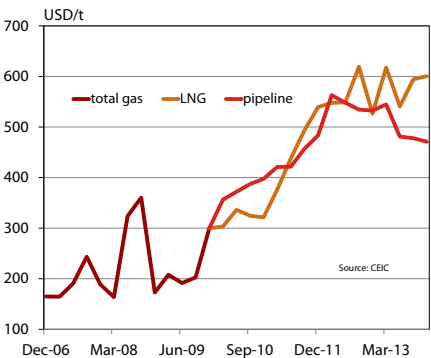


Figure 78: Gas use by sector: China

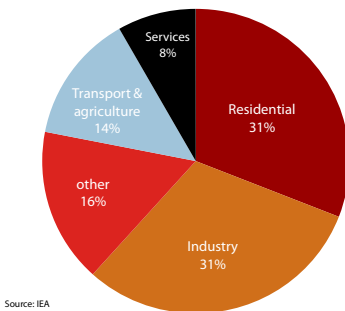
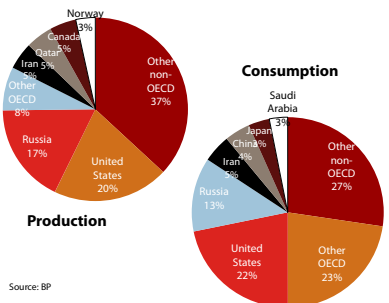


Figure 80: Gas use and supply by country



- Three LNG terminals were completed during Q4 which added 9.2Mtpa to import capacity: Tangshan (3.5Mtpa) in Hebei, Zhuhai (3.5Mtpa) in Guangdong and Tianjin FLNG (2.2Mtpa).
- China's pipeline gas (18%yr) and LNG (22%yr) imports increased in Q4 to meet rising demand. LNG import growth was underpinned by a 39%yr increase in imports from Qatar and 19%yr increase from Malaysia.
- LNG imports from Australia declined by 7%yr to 906.2 kt in Q4, with the value declining by 3%yr to US\$159.6 million. For 2013 as a whole, import volumes were largely unchanged compared with 2012 at 3.6 kt. Import values increased marginally to US\$632 million.

Figure 81: China's gas imports by type

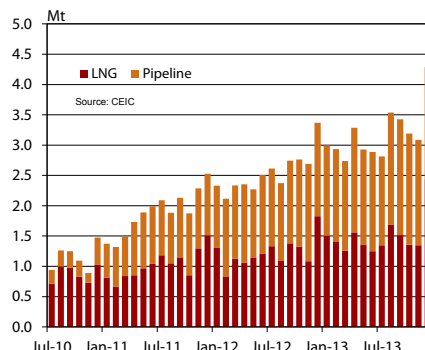


Figure 82: Chinese LNG imports by source

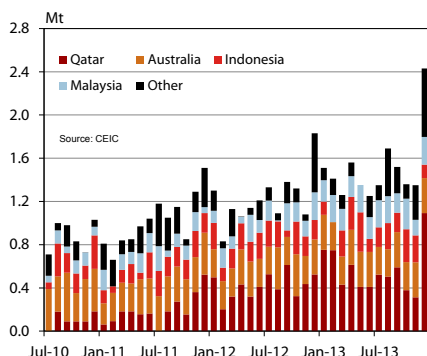


Figure 83: Chinese LNG imports from Australia

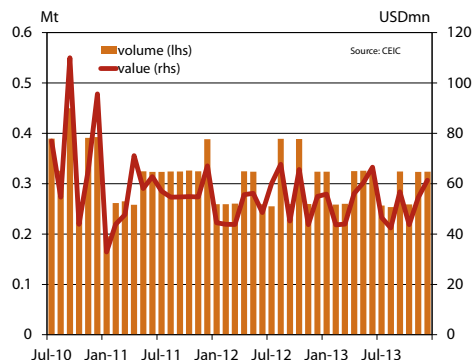


Figure 84: World gas exports by country

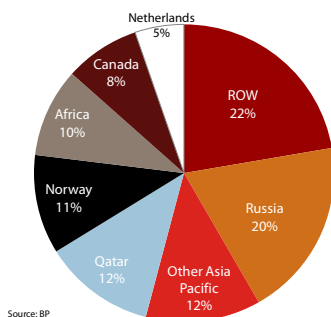
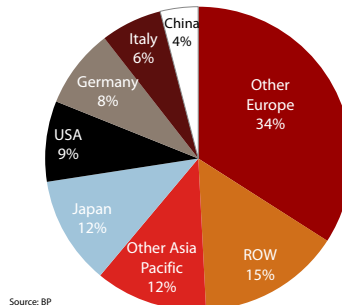


Figure 85: World gas imports by country



Uranium

Figure 86: Uranium prices

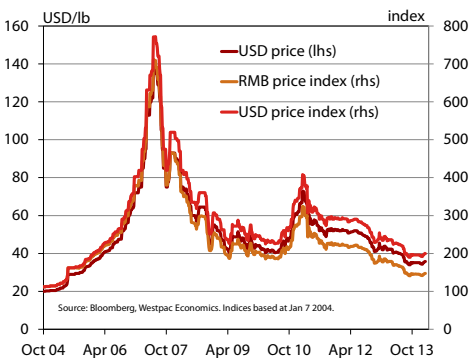


Figure 87: China's uranium imports

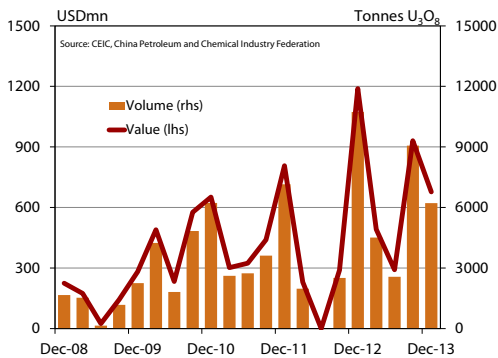


Figure 88: Global uranium output & reserves

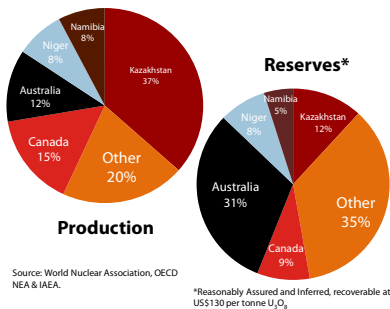


Figure 89: Uranium use by country

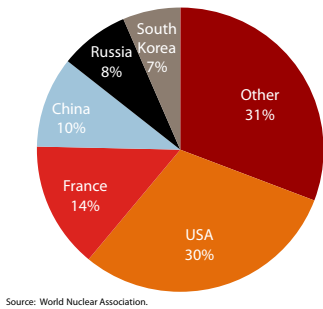


Table 11: Uranium summary data.

	Units	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Uranium spot price U_3O_8	USD/lb	52.4	51.7	51.4	48.8	43.0	42.6	40.5	35.0	35.0
China nuclear power output	bn kWh	21.4	20.9	21.8	25.6	25.4	22.8	23.8	30.3	30.3
Investment in nuclear	RMBbn	23.2	17.1	15.0	19.8	25.9	12.1	14.2	14.6	20.0
China uranium imports	t	7150	1978	0	2510	10734	4516	2567	9069	6216
Value	USDmn	807	231	0	290	1189	491	292	931	677

Source: CEIC, Cameco, The Ux Consulting Company, Trade Tech.

- The average uranium spot price in Q4 remained unchanged relative to Q3 at US\$35/lb but declined 19%yr.
- China's investment in nuclear power declined 23%yr to RMB20 billion in Q4, reflecting the delay in commissioning new power projects through 2012. However, nuclear power generation was up 19%yr to 30 billion kWh due to the start of new power plants in 2013.
- China's imports of uranium ores and concentrates decreased around 42%yr in Q4 to around 6200 tonnes. Imports in 2013 were historically high as Chinese buyers appear to be pre-purchasing uranium at low prices ahead of the commissioning of new plants.

Figure 91: New capacity: planned & underway

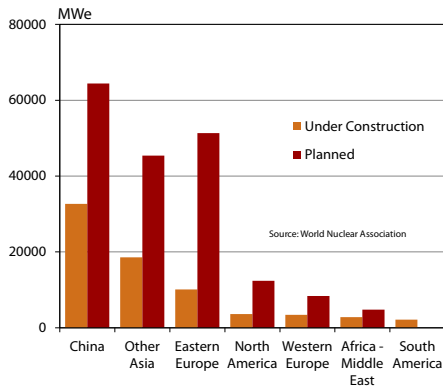


Figure 93: Uranium demand per capita

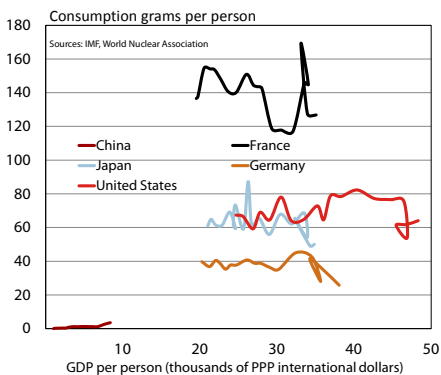


Figure 90: Chinese nuclear generation growth

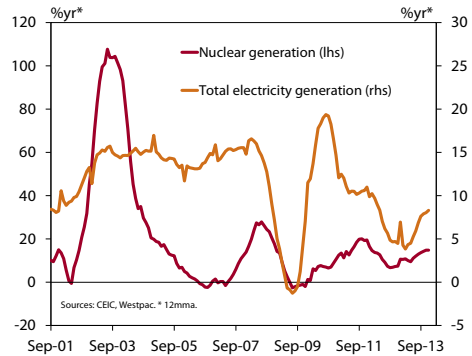


Figure 92: Chinese nuclear generation capacity

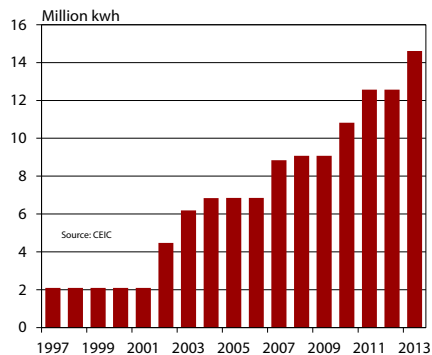
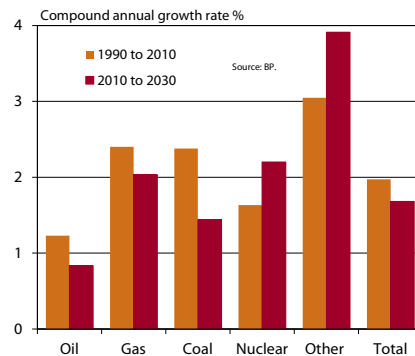


Figure 94: Growth in world energy by source



Gold

- Average LBMA gold prices decreased 15% to average US\$1411 in 2013. Throughout 2013 speculation over the US Federal Reserve's tapering of QE3 led many investors particularly exchange traded funds, to reduce their gold holdings.
- Most of the decline in prices in 2013 occurred prior to Q4, as markets had already factored in tapering announced by the FOMC on 18 December. Q4 LBMA prices declined just 4.4%qtr to average US\$1272 in Q4. Prices have since remained relatively stable, at around US\$1250, with concerns over emerging economy currencies following a second announced tapering of QE3 on 29 January 2013 providing some support for gold prices.
- Although gold consumption increased substantially in China in 2013, Chinese gold prices followed world markets and declined by 5.4%qtr to average RMB251 a gram in Q4.
- According to the World Gold Council, China's domestic gold purchases increased 38%yr to 794 t in the first 9 months of 2013. Jewellery purchases increased 39%yr to 518 t and purchases of bars and coins increased 38%yr to 276 t. BREE estimates for China's full year consumption indicate China surpassed India as the world's leading gold consumer for 2013. (Note that India restricted gold imports in mid 2013 to help lower its total import bill at a time of difficult external financing conditions).

Figure 95: Gold prices, London & Shanghai

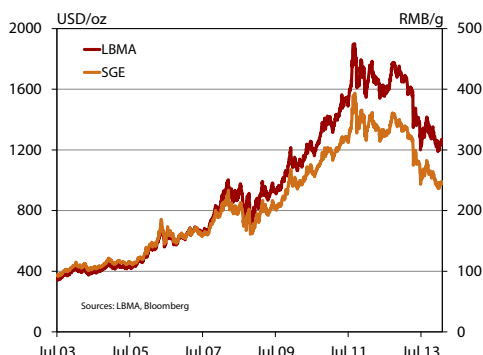


Figure 96: Chinese gold imports via Hong Kong

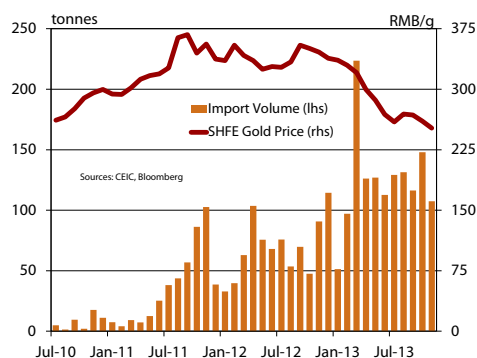


Table 12: Gold prices (USD/oz unless specified otherwise)

LBMA spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	1706	1683	1691	1612	1653	1718	1632	1417	1330	1272
Quarter end	1624	1564	1668	1597	1772	1675	1597	1235	1329	1206
Quarter high	1900	1795	1784	1678	1777	1790	1693	1600	1418	1353
Quarter low	1488	1546	1566	1540	1567	1648	1565	1201	1223	1189
Shanghai avg RMB/g	353	346	345	329	338	345	329	286	265	251
Shanghai avg USD/g	55	54	55	52	53	55	53	46	43	41

Sources: LBMA, Bloomberg.

- China's gold mine production in the year to November 2013 increased by 18%yr to total 156 t. In the year to November 2013, gold imports through Hong Kong increased 90%yr to 1370 t. Gold imports through Hong Kong rose to record levels in 2013 as Chinese consumers took advantage of falling gold prices.
- The volume of Australia's gold export volumes to China increased by 169%yr in Q4. This contributed to a 125%yr increase in earnings in Q4.

Figure 97: Australian gold exports to China

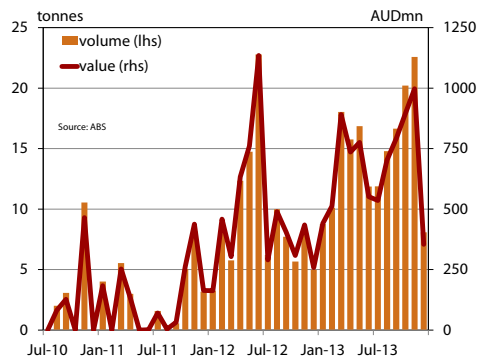


Figure 98: Gold exchange traded funds

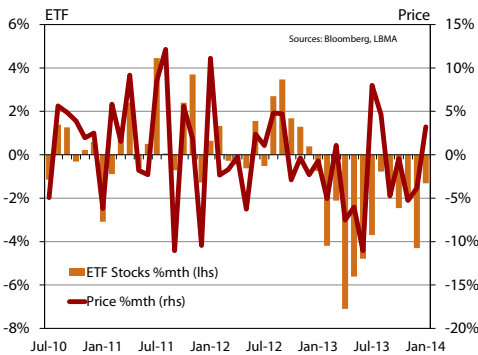


Figure 99: Gold output by country

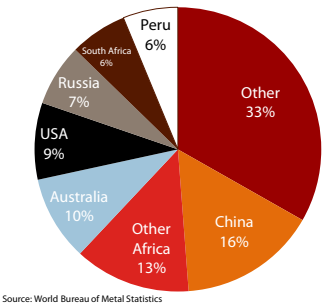


Figure 100: Gold fabrication cons. by country

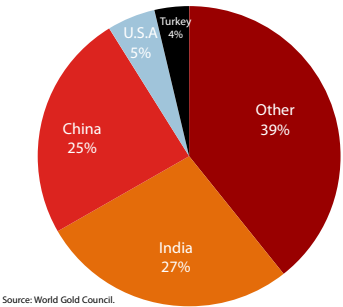


Figure 101: Gold end-use by sector

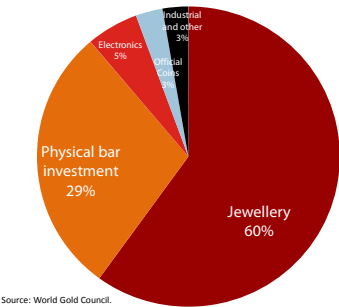


Table I3: Gold and silver summary data

Gold	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports (via Hong Kong)	t	138.7	227.6	135.5	247.3	199.1	252.6	371.9	365.7	377.0	na
Domestic production	t	31.3	32.1	29.6	31.7	43.2	40.1	39.1	41.0	44.0	na
Australian exports to China	t	2.2	16.4	17.8	49.9	23.9	18.9	36.9	44.5	43.3	50.9
value	USDmn	107.2	864.2	924.9	2529.0	1185.1	1000.8	1845.3	2063.9	2031.0	2247.7
Silver											
China imports	t	154.2	129.3	93.7	111.4	110.3	99.7	83.6	85.5	99.9	na
Domestic production	t	2.9	3.7	3.2	3.2	3.3	3.8	na	na	na	na

Sources: CEIC, ABS.

Silver

Figure 102: Silver prices, London & Changjiang



Figure 103: Silver output & fabrication demand

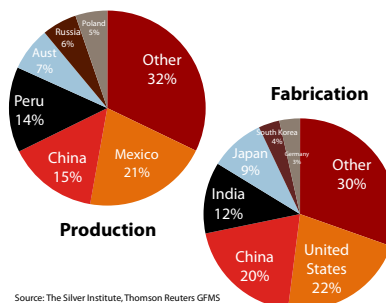


Figure 104: Chinese silver import volumes: annual

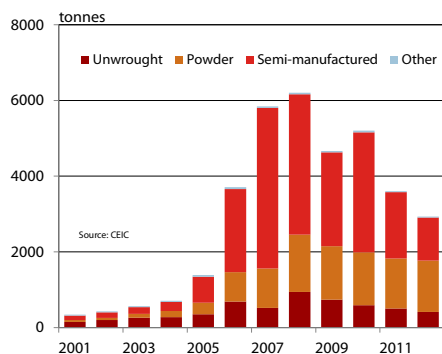


Figure 105: Silver end-use by sector

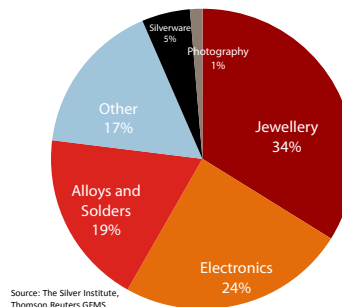


Table 14: Silver prices (USD/oz unless specified otherwise)

LBMA spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	38.9	31.8	32.7	29.5	29.9	32.6	30.1	23.2	21.5	20.8
Quarter end	29.9	27.8	32.3	27.5	34.5	30.3	28.5	19.7	21.7	19.5
Quarter high	43.8	35.3	36.9	33.0	34.8	35.0	32.3	28.0	24.5	22.8
Quarter low	29.9	27.1	27.9	26.4	26.8	29.9	28.4	18.5	18.9	19.1
Changjiang RMB/g	8.34	6.81	6.79	6.18	6.27	6.65	6.11	4.72	4.28	4.24
Changjiang USD/g	1.29	1.07	1.07	0.98	0.99	1.05	0.98	0.76	0.70	0.70

Source: LBMA, Bloomberg.

Copper

- The LME copper price declined by 9.6%yr to average US\$7153 in Q4. Exchange warehouse stocks ended 14.1%yr higher in Q4. Chinese domestic prices mirrored trends on the LME, decreasing by 9.5%yr to average RMB51 562.
- China is estimated to have added 570 kt of smelting capacity and more than 1000 kt of refinery capacity in 2013. This facilitated a 22%yr increase in China's refined copper production to 1909 kt in Q4.
- China's imports of ores and concentrates increased 17%yr in Q4, underpinned by the commencement of shipments from the Oyu Tolgoi mine in Mongolia. Imports of ores and concentrates from Chile increased 32%yr in Q4.

Figure 106: Copper prices, London & Shanghai

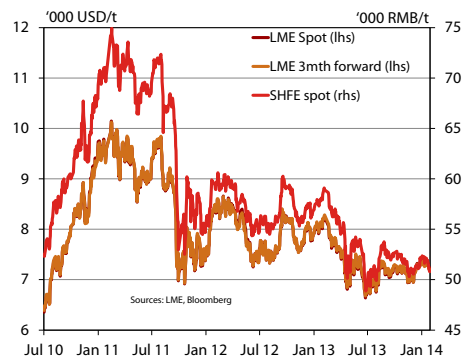


Figure 107: LME prices & inventories

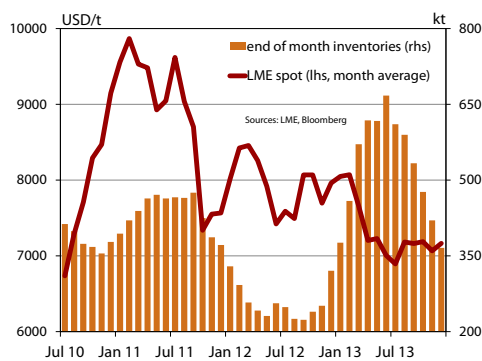


Figure 108: Copper use and supply by country

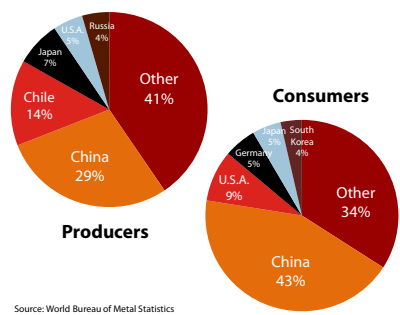


Table 15: Copper prices (USD/t unless specified otherwise)

LME spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	8982	7489	8310	7869	7706	7909	7931	7148	7073	7153
Quarter end	7132	7554	8480	7605	8268	7915	7583	6751	7291	7395
Quarter high	9827	8040	8658	8576	8401	8340	8243	7547	7341	7395
Quarter low	6976	6785	7471	7252	7327	7541	7539	6638	6719	6939
3 Month forward	9003	7511	8314	7829	7712	7921	7964	7180	7096	7161
Shanghai avg RMB/t	67506	56590	58931	56554	56518	56984	57189	52778	51690	51562
Shanghai avg USD/t	10431	8868	9292	8965	8922	8971	9161	8473	8438	8468

Sources: LME, Bloomberg.

- Imports of refined copper from India rose 61%yr to 117 kt in Q4 as a result of Indian port activities returning to normal and clearing of stockpiles. This surge in trade volumes made India China's fourth largest supplier in Q4.
- In terms of total copper content, China's imports increased 23%yr in Q4 to 1819 kt. Import's from China's principal supplier, Chile, increased 18%yr to 574 kt in Q4.
- A 77%yr increase in Australian exports of copper to China to 160 kt in Q4 contributed to an 80%yr increase in the value of total Australian copper exports to China.

Figure 109: Chinese copper import volumes

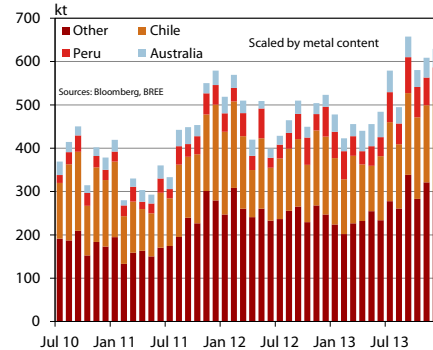


Figure 110: Australian copper exports to China

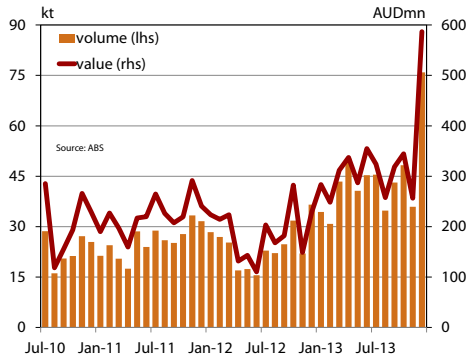


Figure 111: Copper end-use by sector

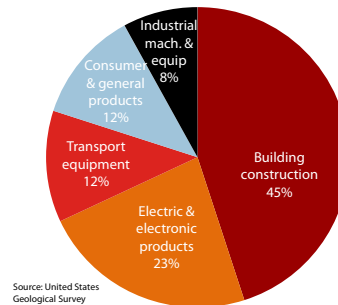


Figure 112: Copper demand per capita

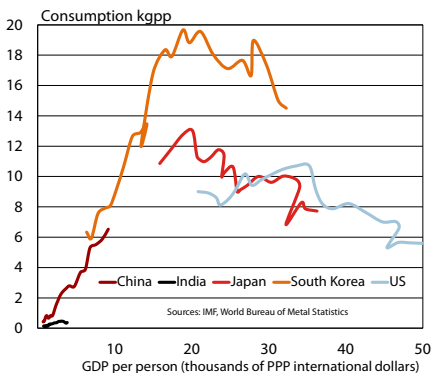


Figure 113: Copper output by Chinese province

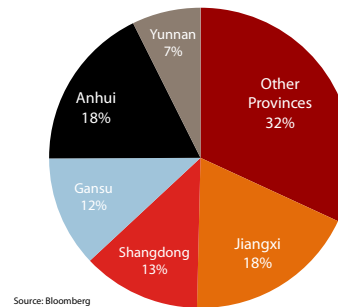


Table I6: Copper summary data

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	kt	1224	1582	1597	1327	1403	1477	1356	1380	1731	1819
Australia	kt	104	82	97	75	80	78	97	157	135	128
Chile	kt	417	557	558	393	439	485	436	383	519	574
Peru	kt	93	136	127	125	127	169	171	120	200	213
other	kt	609	808	816	734	757	744	652	720	877	904
Refined production	kt	1412	1331	1327	1417	1433	1562	1484	1693	1715	1909
World stocks	kt	1107	981	961	860	860	1061	1297	1319	1107	na
	weeks of stocks	2.9	2.5	2.4	2.2	2.2	2.8	3.4	3.3	2.7	na
Australian exports to China	kt	80	93	81	50	70	90	109	142	126	160
	value AUDmn	699	751	661	385	554	660	844	991	900	1187

Sources: Bloomberg, World Metal Statistics.

Aluminium

- Continued oversupply and a build-up of aluminium stocks contributed to average LME spot prices in Q4 falling 0.7%qtr to average US\$1769. LME spot prices peaked at US\$1849 in October, before declining progressively to a low of US\$1695 in early December.
- Despite Central Government measures to address oversupply, average Shanghai prices in Q4 fell by 0.1%qtr to average RMB14 352.
- Chinese refined production in Q4 increased 12%yr to 5.8 Mt. China's aluminium production capacity continues to shift towards north western provinces such as Xinjiang and Qinghai where cheaper energy sources are available.

Figure 114: Aluminium prices, LME & Shanghai

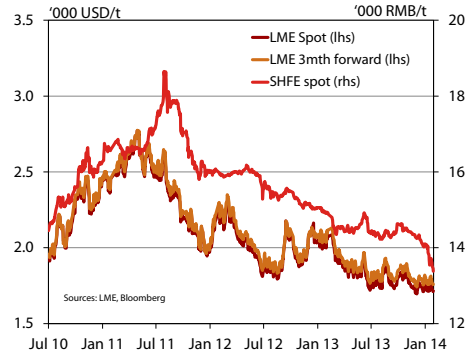


Figure 115: LME prices & inventories

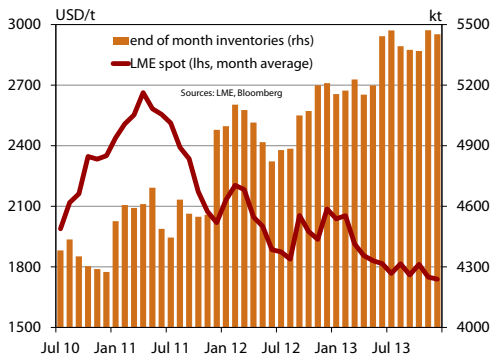


Figure 116: Aluminium use & supply by country

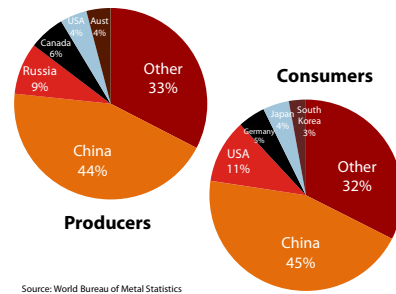


Table 17: Aluminium prices (USD/t unless specified otherwise)

LME spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	2399	2090	2177	1978	1918	1997	2003	1835	1781	1769
Quarter end	2207	1971	2099	1835	2094	2040	1882	1731	1803	1765
Quarter high	2623	2234	2308	2091	2177	2164	2123	1939	1877	1849
Quarter low	2170	1945	2004	1811	1794	1874	1868	1720	1730	1695
3 Month forward	2432	2110	2216	2019	1945	2017	2042	1870	1827	1815
Shanghai avg RMB/t	17759	16244	15957	15946	15467	15161	14722	14551	14363	14352
Shanghai avg USD/t	2745	2545	2516	2528	2442	2387	2358	2336	2345	2357
Aus FOB alumina	372	331	317	317	316	326	341	327	318	323
China Alumina RMB/	2869	2848	2651	2688	2581	2597	2571	2513	2500	2504

Sources: LME, Bloomberg.

- Chinese unwrought aluminium imports in Q4 increased by 40%qtr to 193 kt, as a result of low LME prices relative to the Shanghai price. China's aluminium imports increased progressively in each quarter of 2013, but were down 25% for the year.
- China's aluminium imports from Russia increased 60%qtr in Q4 and it surpassed Australia as the largest source of imports. Import volumes from India also increased 36%qtr to total 18kt in Q4.
- Australia's aluminium exports to China increased 95%yr to 36 kt in Q4. Accordingly, export earnings increased 113%yr to \$84 million.

Figure 117: Chinese aluminium import volumes

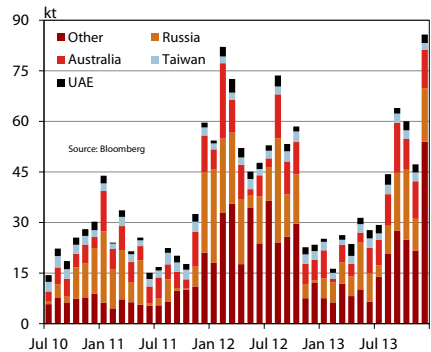


Figure 118: Australian aluminium exports to China

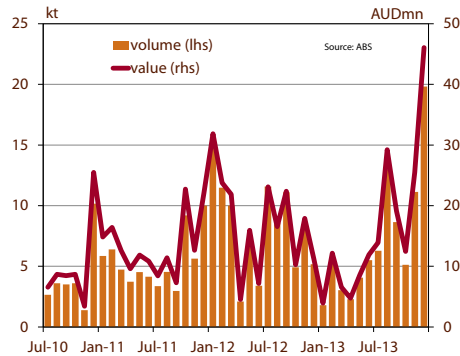


Figure 119: Aluminium end-use by sector

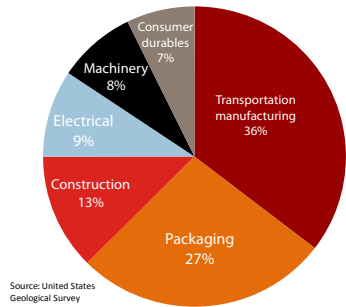


Figure 120: Aluminium demand per head

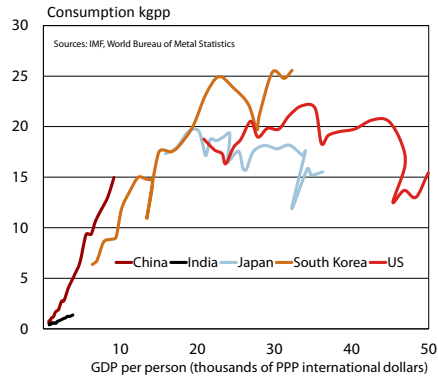
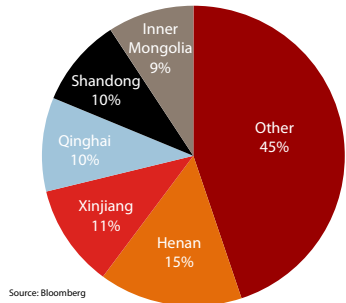


Figure 121: Aluminium output by province



Alumina

- Alumina prices FOB Australia averaged US\$323 in Q4, down 1.1%yr on the back of market oversupply.
- Higher aluminium production in China contributed to domestic alumina prices increasing by 0.2%qtr to average RMB2504 in Q4. Increased supply from newly constructed alumina refineries that use more efficient technologies and higher quality bauxite underpinned the rise.
- China's alumina imports increased 4.3%yr to 1.4 Mt in Q4 supported by relatively cheaper import prices. Australia accounted for 87% of China's alumina imports (1.2 Mt) in Q4.

Figure 122: Alumina prices

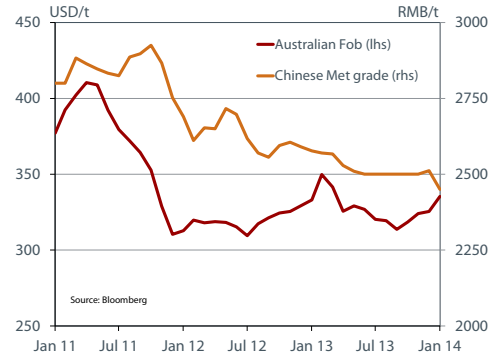


Figure 123: World alumina trade

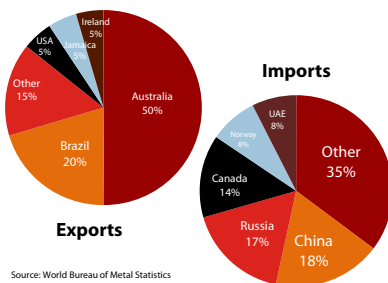


Figure 124: China's alumina imports

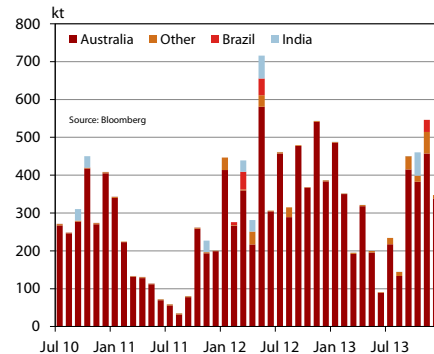


Figure 125: World alumina output

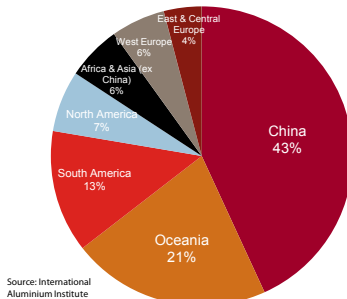
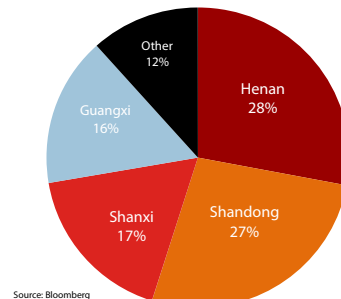


Figure 126: China's alumina output by province



Bauxite

- China's bauxite imports increased 89%yr to 17.6Mt in Q4 with value increasing by 93%yr to US\$946 million. Stockpiling of ore prior to Indonesia's January 2014 ban on unprocessed mineral commodity exports supported increased imports into China. However the exact level of accumulated bauxite stocks within China remains uncertain.
- On 12 January 2014, the Indonesian government enacted a ban on ores and concentrates exports. The ban is intended to boost domestic economic growth through increased value-added activities: refining and smelting into either alumina or aluminium prior to export.
- Indonesia was the largest supplier of bauxite in Q4 as China stockpiled ore prior to the ban on unprocessed mineral commodity exports. Import volumes increased 123%yr to 12.4Mt. Import values for Q4 were up 125%yr to US\$631 million.
- Imports from Australia increased by 51%yr to 3.4Mt in Q4 in response to higher demand and uncertainty about future supply from Indonesia.
- Australia's exports of bauxite to China increased 55%yr to 4 Mt in Q4. Accordingly, export earnings increased 107%yr.

Figure 127: China's bauxite import by source

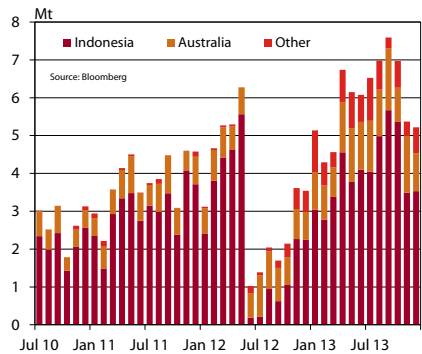


Figure 128: Australia's bauxite exports to China

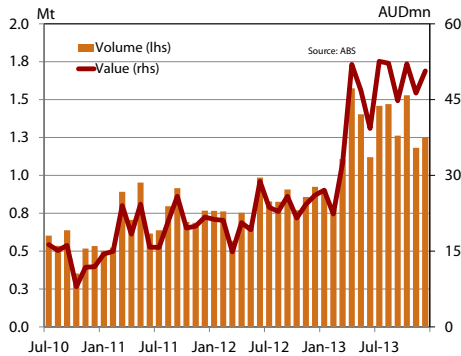


Figure 129: World bauxite output

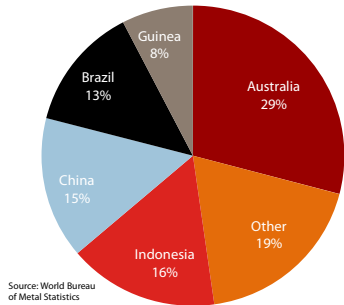


Figure 130: World bauxite trade

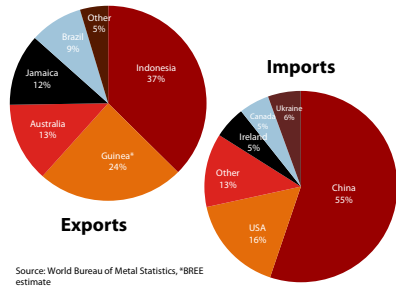


Table 18: Aluminium, alumina and bauxite summary data

Aluminium	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	kt	594	109.9	209.0	144.9	179.8	104.6	67.8	82.8	137.7	193.0
	Australia	15.6	24.0	38.2	18.3	25.5	21.6	14.5	14.3	31.7	31.5
	India	1.5	5.6	10.0	5.0	28.0	0.5	0.0	2.9	13.1	17.7
	Russia	9.3	30.0	70.5	36.9	53.3	19.6	18.1	28.1	28.9	46.1
	other	33.0	50.3	90.3	84.7	72.9	62.9	35.2	37.6	64.0	97.7
Refined production	kt	4790	4586	4691	5002	5357	5217	5215	5365	5626	5840
World stocks	kt	6436	6999	7239	6839	7203	7361	7400	7439	7089	na
	weeks of stocks	7.6	9.0	8.8	7.7	8.2	8.3	8.7	8.4	7.9	na
Australian exports to China	kt	11	25	36	13	31	19	10	12	28	36
	value AUDmn	27	57	78	28	62	39	23	25	62	84
Alumina											
China imports	kt	174.7	689.3	1161.6	1303.8	1255.0	1298.7	1034.9	612.5	829.3	1354.4
	Australia	165.9	651.5	1039.7	1102.4	1223.5	1291.8	1028.5	602.7	766.5	1177.0
	Chinese production	8.7	7.9	9.0	10.1	9.6	9.0	10.3	11.0	11.6	11.2
Bauxite											
China imports	Mt	12.1	12.3	13.1	12.6	5.1	9.3	14.0	19.0	21.1	17.6
	Australia	2.3	2.0	2.3	2.0	3.0	2.3	2.7	4.0	4.2	3.4
	Indonesia	9.6	10.2	10.6	10.4	1.8	5.6	9.2	12.4	14.7	12.4
Australian exports to China	Mt	2.3	2.1	2.1	2.4	2.6	2.6	2.8	4.1	4.2	4.0
	value AUDmn	62.5	61.3	57.3	68.7	72.4	71.9	82.0	138.0	149.5	149.0

Source: Bloomberg, World Metal Statistics.

Nickel

- LME nickel prices fluctuated between a high of US\$14 635 in October to a low of US\$13 270 in November. A continued supply glut caused prices to average below US\$14 000 a tonne for the second consecutive quarter.
- Shanghai nickel prices decreased by 20%yr to average RMB96 910 in Q4. In the first 11 months of 2013, domestic refined production increased 17%yr to total 643 kt.
- The value of China's imports decreased by 12%yr to US\$2.1 billion as a result of lower prices. For 2013 as a whole, China imported US\$7.9 billion worth of nickel, down 2.9% on 2012.

Figure 131: Nickel prices, London & Shanghai

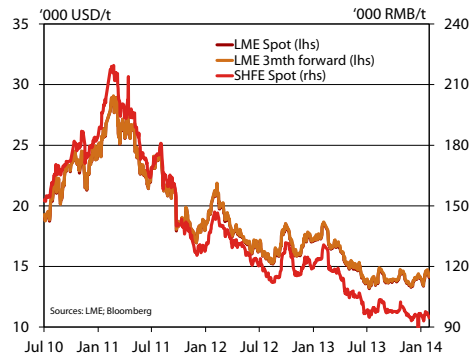


Figure 132: LME prices & inventories

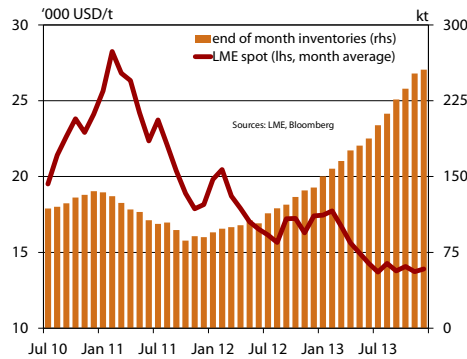


Figure 133: Nickel use and supply by country

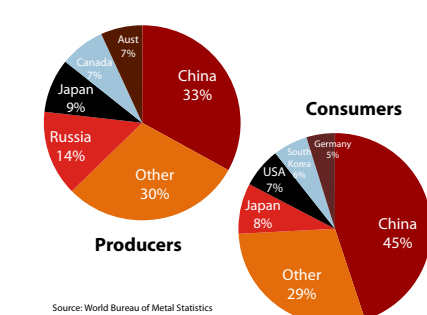


Table 19: Nickel prices (USD/t unless specified otherwise)

LME spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	22043	18303	19651	17146	16317	16967	17314	14963	13916	13909
Quarter end	18305	18280	17430	16475	18520	17085	16540	13680	13860	13970
Quarter high	25080	19825	21830	18400	18520	18840	18600	16390	14775	14635
Quarter low	17925	16935	17405	16025	15190	15850	16425	13560	13160	13270
3 Month forward	22075	18328	19721	17215	16381	17036	17387	15039	13996	13979
Shanghai avg RMB/t	165038	133408	138025	126669	118070	120920	121306	106053	98866	96190
Shanghai avg USD/t	25503	20904	21760	20080	18640	19038	19432	17026	16139	15798

Sources: LME, Bloomberg.

- The value of China's imports from Australia fell by 24%yr to US\$112 million. Import values were lower from Indonesia (down 7.2%yr), Russia (down 55%yr) and Canada (down 19%yr), with the Philippines the only exception (up 8.9%yr). Imports from these five countries accounted for 86% of the total value of China's imports of nickel, with Indonesia and the Philippines accounting for the lion's share of 65%.
- Australia's nickel export values decreased by 15%yr in the first 9 months of 2013. The fall in values is a result of a lower received nickel prices and a slight decrease in export volumes.

Figure 134: Chinese nickel import values

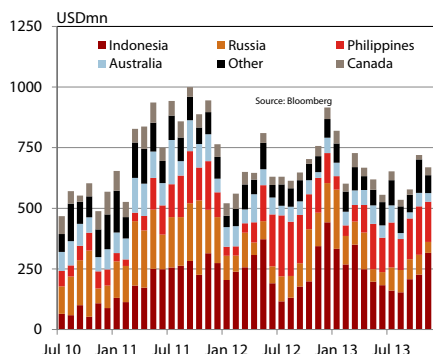


Figure 135: Nickel output by province

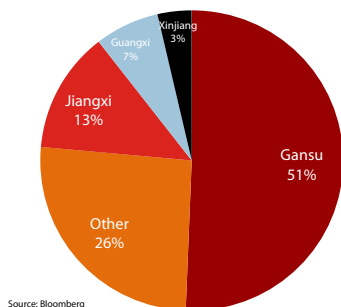


Figure 136: Nickel end-use by sector

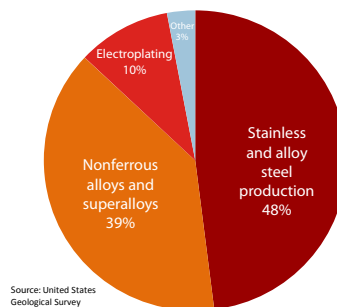


Figure 137: Nickel demand per capita

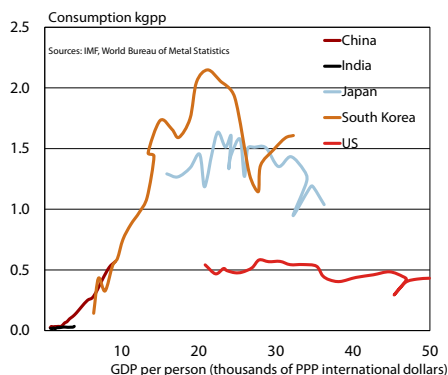


Figure 138: World trade in nickel

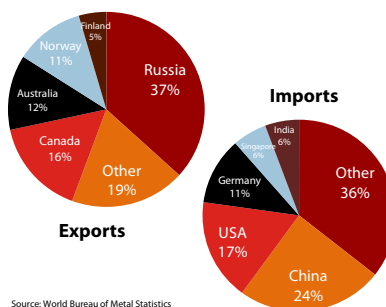


Table 20: Nickel summary data

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	USDmn	2801	2597	1731	2086	1890	2376	2149	1842	1766	2095
	Australia USDmn	369	265	221	252	158	147	172	189	119	112
	Canada USDmn	166	156	166	103	93	110	143	107	86	89
	Russia USDmn	646	676	309	196	290	514	456	257	270	233
	Indonesia USDmn	801	814	699	871	425	985	952	629	521	914
	Philippines USDmn	522	439	114	445	673	411	168	442	482	448
	other USDmn	296	248	221	220	252	209	258	217	287	299
	kt	151	129	105	149	172	198	152	161	181	na
Refined production	kt	103	97	105	110	130	162	186	207	248	282
World stocks	weeks of stocks	6.9	6.4	7.6	7.5	7.1	7.8	8.1	7.0	6.1	na
	kt	147	210	95	106	131	153	110	156	120	202
Australian exports to China	value	215	302	133	148	186	220	176	214	175	278
	AUDmn										

Sources: Bloomberg, World Metal Statistics International Nickel Study Group.

Zinc

- LME zinc prices declined 2%yr to average US\$1907 in Q4. Prices ranged from US\$1828 in October to US\$2116 in late December. Metal exchange stocks declined in Q4 resulting in a 2.6%qtr rise in average LME zinc prices.
- Shanghai zinc prices mirrored movements in LME prices, decreasing by 0.3%yr to average RMB14 969 in Q4. Consumers continued to draw down existing stocks during Q4, contributing to Shanghai prices increasing 1.7%qtr.
- Refined zinc production in China increased by 7.1%yr to 1.4Mt in Q4 supported by increased output at a number of operations.

Figure 139: Zinc prices, London & Shanghai

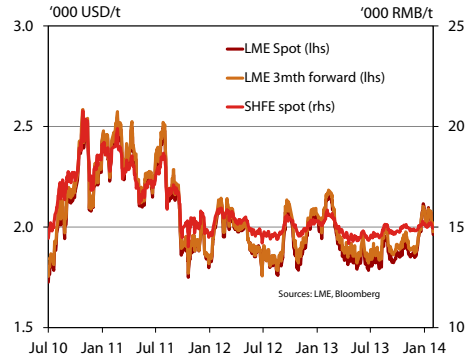


Figure 140: LME prices & inventories

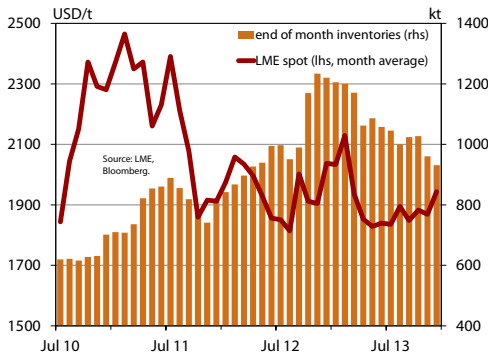


Figure 141: Zinc use and supply by country

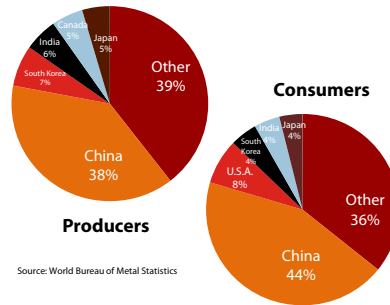


Table 21: Zinc prices (USD/t unless specified otherwise)

LME spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	2224	1897	2025	1928	1885	1947	2033	1840	1859	1907
Quarter end	1905	1828	2003	1843	2088	2035	1871	1823	1877	2086
Quarter high	2495	2060	2179	2049	2105	2098	2188	1925	1956	2116
Quarter low	1860	1750	1827	1760	1760	1785	1854	1784	1793	1828
3 Month forward	2251	1909	2040	1932	1902	1979	2057	1875	1896	1932
Shanghai avg RMB/t	17342	15173	15369	15132	14640	15021	15330	14596	14726	14969
Shanghai avg USD/t	2680	2378	2423	2399	2311	2365	2456	2343	2404	2459

Sources: LME, Bloomberg.

- Relatively slower growth in domestic production underpinned higher zinc imports (total metal content) in 2013. Imports from Peru grew at an estimated rate of 44%yr, supported by larger volumes of ores and concentrates. Australia remained the largest source of China's zinc imports, despite an estimated 2%yr fall in volumes for the year, and accounted for around 30% of total imports into China in 2013.
- Australian export volumes (in metal content) to China increased by 32%yr to 202 kt in Q4, with export values increasing 26%yr to \$278 million.
- China is the world's largest zinc consumer (44% of total refined consumption), but per capita consumption is still reasonably low. There is the potential for zinc intensity to continue to increase as the economy develops. Evidence from Japan and South Korea suggests that the turning point for zinc demand per head can come relatively late in the development cycle.

Figure 142: Chinese zinc import volumes

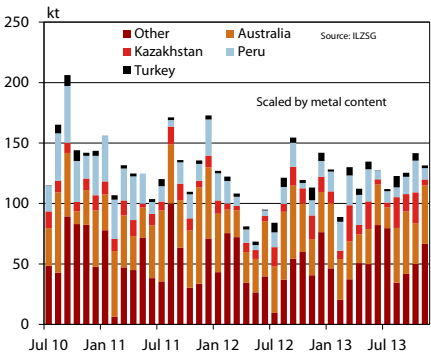


Figure 143: Australian zinc exports to China

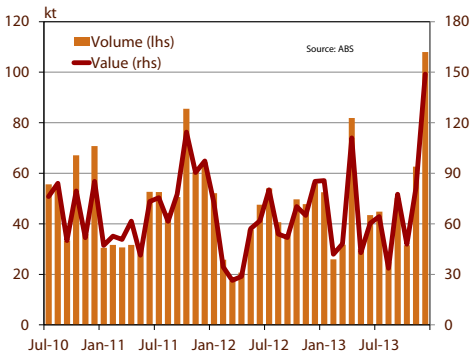


Figure 144: Zinc demand per capita

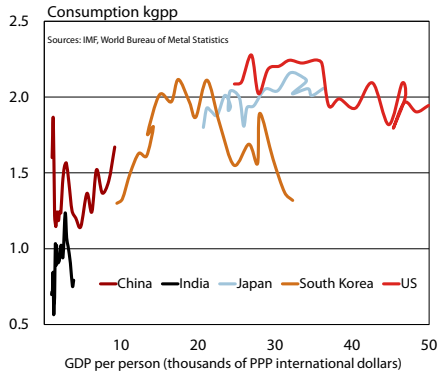


Figure 145: Zinc output by province

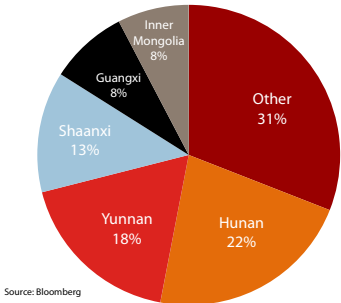


Table 22: Zinc summary data

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	kt	427.4	418.0	357.5	244.6	359.9	374.5	347.0	374.4	360.1	na
	Australia	146.6	186.3	90.0	98.7	155.0	103.3	119.0	86.3	114.2	na
	Kazakhstan	35.6	25.1	19.5	19.4	38.0	44.5	46.5	35.1	43.8	na
	Peru	36.0	63.6	48.7	19.6	46.2	30.2	65.0	58.7	31.7	na
	Turkey	10.1	8.2	8.3	6.0	19.8	19.6	12.4	11.5	14.6	na
	other	199.3	134.9	191.0	100.9	100.9	177.0	104.1	182.7	155.9	na
Refined production	kt	1292.8	1388.4	1168.7	1179.2	1138.8	1342.7	1241.5	1325.7	1330.8	1438.0
World stocks	kt	1634.7	1619.1	1702.3	1758.1	1678.9	1929.2	1903.2	1756.8	1589.3	na
	weeks of stocks	6.9	6.4	7.6	7.5	7.1	7.8	8.1	7.0	6.1	na
Australian exports to China	kt	147	95	106	131	153	110	110	156	120	202
	value AUDmn	215	133	148	186	220	176	176	214	175	278

Sources: Bloomberg, World Metal Statistics, International Lead and Zinc Study Group.

Lead

Figure 146: LME prices & inventories

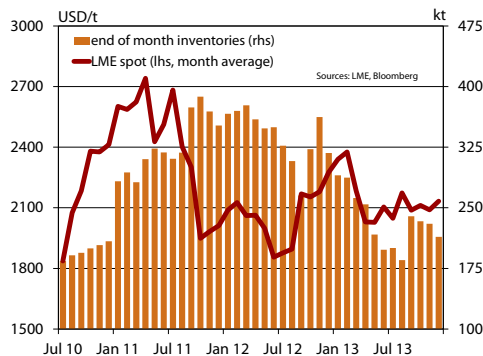


Figure 147: Chinese lead import volumes

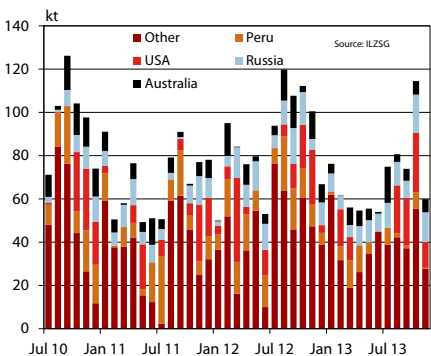


Figure 148: Australian lead exports to China

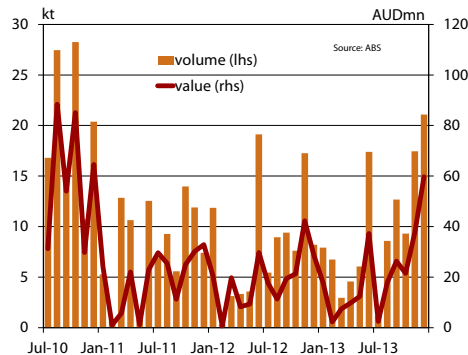


Figure 149: World trade in lead

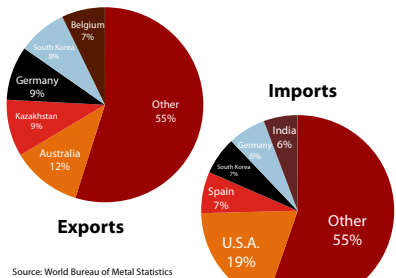


Table 23: Lead prices (USD/t unless specified otherwise).

LME spot prices	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter average	2459	1983	2093	1974	1975	2199	2301	2053	2102	2111
Quarter end	2061	1980	2021	1796	2300	2340	2094	2058	2075	2206
Quarter high	2745	2119	2288	2156	2300	2340	2448	2247	2238	2259
Quarter low	1994	1792	1943	1744	1817	2002	2089	1949	2017	2027
3 Month forward	2459	2000	2118	1984	1985	2200	2314	2066	2116	2134
Shanghai avg RMB/t	16329	15296	15760	15363	15212	15043	14734	13943	14141	14112
Shanghai avg USD/t	2523	2397	2485	2435	2401	2368	2360	2238	2308	2318

Sources: LME, Bloomberg.

Table 24: Lead summary data

	unit	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
China imports	kt	220.8	222.1	229.2	208.8	321.3	279.5	194.1	164.2	229.5	na
Australia	kt	14.0	15.7	15.8	16.4	33.6	24.0	12.6	13.4	25.7	na
Peru	kt	62.0	23.5	38.9	40.6	51.2	29.6	20.3	17.7	10.8	na
Russia	kt	9.0	30.7	21.0	35.7	33.6	30.7	20.7	27.4	30.5	na
USA	kt	12.9	49.3	48.8	15.2	16.9	48.8	28.0	0.1	44.0	na
Mexico	kt	6.8	7.5	7.6	15.4	15.9	16.3	11.9	9.2	7.0	na
other	kt	116.1	95.3	97.0	85.5	170.1	130.1	100.6	96.4	111.4	na
Refined production	kt	1159	1224	900	1143	1296	1307	1059	1187	1137	1131
World stocks	kt	609	581	634	614	533	627	680	600	603	na
	weeks	3.1	2.9	3.5	3.1	2.5	2.9	3.4	2.9	2.9	na
Australian exports to China	kt	22	33	15	26	24	33	18	28	22	48
	value AUDmn	66	88	41	47	48	92	27	59	47	119

Sources: Bloomberg, World Metal Statistics, International Lead and Zinc Study Group.

Tin

Figure 150: Tin prices

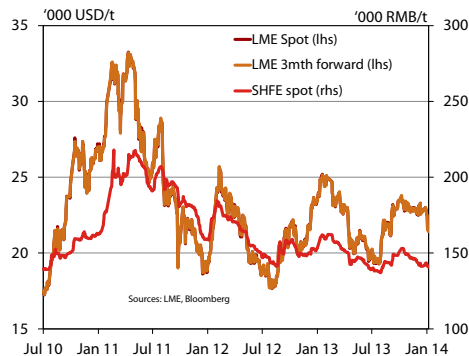


Figure 151: LME prices and inventory

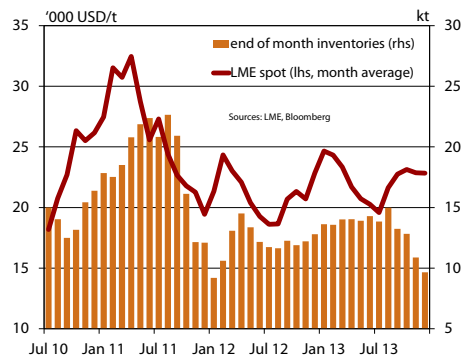


Figure 152: World tin producers and consumers

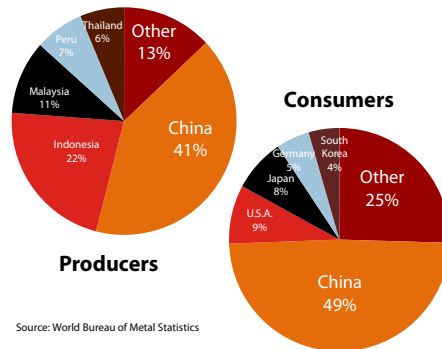


Figure 153: China's tin imports by source

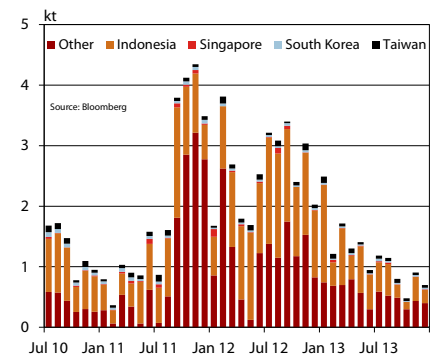


Figure 154: Tin use by sector

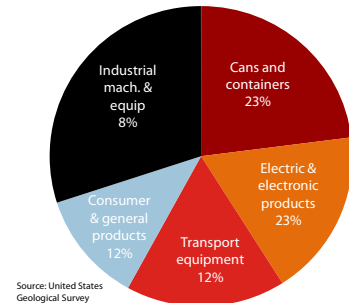
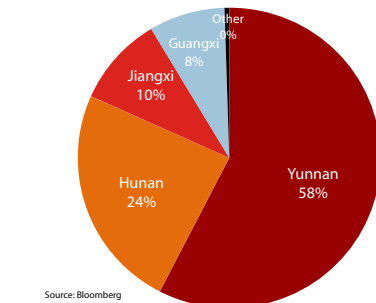


Figure 155: China's tin output by province



Molybdenum

Figure 156: Molybdenum prices

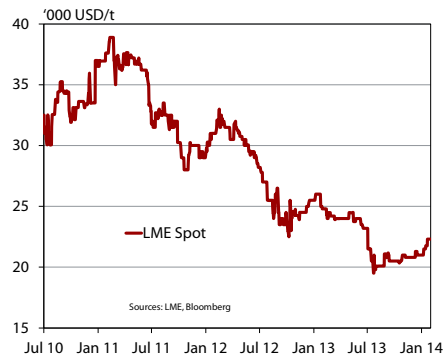


Figure 157: China's molybdenum ore imports

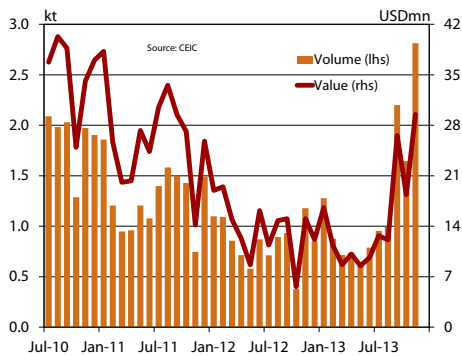


Figure 158: China's molybdenum articles exports

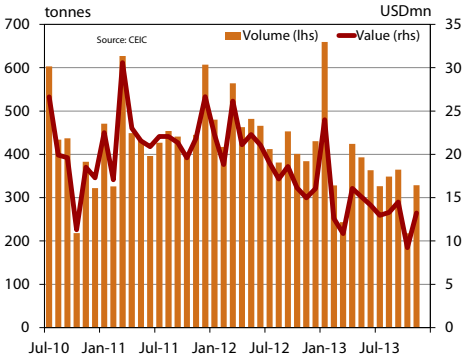


Figure 159: China's molybdenum ore exports

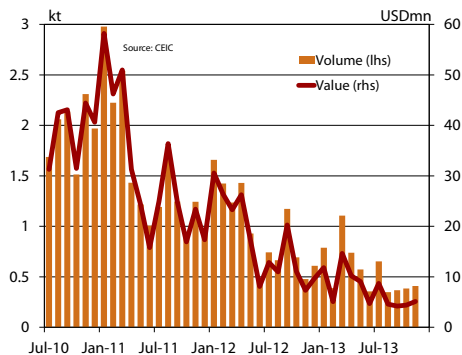


Figure 160: China's molybdenum production

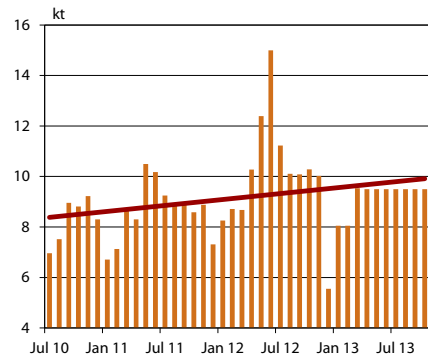
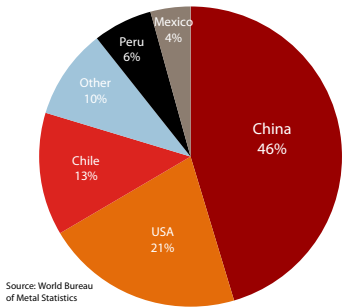


Figure 161: World molybdenum output



Tungsten

Figure 162: China's tungsten ore imports

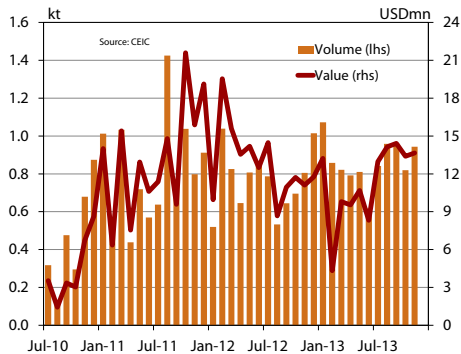


Figure 163: China's tungsten articles imports

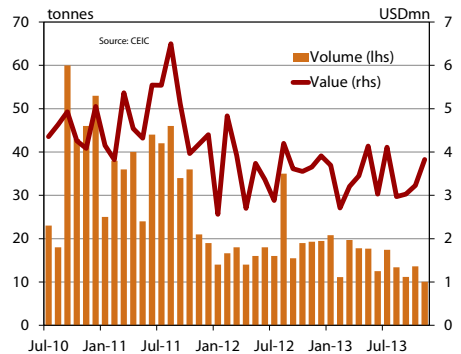


Figure 164: China's tungsten and articles exports

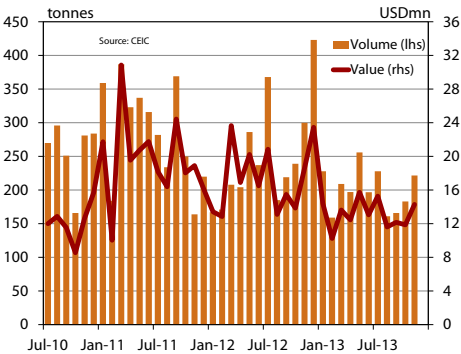


Figure 165: China's tungsten products exports

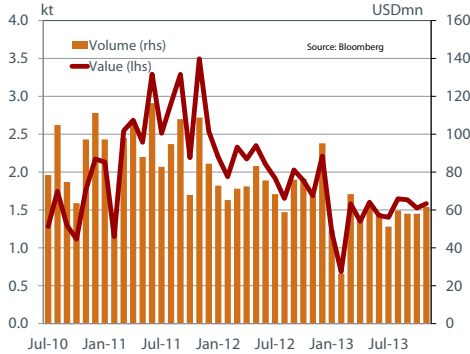


Figure 166: World tungsten output

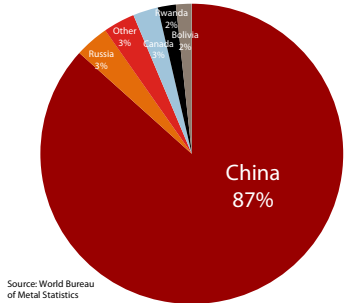
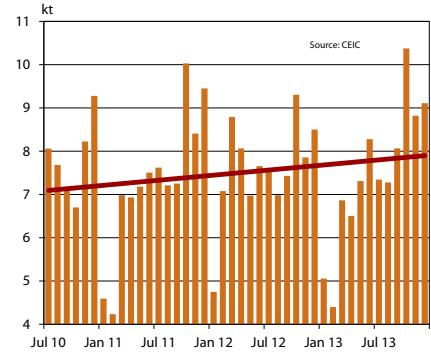


Figure 167: China's tungsten output (metal content)



Cobalt

Figure 168: Cobalt prices

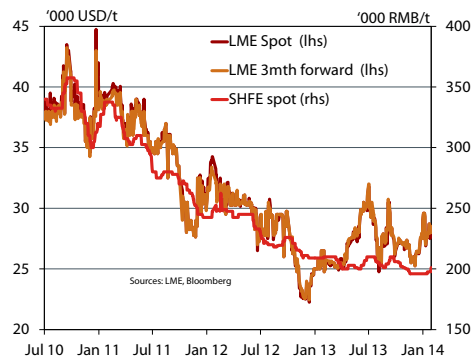


Figure 169: China's cobalt ore imports

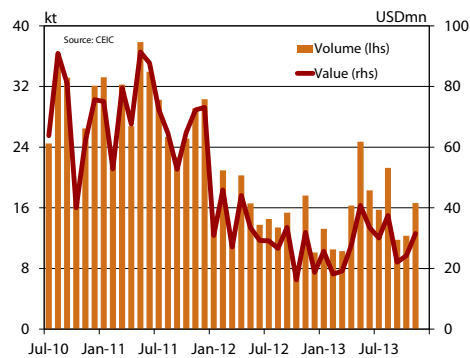


Figure 170: China's cobalt articles imports

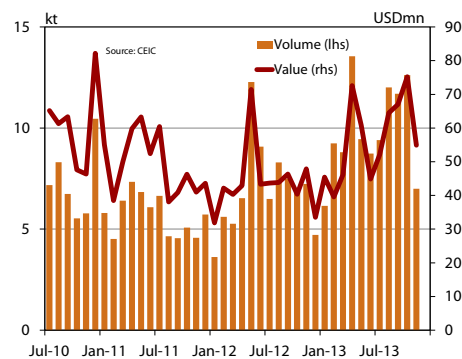


Figure 171: World cobalt mine output

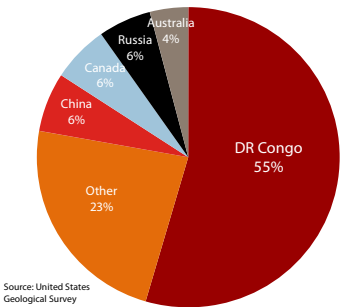


Figure 172: World cobalt refined output

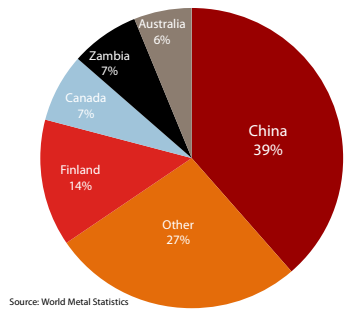
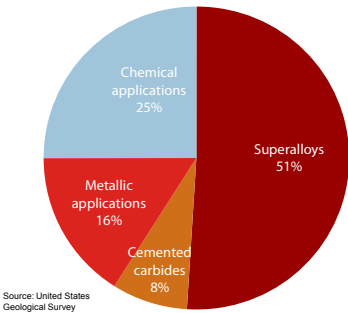


Figure 173: Cobalt use by sector



Antimony

Figure 174: Antimony prices

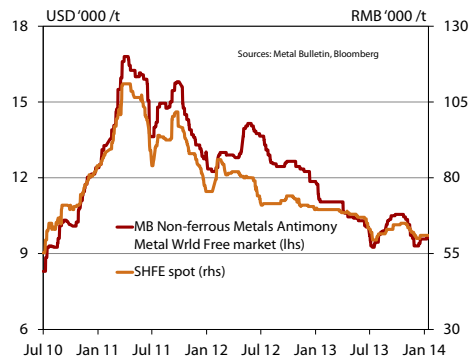


Figure 175: China's antimony ores imports

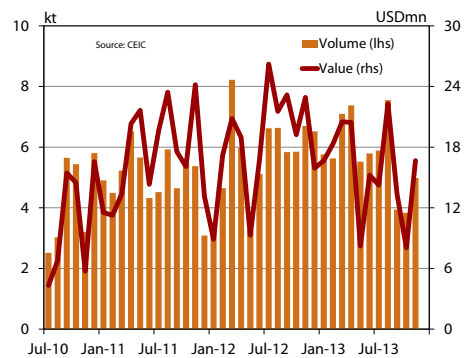


Figure 176: China's unwrought antimony exports

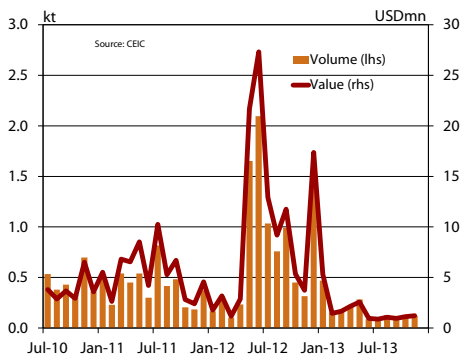


Figure 177: Australian antimony exports to China

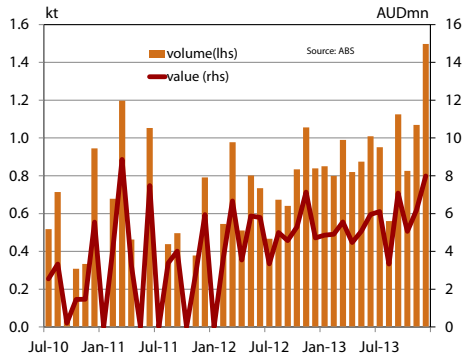


Figure 178: China's antimony mine output

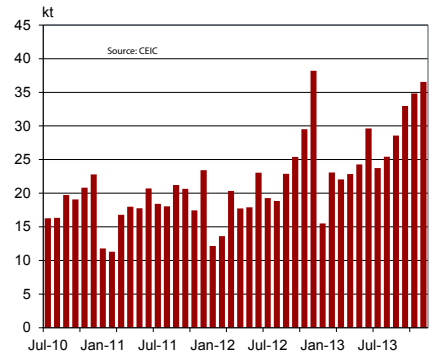
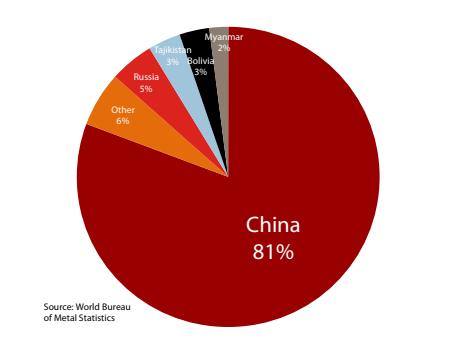


Figure 179: World antimony mine output



Platinum & Palladium

Figure 180: Platinum prices

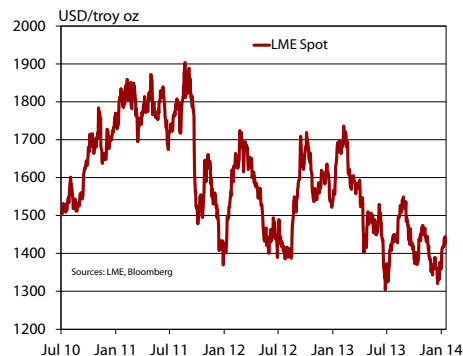


Figure 181: Palladium prices

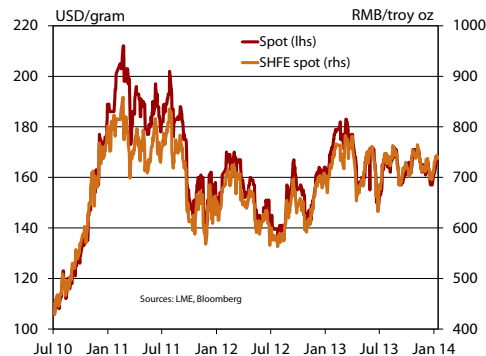


Figure 182: China's platinum imports

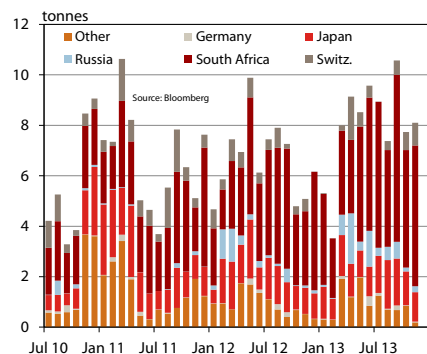


Figure 183: China's platinum exports

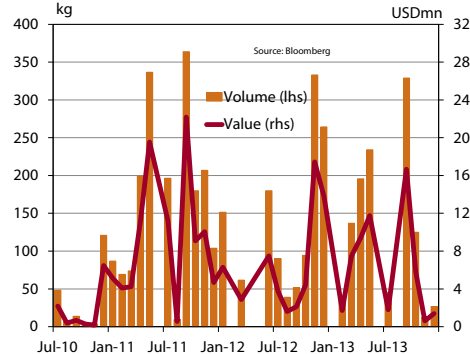


Figure 184: World platinum output

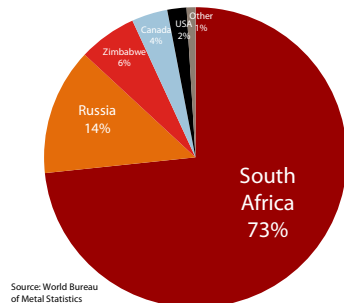
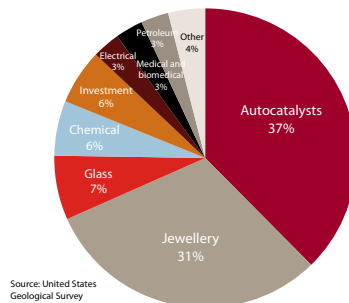


Figure 185: Platinum end use by sector



Mineral Sands

Figure 186: China's titanium dioxide imports

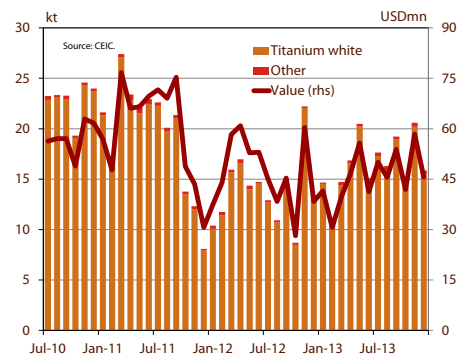


Figure 187: China's titanium dioxide exports

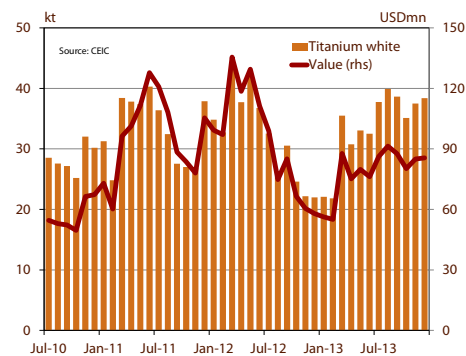


Figure 188: Aust titanium dioxide exports to China

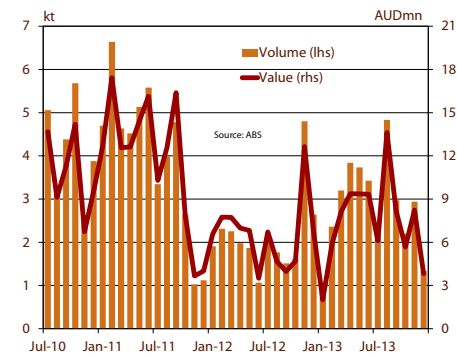


Figure 189: Australian rutile exports to China

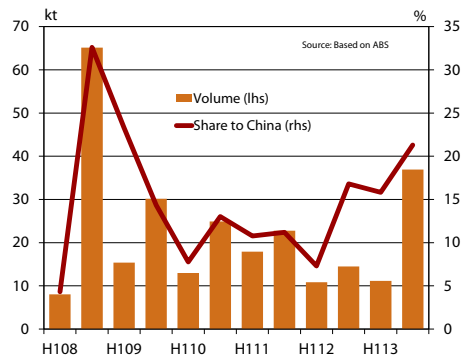


Figure 190: Australian zirconium exports to China

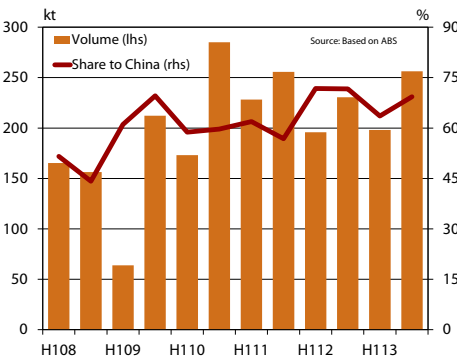
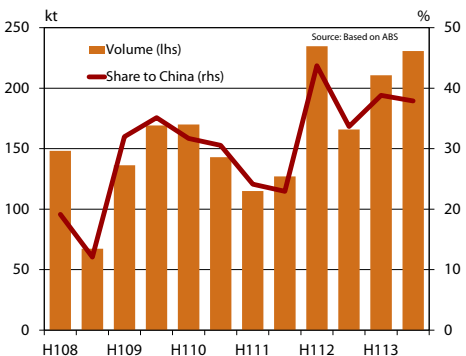


Figure 191: Australian ilmenite exports to China



China's exports of rare earth oxides

Figure 192: China's total rare earth oxides exports

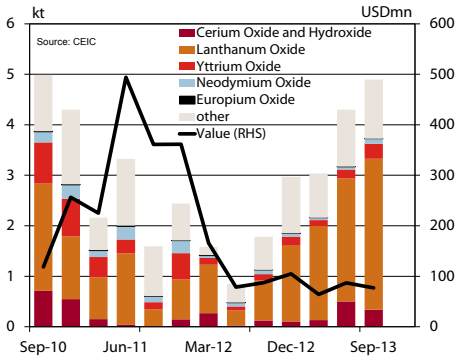


Figure 193: Cerium oxide & hydroxide exports

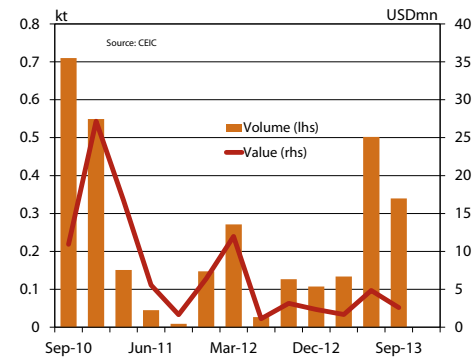


Figure 194: Lanthanum oxide exports

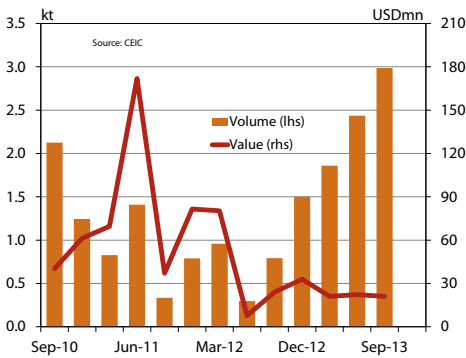


Figure 195: Neodymium oxide exports

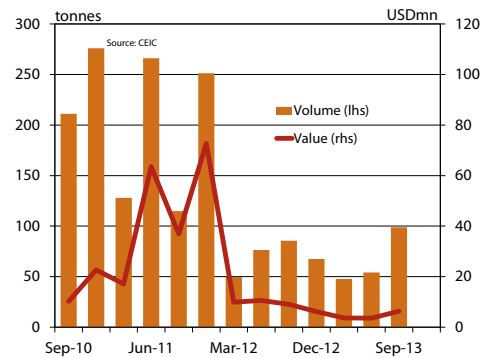


Figure 196: Europium oxide exports

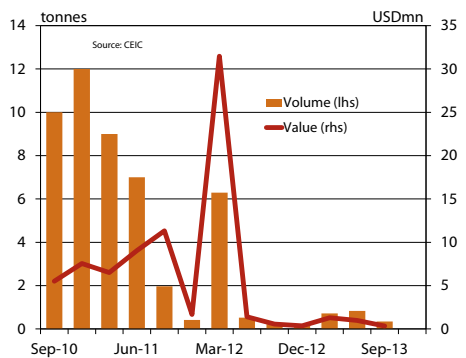
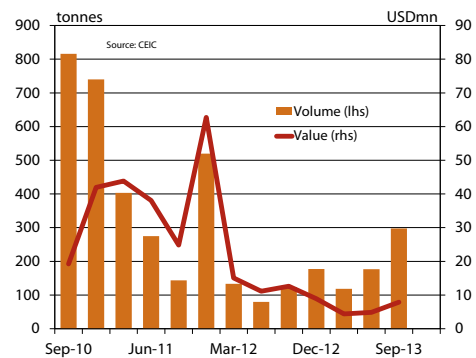


Figure 197: Yttrium oxide exports



Manganese & Cadmium

Figure 198: Manganese & cadmium prices

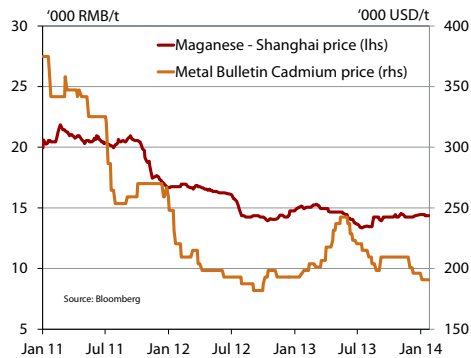


Figure 199: China's manganese ore imports

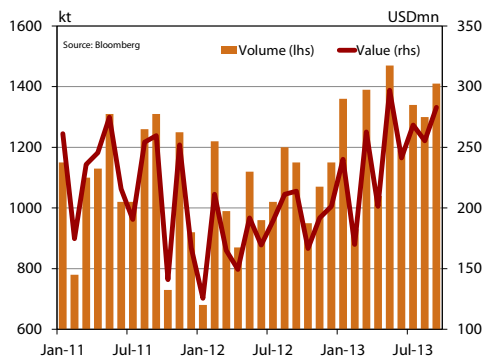


Figure 200: Australian manganese exports to China

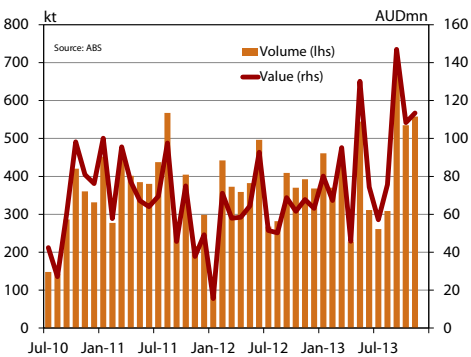


Figure 201: World manganese mine output

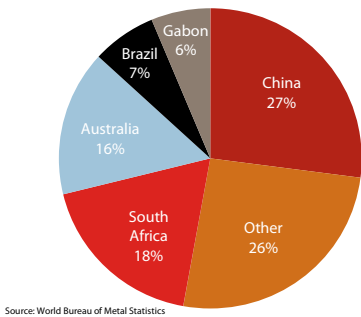


Figure 202: World cadmium production

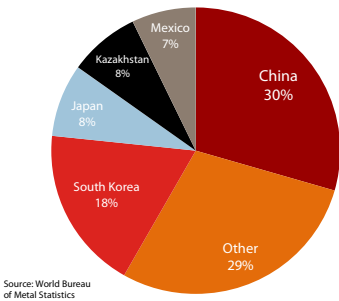
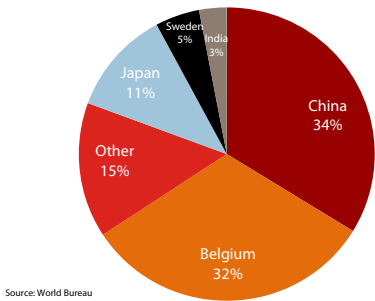


Figure 203: World cadmium consumption



Diamonds & Magnesium

Figure 204: World diamond exports

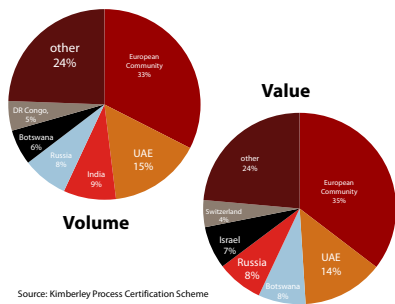


Figure 205: World diamond imports

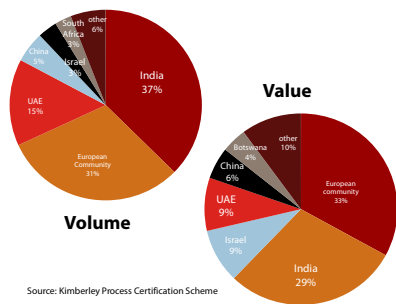


Figure 206: World diamond output

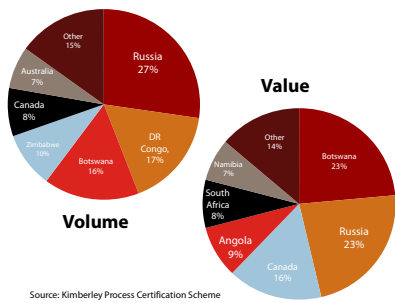


Figure 207: Magnesium prices

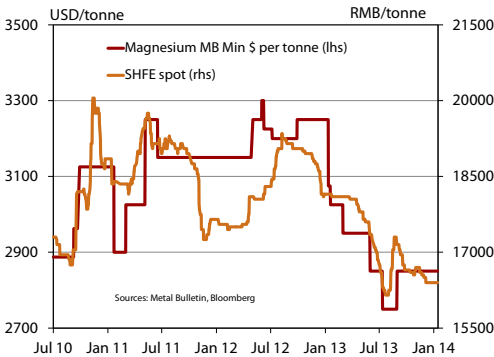


Figure 208: China's magnesium exports

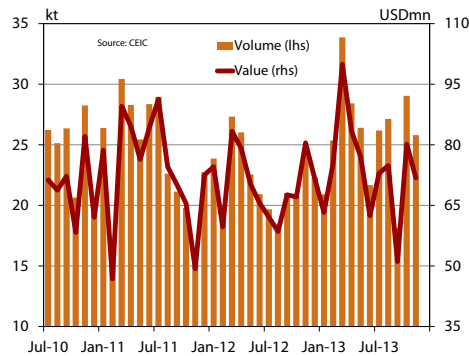


Figure 209: Shares of world magnesium output

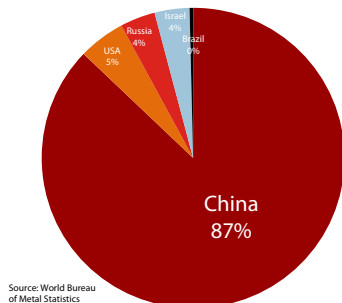


Table 24: China mineral and energy import summary

	unit	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Iron ore	Mt	187.2	179.8	185.3	193.1	186.5	198.0	216.7	219.1
from Australia	Mt	83.0	82.7	91.6	94.3	89.8	102.6	111.8	112.9
Australian share	%	44	46	49	49	48	52	52	52
Thermal coal	Mt	49.3	62.9	54.4	68.5	62.8	60.5	60.9	67.6
from Australia	Mt	8.1	11.4	11.3	14.8	12.9	12.2	17.0	15.9
Australian share	%	16	18	21	22	21	20	28	24
Metallurgical coal	Mt	12.2	15.4	8.9	17.0	17.2	18.1	19.4	20.7
from Australia	Mt	3.8	2.9	1.7	5.5	7.9	5.4	7.7	9.2
Australian share	%	31	19	19	33	46	30	40	44
Aluminium	kt	209.0	144.9	179.8	104.6	67.8	82.8	137.7	193.0
from Australia	kt	38.2	18.3	25.5	21.6	14.5	14.3	31.7	31.5
Australian share	%	18	13	14	21	21	17	23	16
Alumina	kt	1162	1304	1255	1299	1035	612	829	1354
from Australia	kt	1040	1102	1224	1292	1028	603	767	1177
Australian share	%	90	85	97	99	99	98	92	87
Bauxite	Mt	13.1	12.6	5.1	9.3	14.0	19.0	21.1	17.6
from Australia	Mt	2.3	2.0	3.0	2.3	2.7	4.0	4.2	3.4
Australian share	%	17	16	58	24	19	21	20	19
Copper	kt	1597	1327	1403	1477	1356	1380	1731	1819
from Australia	kt	97	75	80	78	97	157	135	128
Australian share	%	6	6	6	5	7	11	8	7

Table 24 continued on page 65

Table 24 continued:

	unit	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Oil	Mt	70.6	69.5	60.3	70.7	69.0	69.2	73.2	70.8
from Australia	Mt	0.8	1.4	0.6	1.0	0.5	0.8	1.2	0.5
Australian share	%	1.1	2.0	1.0	1.4	0.8	1.2	1.7	0.7
Gas (LNG)	kt	3260	3410	3800	4230	4180	4160	4560	5140
from Australia	kt	779	908	904	972	842	974	834	906
Australian share	%	24	27	24	23	20	23	18	18
Zinc	kt	357.5	244.6	359.9	374.5	347.0	374.4	360.1	na
from Australia	kt	90.0	98.7	155.0	103.3	119.0	86.3	114.2	na
Australian share	%	25	40	43	28	34	23	32	na
Nickel	USDmn	221	252	158	147	172	189	119	112
from Australia	USDmn	13	12	8	6	8	10	7	5
Australian share	%	19	18	14	9	12	9	8	8
Lead	kt	229.2	208.8	321.3	279.5	194.1	164.2	229.5	na
from Australia	kt	15.8	16.4	33.6	24.0	12.6	13.4	25.7	na
Australian share	%	7	8	10	9	7	8	11	na
Tin	kt	8.2	6.0	9.7	7.5	5.4	3.7	3.1	2.1
from Australia	kt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Australian share	%	0	0	0	0	0	0	0	0
Uranium	t	1978	0	2510	10734	4516	2567	9069	6216

Source: CEIC and Bloomberg.

Electricity generation and consumption

Figure 210: Electricity generation by region, 2013

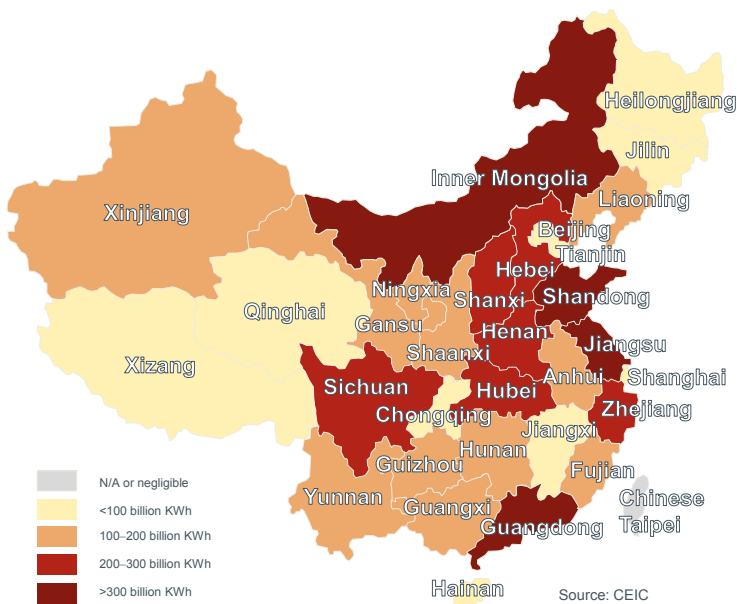
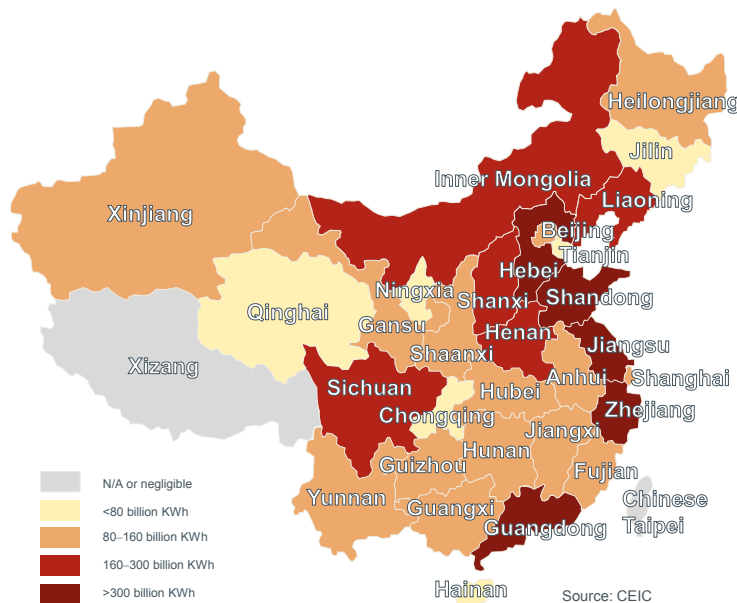


Figure 211: Electricity consumption by region, 2012



Coal and gas

Figure 212: Coal production by region, 2011

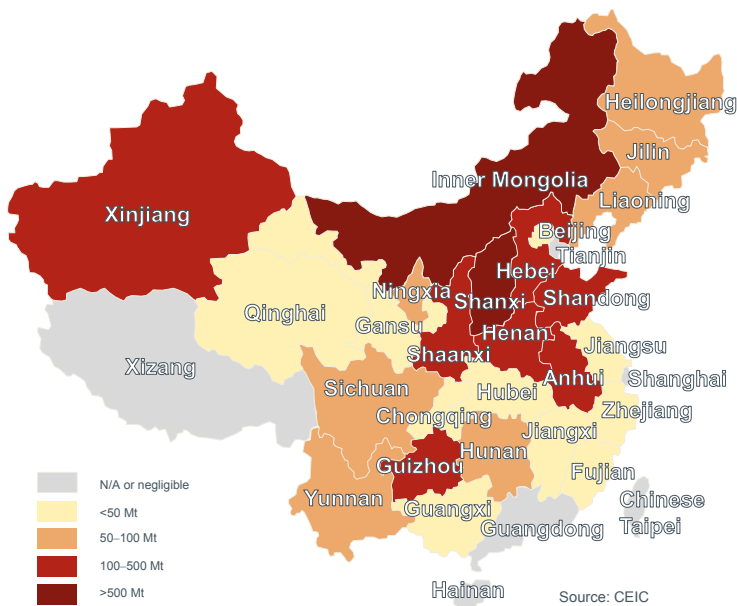
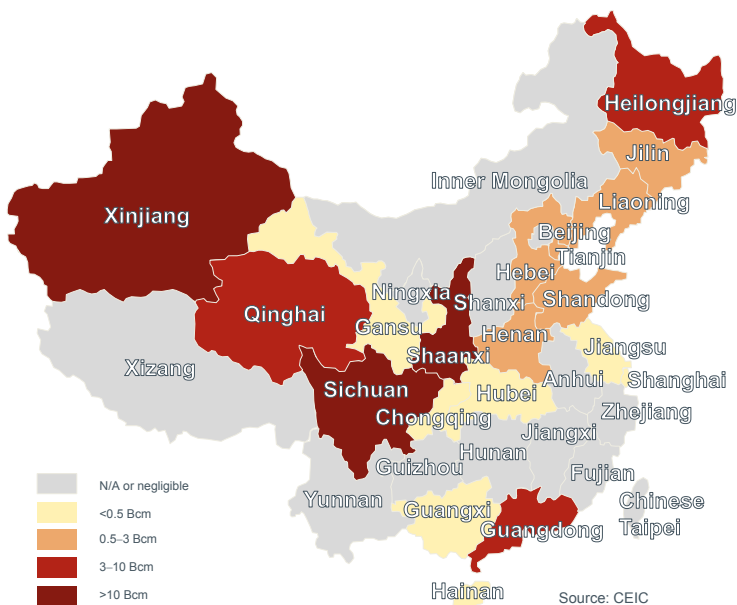


Figure 213: Gas production by region, 2013



Ferrous metals

Figure 214: Iron ore production by region, 2013 estimate

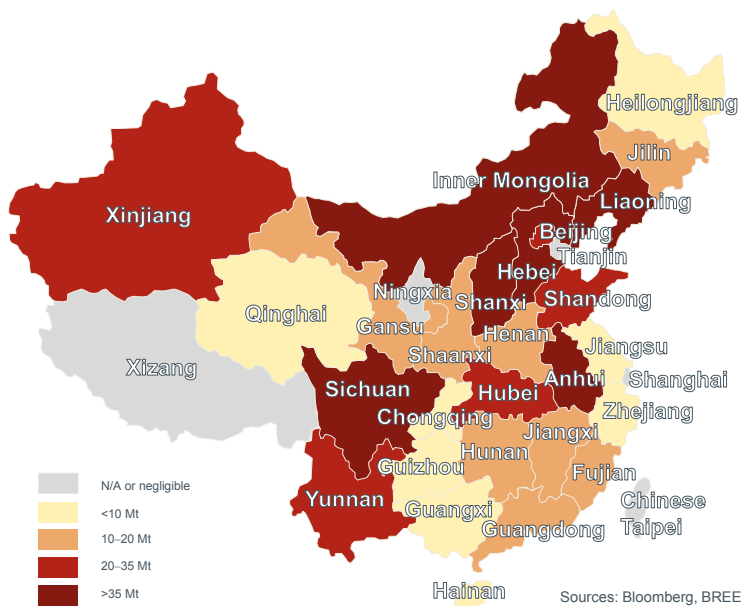
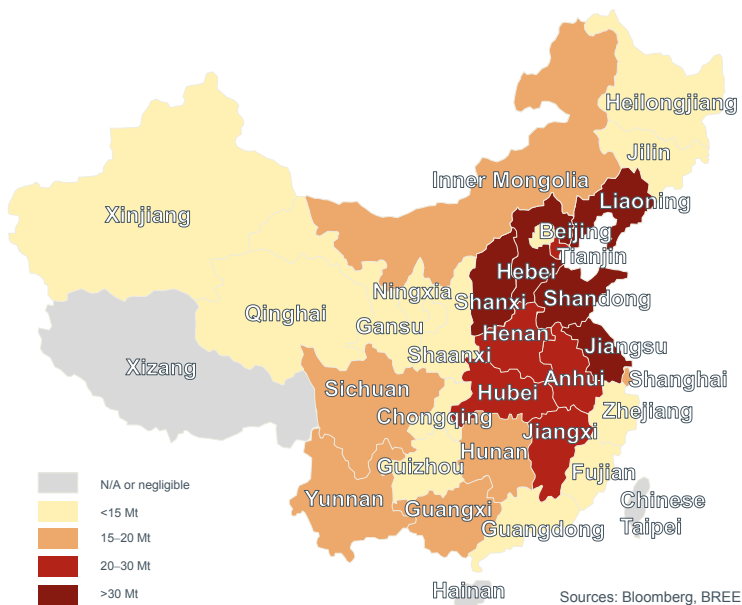


Figure 215: Crude steel production by region, 2013 estimate



Alumina and aluminium

Figure 216: Alumina production by region, 2013

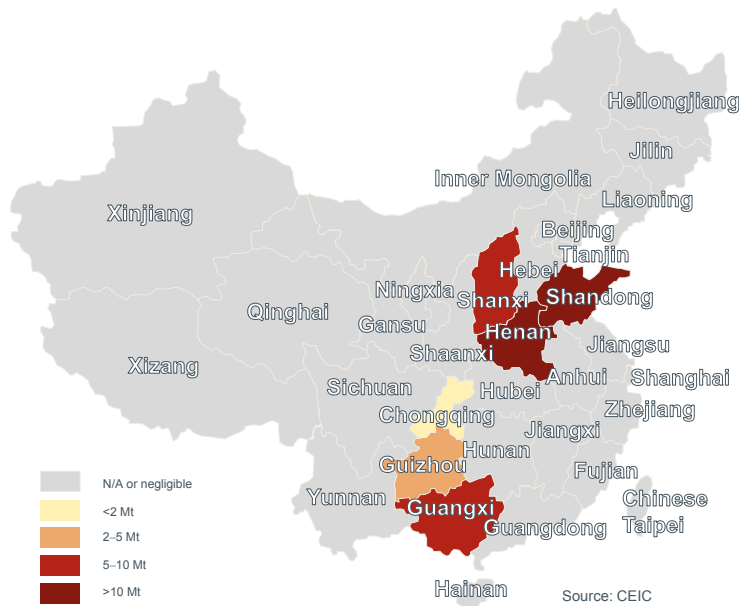


Figure 217: Aluminum production by region, 2013



Copper and gold

Figure 218: Copper production by region, 2013

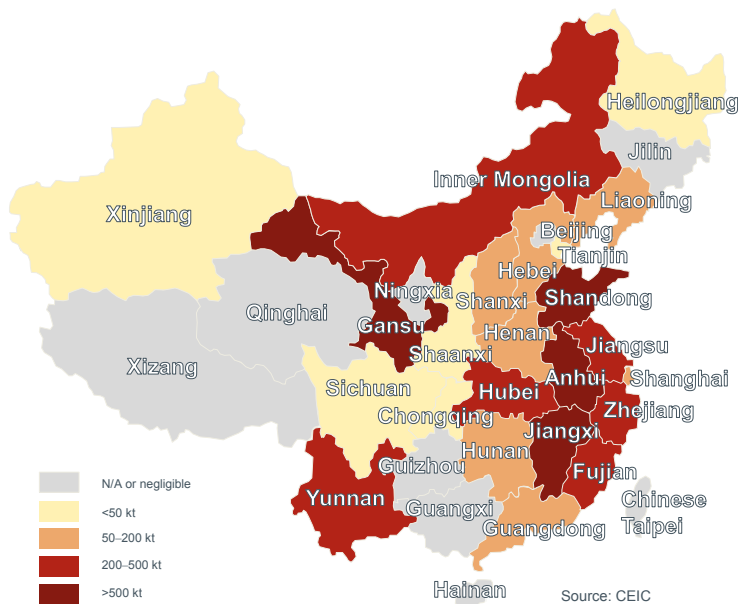
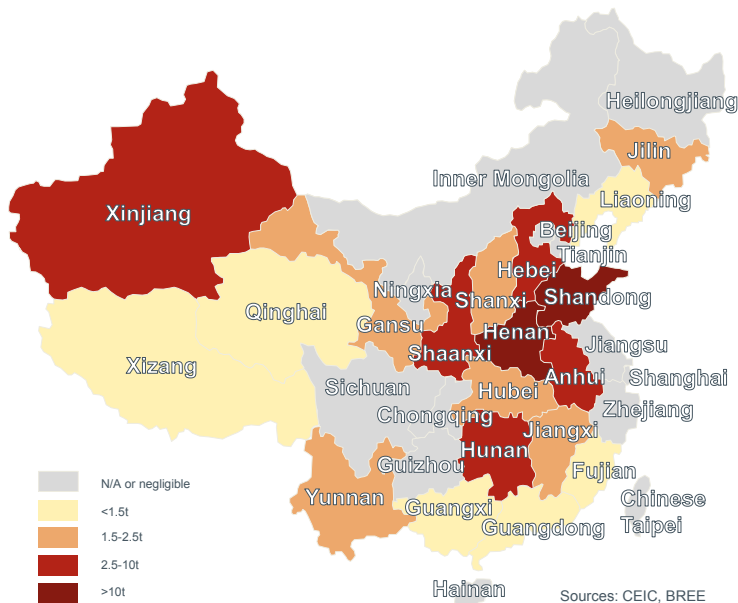


Figure 219: Mined gold production by region, 2013



Nickel and zinc

Figure 220: Nickel production by region, 2013

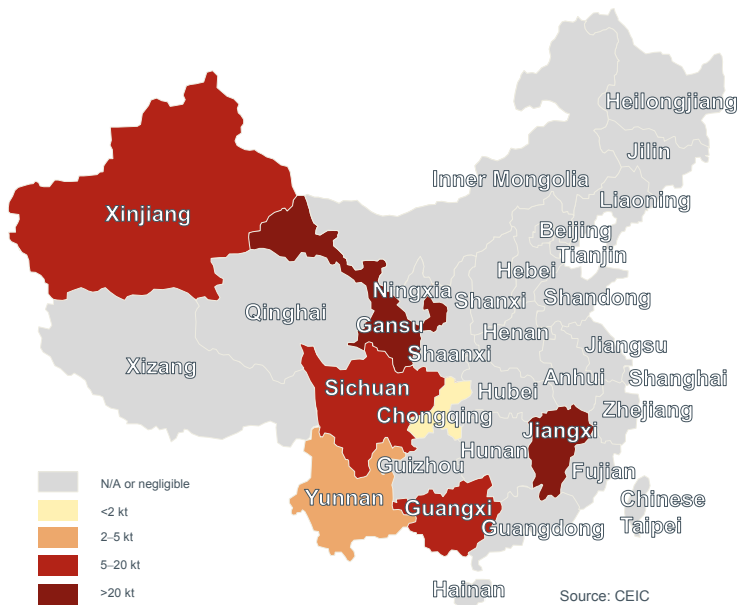
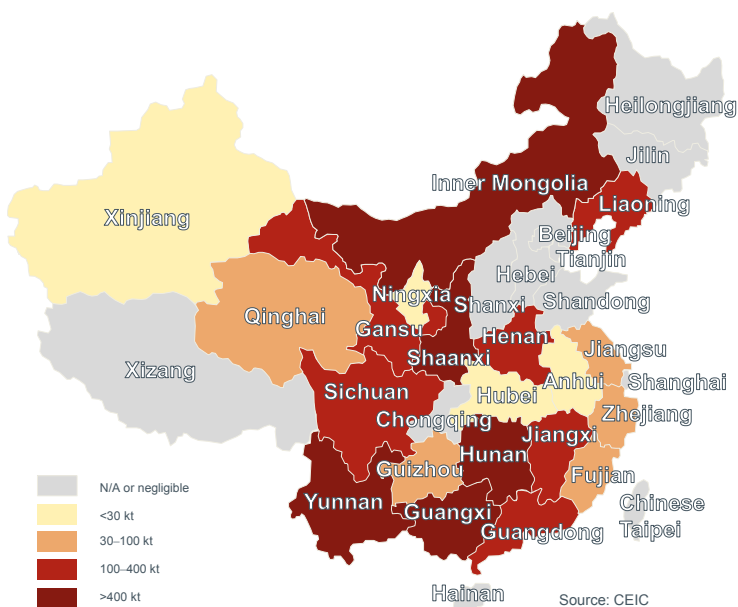


Figure 221: Zinc production by region, 2013



Westpac disclaimer

Things you should know: Each time someone visits our site, data is captured so that we can accurately evaluate the quality of our content and make improvements for you. We may at times use technology to capture data about you to help us to better understand you and your needs, including potentially for the purposes of assessing your individual reading habits and interests to allow us to provide suggestions regarding other reading material which may be suitable for you.

If you are located in Australia, this material and access to this website is provided to you solely for your own use and in your own capacity as a wholesale client of Westpac Institutional Bank being a division of Westpac Banking Corporation ABN 33 007 457 141 AFSL 233714 ('Westpac'). If you are located outside of Australia, this material and access to this website is provided to you as outlined below.

This material and this website contain general commentary only and does not constitute investment advice. Certain types of transactions, including those involving futures, options and high yield securities give rise to substantial risk and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. This material and this website may contain material provided by third parties. While such material is published with the necessary permission none of Westpac or its related entities accepts any responsibility for the accuracy or completeness of any such material. Although we have made every effort to ensure the information is free from error, none of Westpac or its related entities warrants the accuracy, adequacy or completeness of the information, or otherwise endorses it in any way. Except where contrary to law, Westpac and its related entities intend by this notice to exclude liability for the information. The information is subject to change without notice and none of Westpac or its related entities is under any obligation to update the information or correct any inaccuracy which may become apparent at a later date. The information contained in this material and this website does not constitute an offer, a solicitation of an offer, or an inducement to subscribe for, purchase or sell any financial instrument or to enter a legally binding contract. Past performance is not a reliable indicator of future performance. The forecasts given in this material and this website are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

Transactions involving carbon give rise to substantial risk (including regulatory risk) and are not suitable for all investors. We recommend that you seek your own independent legal or financial advice before proceeding with any investment decision. This information has been prepared without taking account of your objectives, financial situation or needs. Statements setting out a concise description of the characteristics of carbon units, Australian carbon credit units and eligible international emissions units (respectively) are available at www.cleanenergyregulator.gov.au as mentioned in section 202 of the Clean Energy Act 2011, section 162 of the Carbon Credits (Carbon Farming Initiative) Act 2011 and section 61 of the Australian National Registry of Emissions Units Act 2011. You should consider each such statement in deciding whether to acquire, or to continue to hold, any carbon unit, Australian carbon credit unit or eligible international emissions unit.

Additional information if you are located outside of Australia

New Zealand: The current disclosure statement for the New Zealand division of Westpac Banking Corporation ABN 33 007 457 141 or Westpac New Zealand Limited can be obtained at the internet address www.westpac.co.nz. Westpac Institutional Bank products and services are provided by either Westpac Banking Corporation ABN 33 007 457 141 incorporated in Australia (New Zealand division) or Westpac New Zealand Limited. For further information please refer to the Product Disclosure Statement (available from your Relationship Manager) for any product for which a Product Disclosure Statement is required, or applicable customer agreement. Download the Westpac NZ QFE Group Financial Advisers Act 2008 Disclosure Statement at www.westpac.co.nz.

China, Hong Kong, Singapore and India: Westpac Singapore Branch holds a wholesale banking licence and is subject to supervision by the Monetary Authority of Singapore. Westpac Hong Kong Branch holds a banking licence and is subject to supervision by the Hong Kong Monetary Authority. Westpac Hong Kong branch also holds a license issued by the Hong Kong Securities and Futures Commission (SFC) for Type 1 and Type 4 regulated activity. Westpac Shanghai and Beijing Branches hold banking licenses and are subject to supervision by the China Banking Regulatory Commission (CBRC). Westpac Mumbai Branch holds a banking license from Reserve Bank of India (RBI) and subject to regulation and supervision by the RBI.

U.K.: Westpac Banking Corporation is registered in England as a branch (branch number BR000106), and is authorised and regulated by the Australian Prudential Regulatory Authority in Australia. WBC is authorised in the United Kingdom by the Prudential Regulation Authority. WBC is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority in the United Kingdom. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Westpac Europe Limited is a company registered in England (number 05660023) and is authorised by the Prudential Regulation Authority and regulated by the Financial

Conduct Authority and the Prudential Regulation Authority. This material and this website and any information contained therein is directed at a) persons who have professional experience in matters relating to investments falling within Article 19(1) of the Financial Services Act 2000 (Financial Promotion) Order 2005 or (b) high net worth entities, and other persons to whom it may otherwise be lawfully communicated, falling within Article 49(1) of the Order (all such persons together being referred to as “relevant persons”). The investments to which this material and this website relates are only available to and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such investments will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely upon this material and this website or any of its contents. In the same way, the information contained in this material and this website is intended for “eligible counterparties” and “professional clients” as defined by the rules of the Financial Services Authority and is not intended for “retail clients”. With this in mind, Westpac expressly prohibits you from passing on the information in this material and this website to any third party. In particular this material and this website, website content and, in each case, any copies thereof may not be taken, transmitted or distributed, directly or indirectly into any restricted jurisdiction.

U.S.: Westpac operates in the United States of America as a federally licensed branch, regulated by the Office of the Comptroller of the Currency. Westpac is also registered with the US Commodity Futures Trading Commission (“CFTC”) as a Swap Dealer, but is neither registered as, or affiliated with, a Futures Commission Merchant registered with the US CFTC. Westpac Capital Markets, LLC (“WCM”), a wholly-owned subsidiary of Westpac, is a broker-dealer registered under the U.S. Securities Exchange Act of 1934 (‘the Exchange Act’) and member of the Financial Industry Regulatory Authority (‘FINRA’).

This communication is provided for distribution to U.S. institutional investors in reliance on the exemption from registration provided by Rule 15a-6 under the Exchange Act and is not subject to all of the independence and disclosure standards applicable to debt research reports prepared for retail investors in the United States. WCM is the U.S. distributor of this communication and accepts responsibility for the contents of this communication. All disclaimers set out with respect to Westpac apply equally to WCM. If you would like to speak to someone regarding any security mentioned herein, please contact WCM on +1 212 389 1269.

Investing in any non-U.S. securities or related financial instruments mentioned in this communication may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the SEC in the United States. Information on such non-U.S. securities or related financial instruments may be limited. Non-U.S. companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect in the United States. The value of any investment or income from any securities or related derivative instruments denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related derivative instruments.

The author of this communication is employed by Westpac and is not registered or qualified as a research analyst, representative, or associated person under the rules of FINRA, any other U.S. self-regulatory organisation, or the laws, rules or regulations of any State. Unless otherwise specifically stated, the views expressed herein are solely those of the author and may differ from the information, views or analysis expressed by Westpac and/or its affiliates.

For the purposes of Regulation AC only: Each analyst whose name appears in this report certifies that (1) the views expressed in this report accurately reflect the personal views of the analyst about any and all of the subject companies and their securities and (2) no part of the compensation of the analyst was, is, or will be, directly or indirectly related to the specific views or recommendations in this report.

For XYLO Foreign Exchange clients: This information is provided to you solely for your own use and is not to be distributed to any third parties. XYLO Foreign Exchange is a division of Westpac Banking Corporation ABN 33 007 457 141 and Australian credit licence 233714. Information is current as at date shown on the publication. This information has been prepared without taking account of your objectives, financial situation or needs. Because of this you should, before acting on this information, consider its appropriateness, having regard to your objectives, financial situation or needs. XYLO Foreign Exchange’s combined Financial Services Guide and Product Disclosure Statement can be obtained by calling XYLO Foreign Exchange on 1300 995 639, or by emailing customer@XYLO.com.au.

The information may contain material provided directly by third parties, and while such material is published with permission, Westpac accepts no responsibility for the accuracy or completeness of any such material. Except where contrary to law, Westpac intends by this notice to exclude liability for the information. The information is subject to change without notice and Westpac is under no obligation to update the information or correct any inaccuracy which may become apparent at a later date. Past performance is not a reliable indicator of future performance. The forecasts given in this document are predictive in character. Whilst every effort has been taken to ensure that the assumptions on which the forecasts are based are reasonable, the forecasts may be affected by incorrect assumptions or by known or unknown risks and uncertainties. The ultimate outcomes may differ substantially from these forecasts.

