

Zinc market – fund fatigue vs fundamental realities

INTERGALVA

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Zinc market – fund fatigue vs fundamental realities

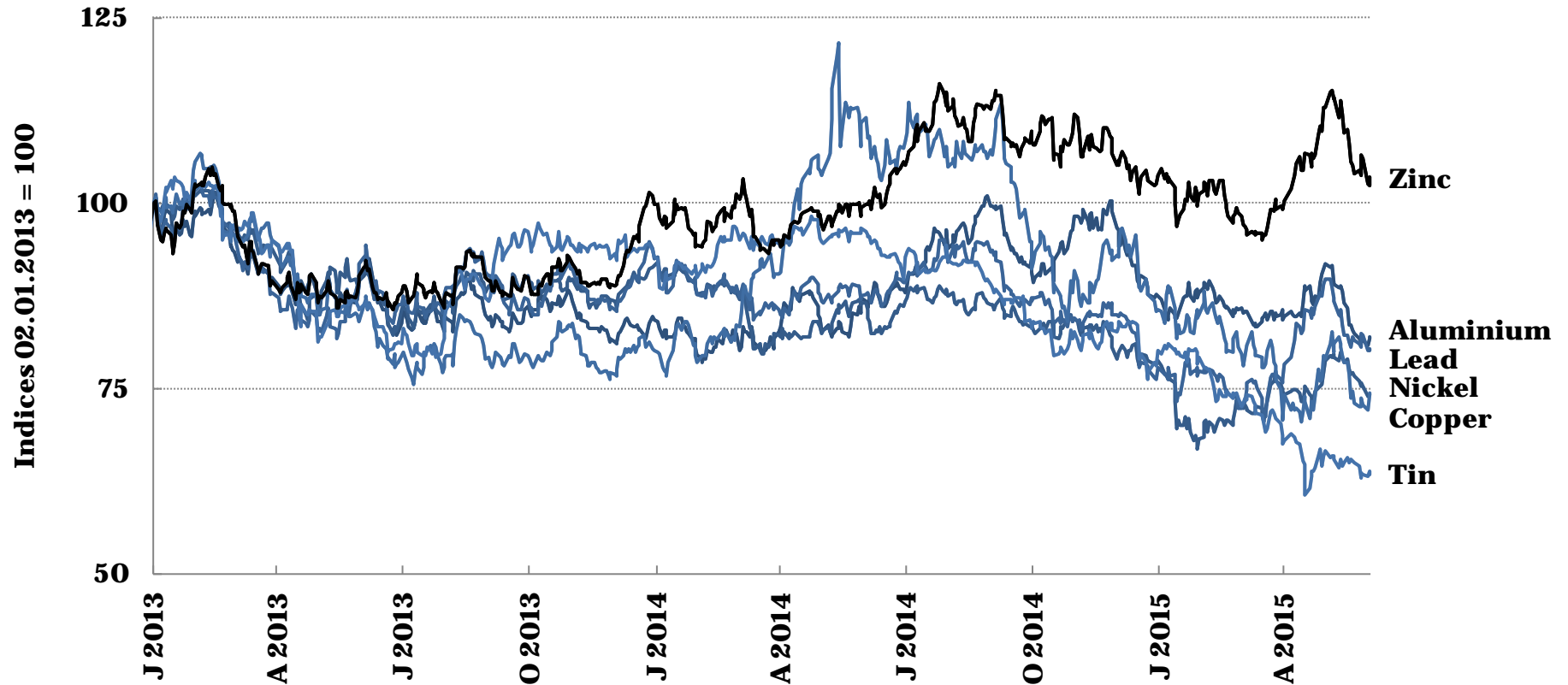
- Present market perspectives
- Current economic environment
- Looking ahead – all eyes on mine supply

Zinc market – fund fatigue vs fundamental realities

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LME zinc prices had been lagging before outperforming over the last year in anticipation of a tighter market on major mine closures

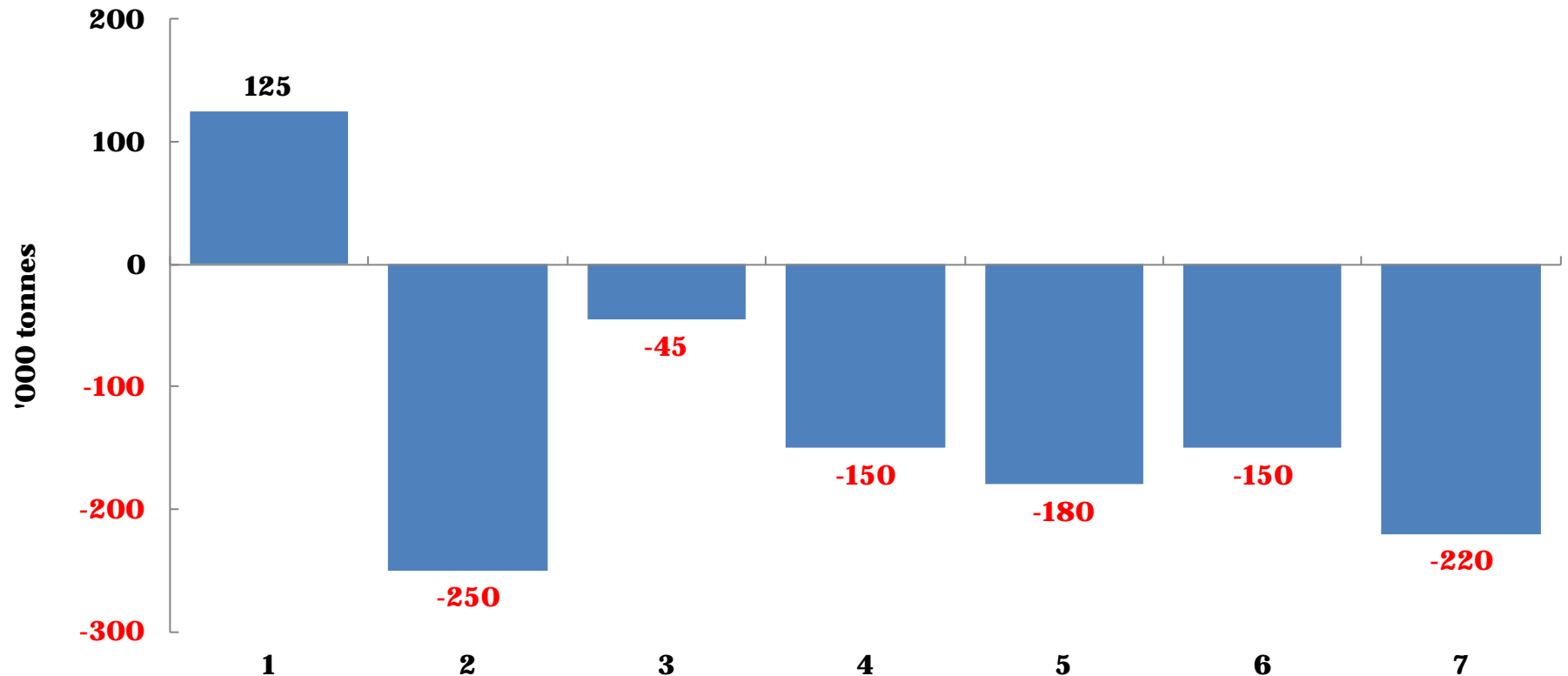
LME metals prices indices



Source: LME, Noble Research, June 2015

Seen from the street it appears the zinc metal market will be in deficit in 2015

Zinc metal market balance - selected forecasts for 2015

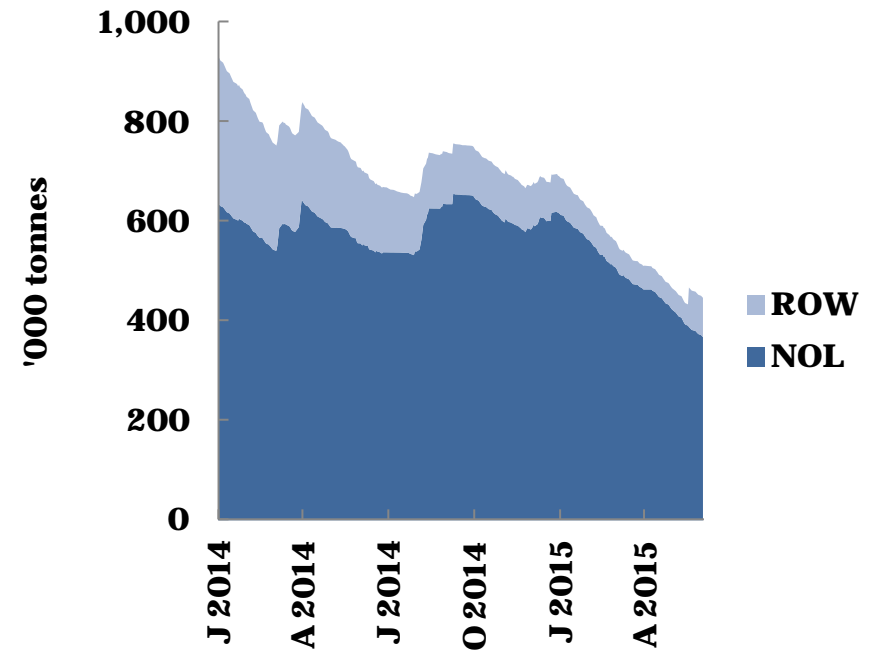
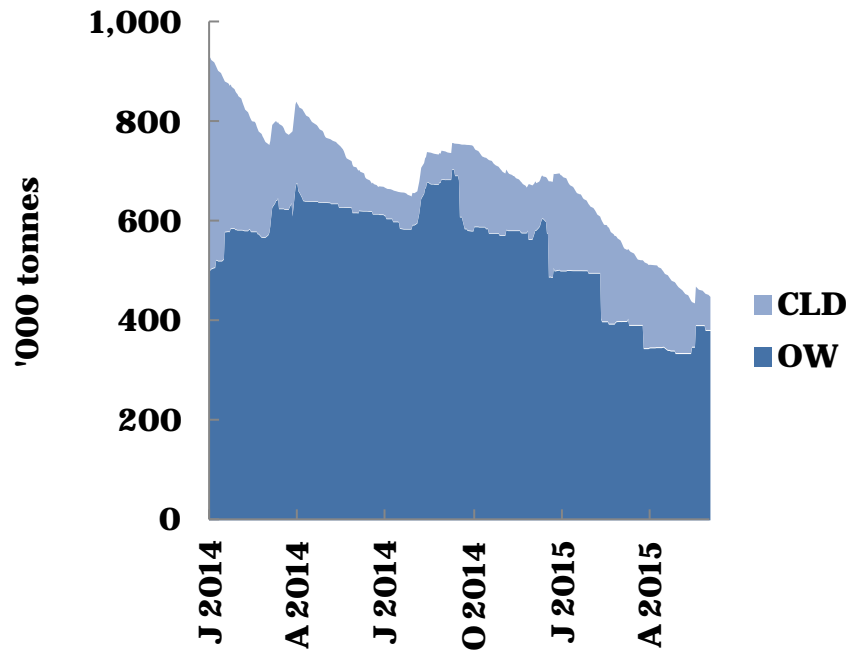


Note: forecasts of zinc metal market balance for 2015, published between Oct. 2014 and Jan. 2015

Source: CRU, EIU, GS, ILZSG, MBL, SocGen, WM, Noble Research, June 2015

Estimates of metal market deficit may be encouraged by draw from visible stocks

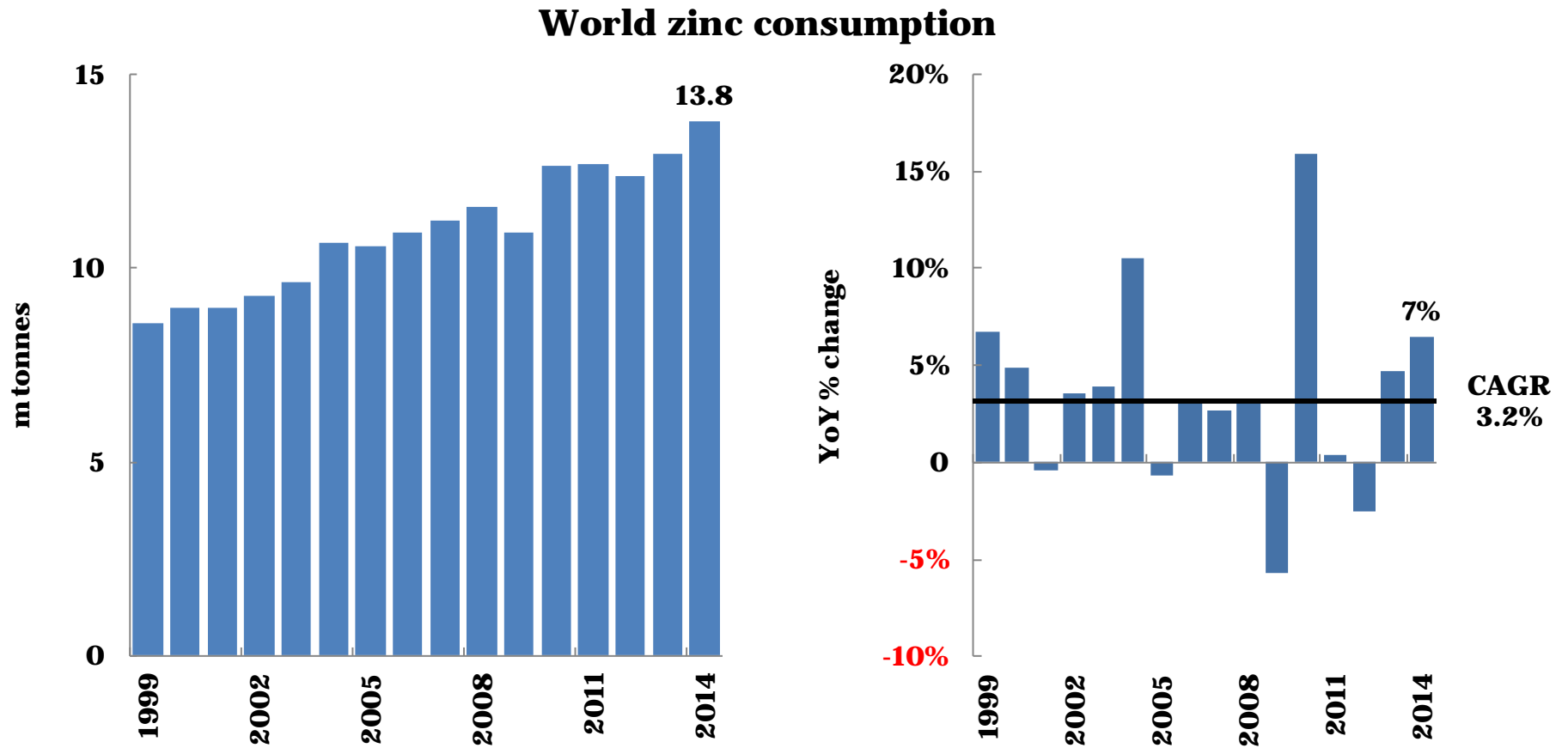
LME zinc stocks



- Open question whether all metal withdrawn from warehouses is going into real consumption

Note: OW – on warrant. CLD – cancelled. NOL – New Orleans. ROW – rest of world
 Source: LME, Noble Research, June 2015

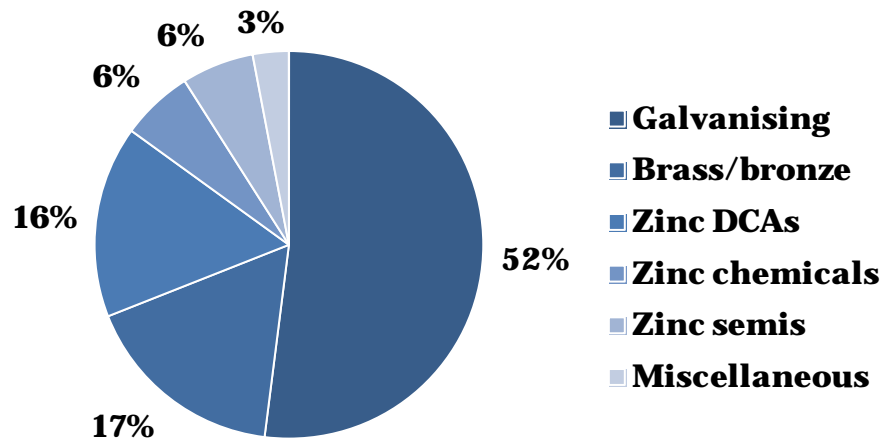
Reported world zinc consumption reached new record in 2014



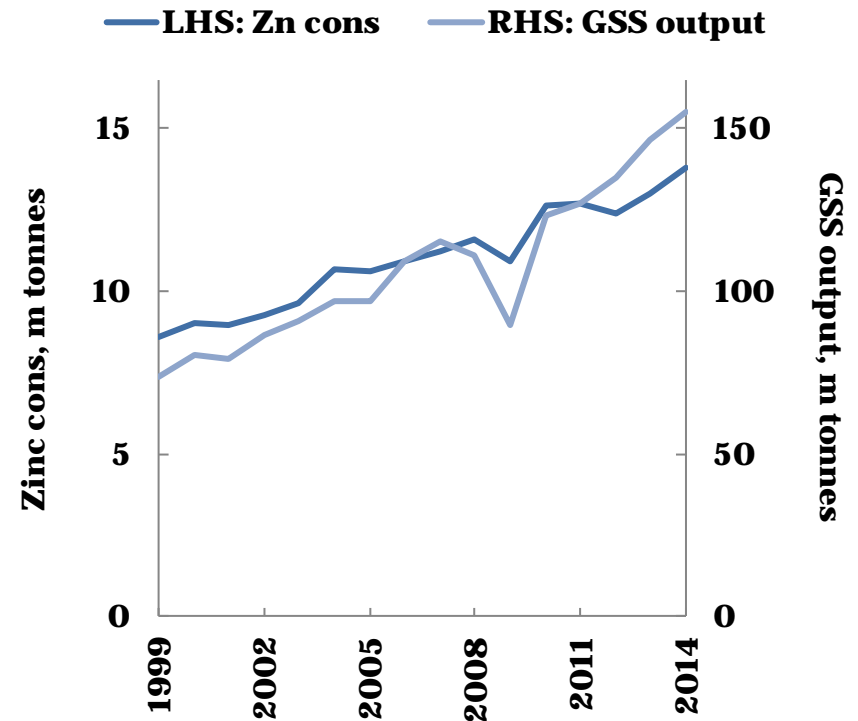
Source: ILZSG, Noble Research, June 2015

Relationship between galvanising steel and real zinc demand

Global zinc consumption by first use market



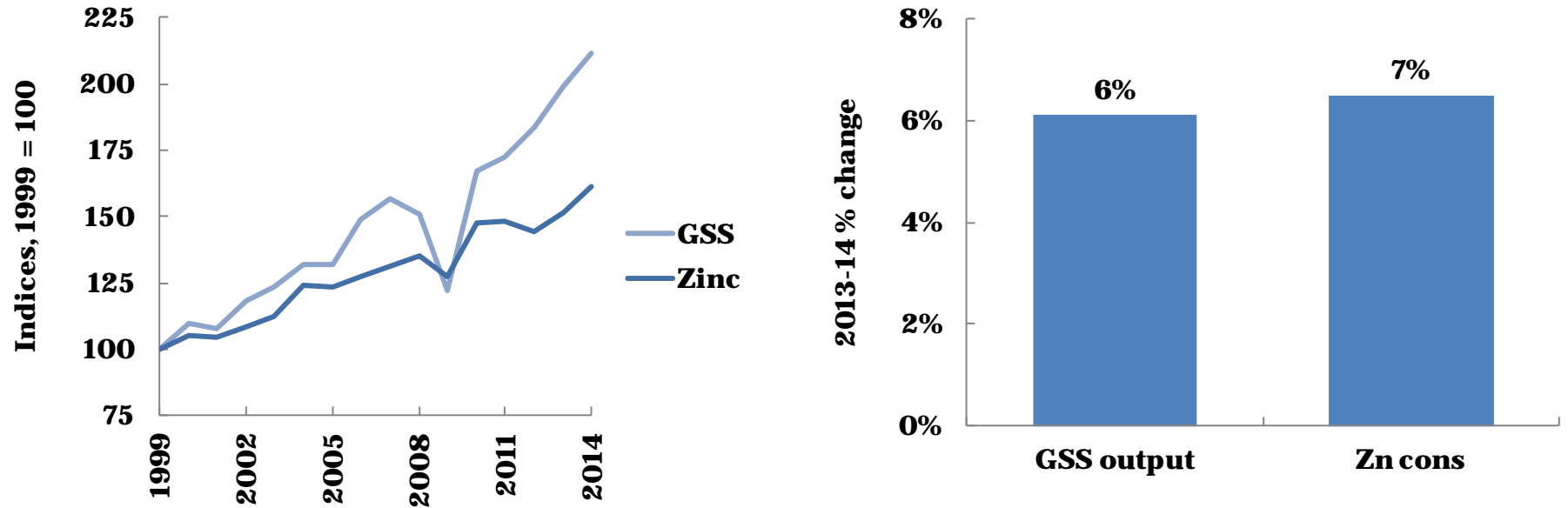
Global zinc consumption and galvanised steel sheet output



Note: zinc usage data 2007. DCAs – die cast alloys. GSS – galvanised steel sheet
 Source: CRU, ILZSG, Noble Research, June 2015

Comparing recent rates of change in galv. steel sheet output and reported zinc consumption

Refined zinc consumption and galvanised steel sheet output

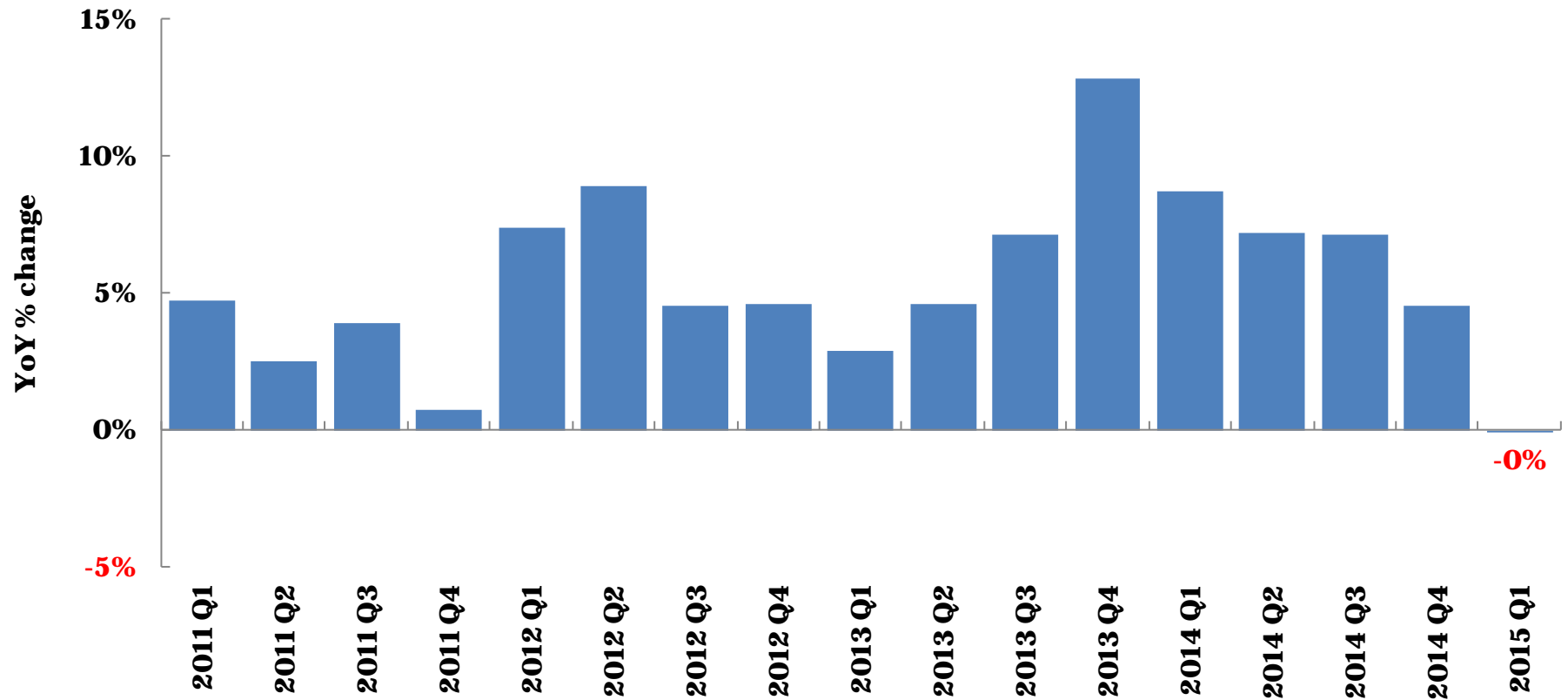


- Rate of increase in latest zinc consumption stats appears overstated vs galv. steel sheet output
- CAGR 1999-2014: GSS output 5.1% vs 3.2% Zn cons. 2013-14: GSS output 6.1% vs 6.5% Zn cons.

Source: CRU, ILZSG, WSA, Noble Research, June 2015

World galvanised steel sheet production stalled at start of 2015

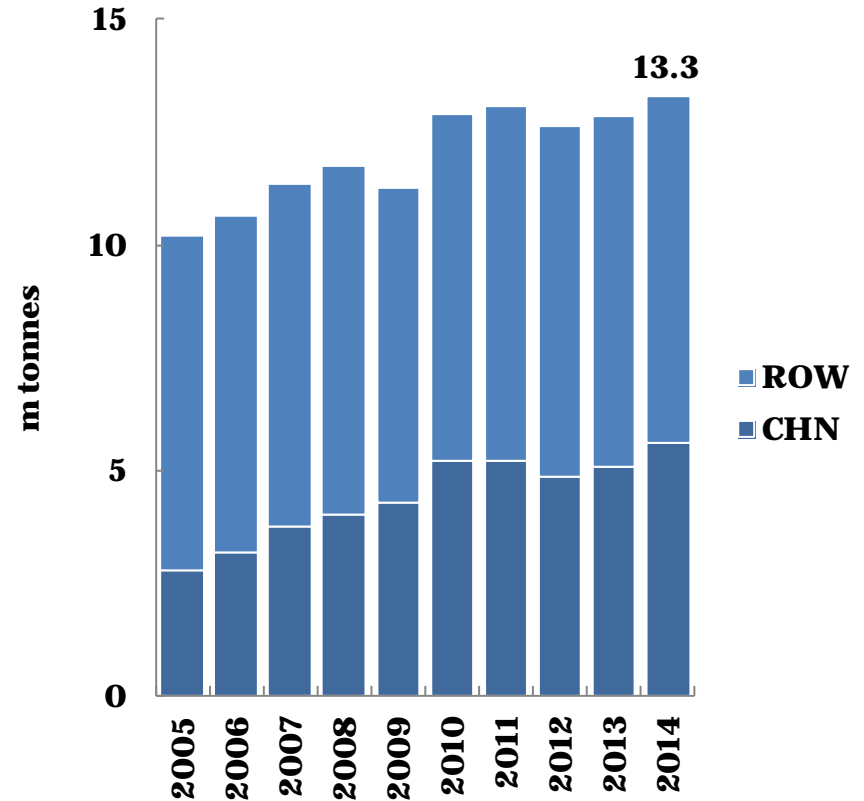
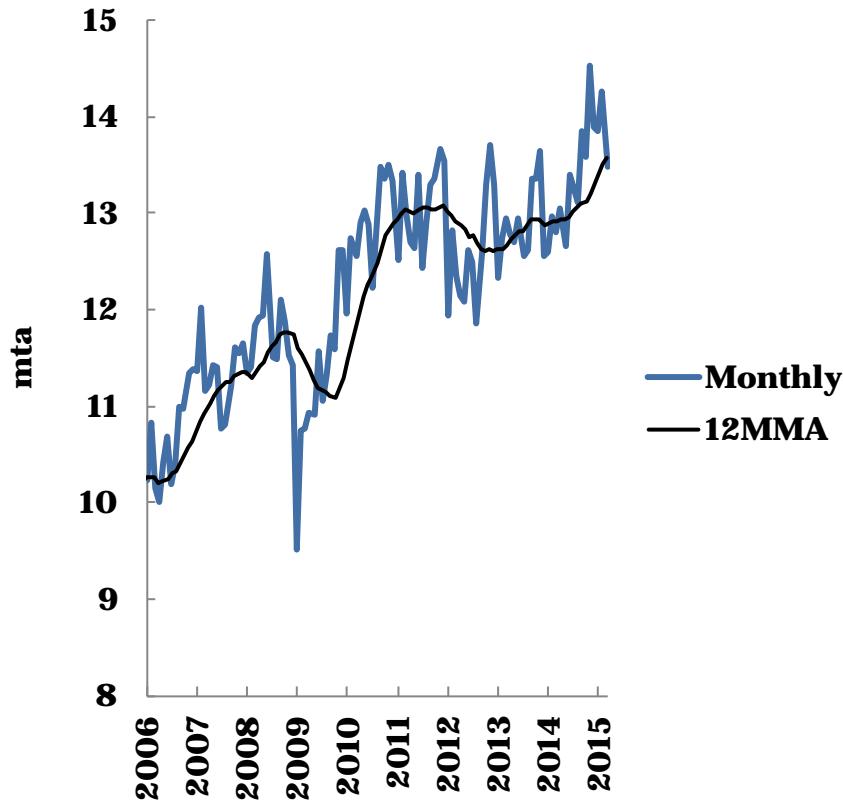
World galv. steel sheet production



Source: CRU, NBS, WSA, Noble Research, June 2015

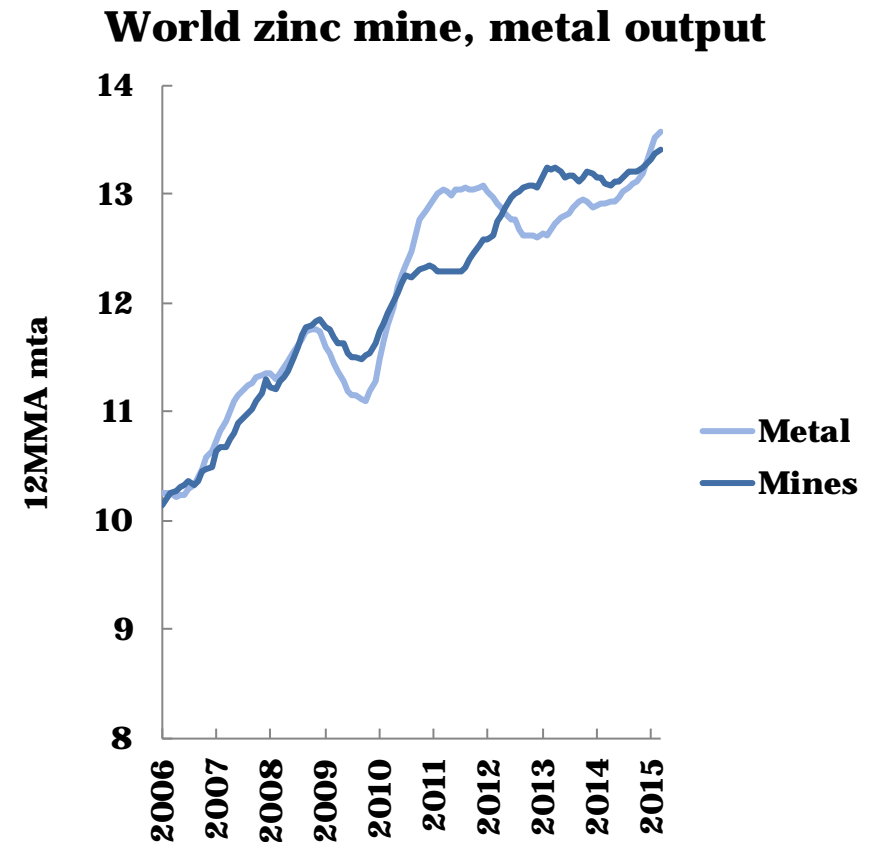
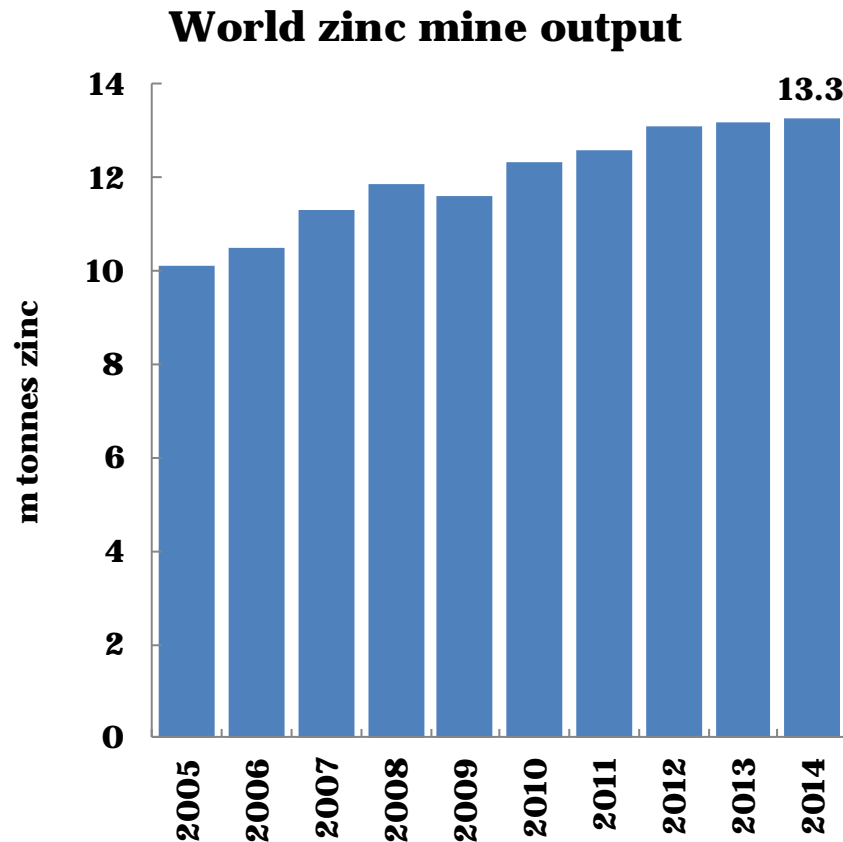
Reported zinc supply has been strong with new records in refined metal output

World refined zinc output



Source: ILZSG, Noble Research, June 2015

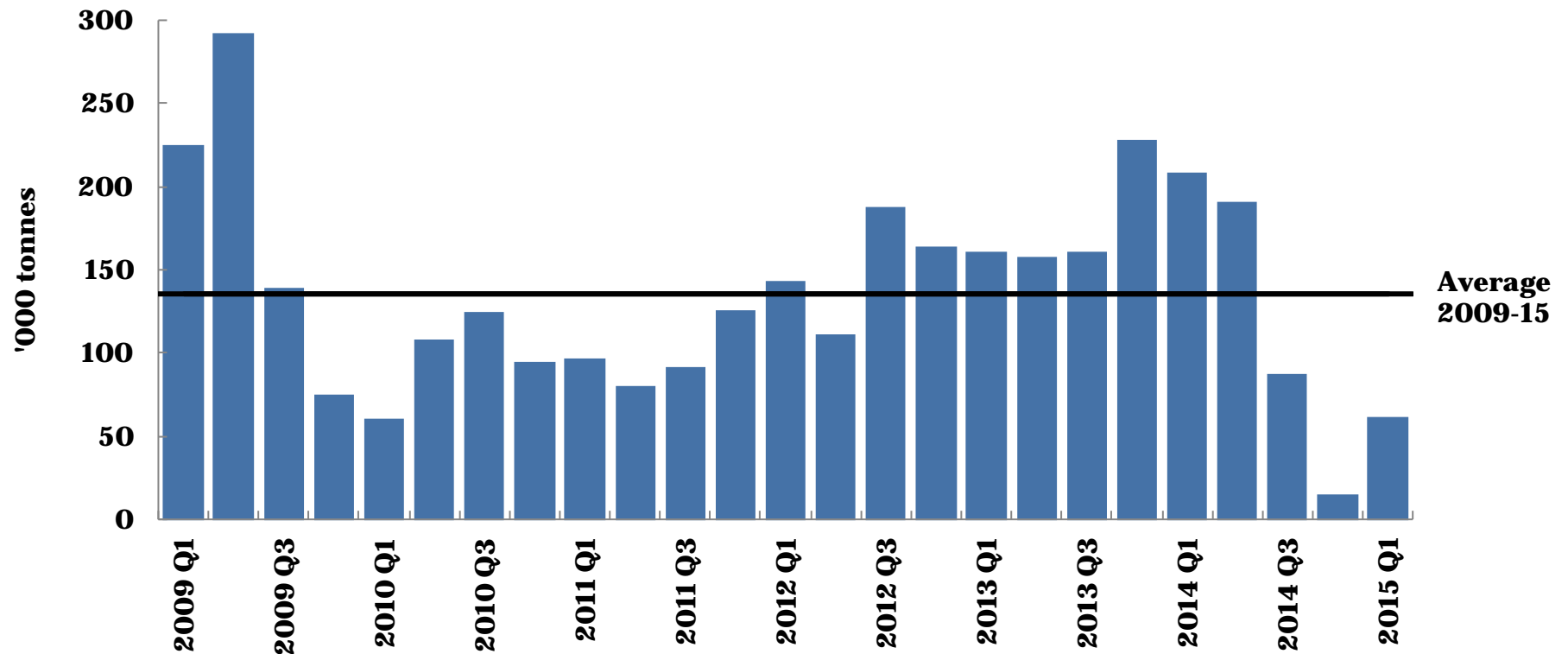
Reported zinc mine output has also been running at record levels; concentrates market well supplied but balance shifting



Note: illustration in chart on right does not take account of zinc oxide input nor smelter yield losses but these offset one another to some extent
Source: ILZSG, Noble Research, June 2015

China's zinc metal trade – trend reversal

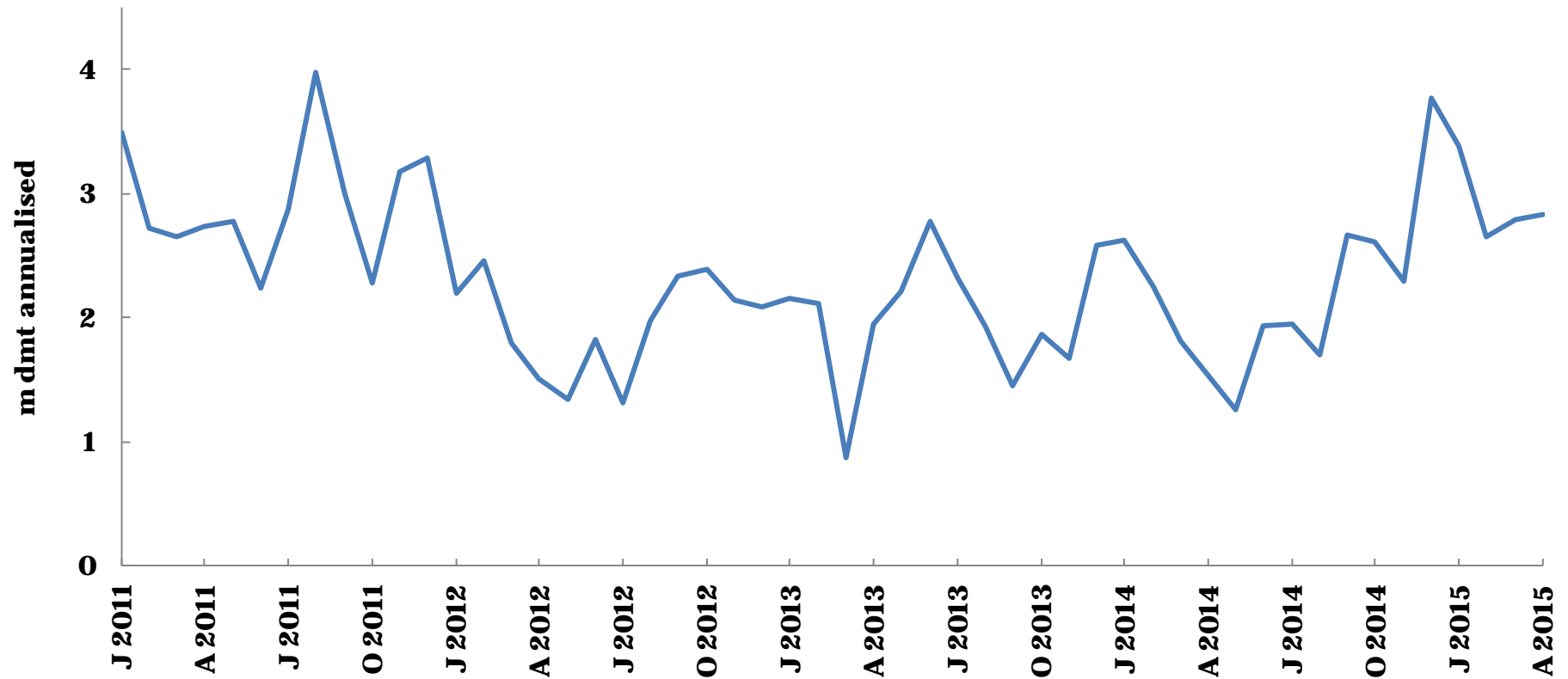
China's net zinc metal imports



Source: China Customs, Noble Research, June 2015

China's zinc concentrates imports still strong

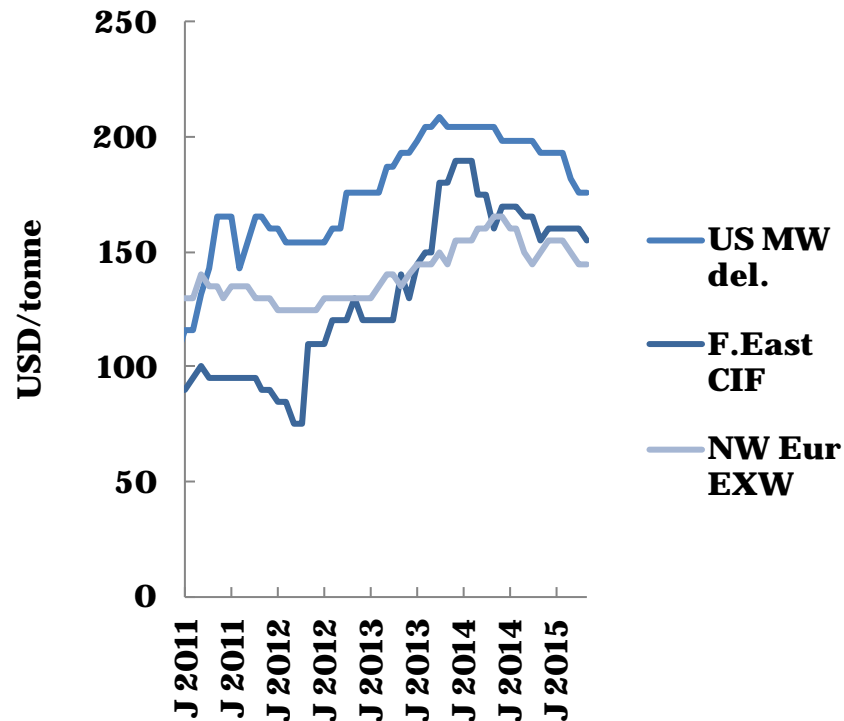
China's zinc concentrates imports



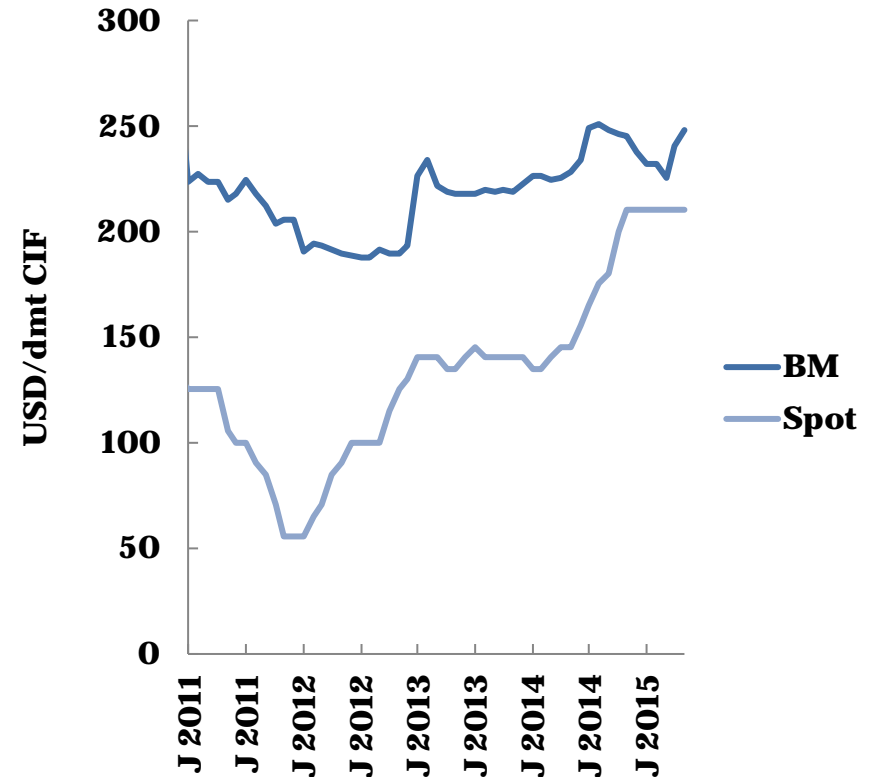
Source: China Customs, Noble Research, June 2015

Physical market signals: metal premiums, treatment charges for concentrates

Zinc ingot spot premiums



Zinc TCs - spot vs benchmark



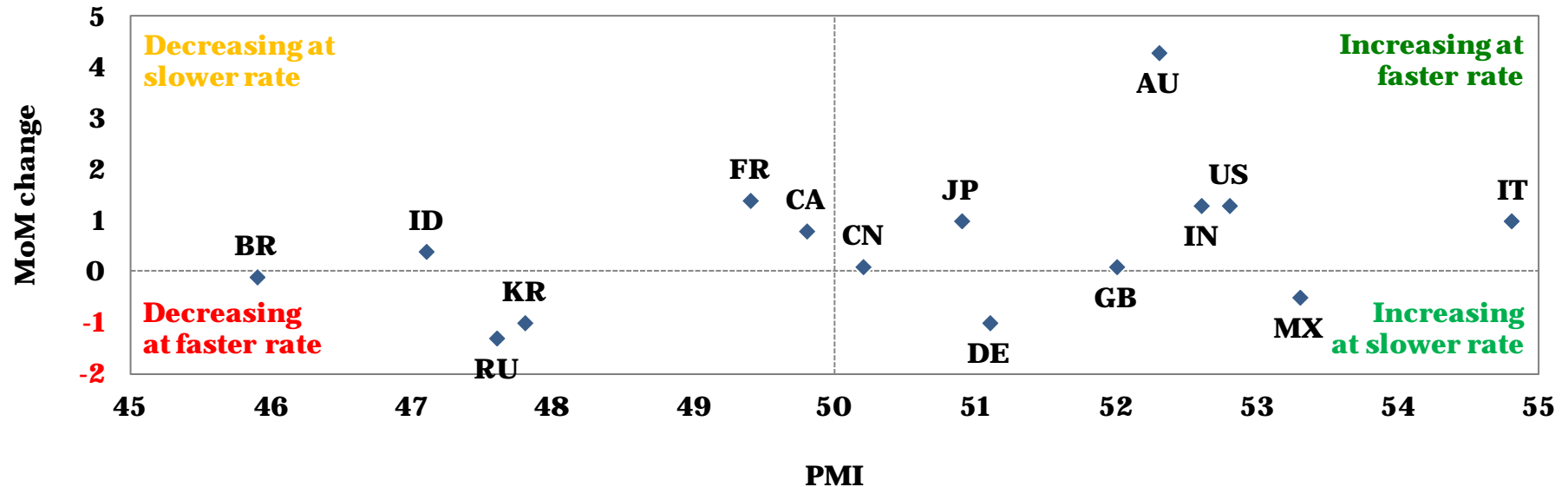
Note: BM = realised "benchmark" treatment charge
 Source: CRU, FM, MB, Noble Research, June 2015

Zinc market review

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Purchasing managers' indices for manufacturing

Manufacturing PMIs - May 2015

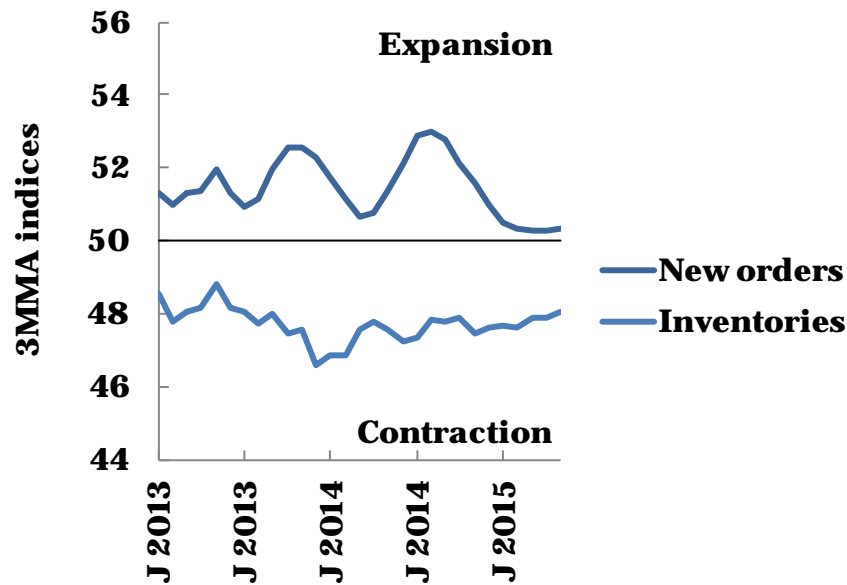


- PMIs for 9 / 15 of world's largest economies posted 50+ levels in May, indicating expansion
- And 10 / 15 increased MoM, signalling an upturn, but some from low levels including China

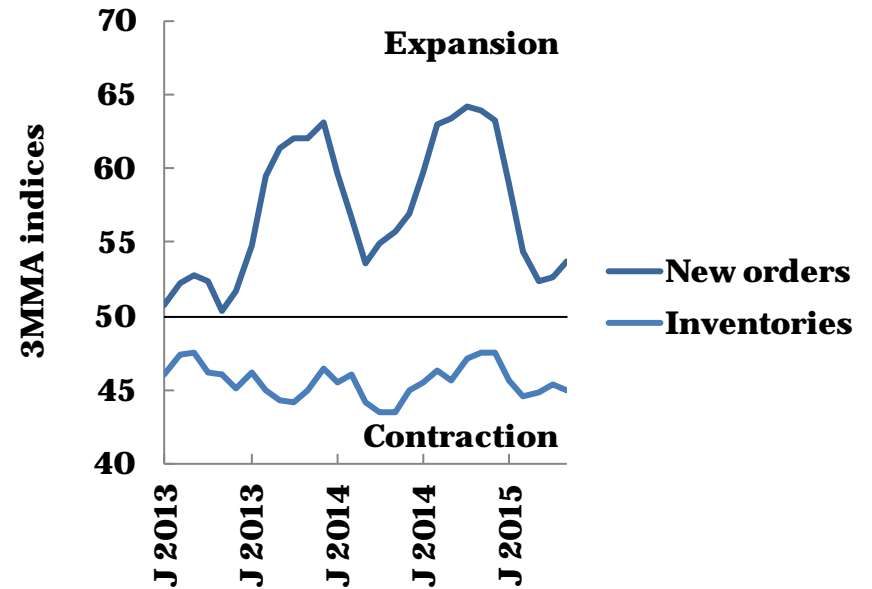
Source: ISM, Markit, NBS, Noble Research, June 2015

Decline in new order intake flags further downside risk in key countries

China's PMI for manufacturing



US PMI for manufacturing

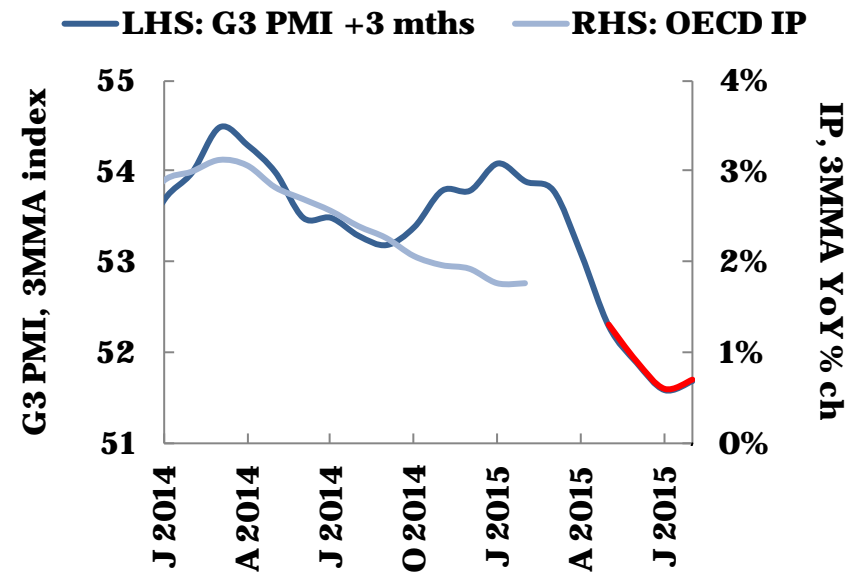
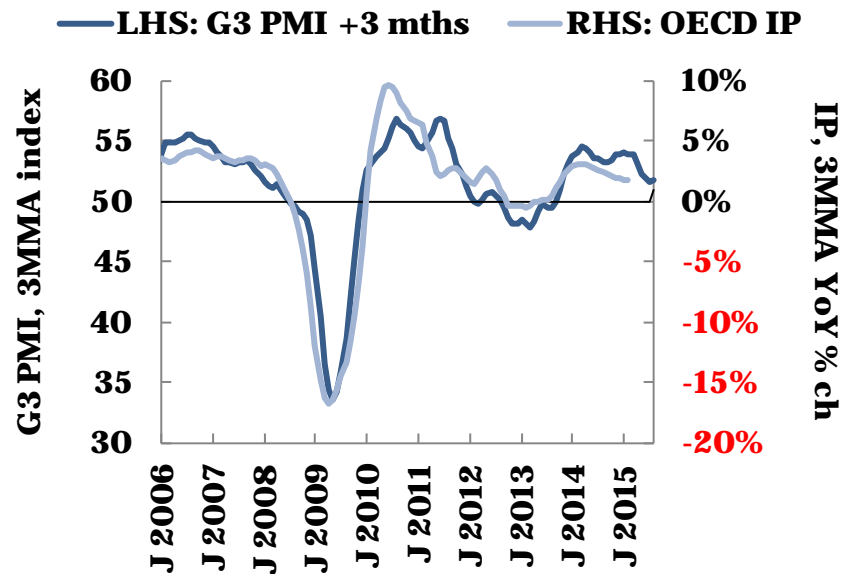


- China's PMI new orders drop to 2½ year lows in early 2015. US new orders also low
- However, latest data suggest some offset from stocks being drawn down

Source: ISM, Markit, Noble Research, June 2015

Latest PMIs point to slowdown in manufacturing output in the OECD

G3 PMI and OECD industrial production

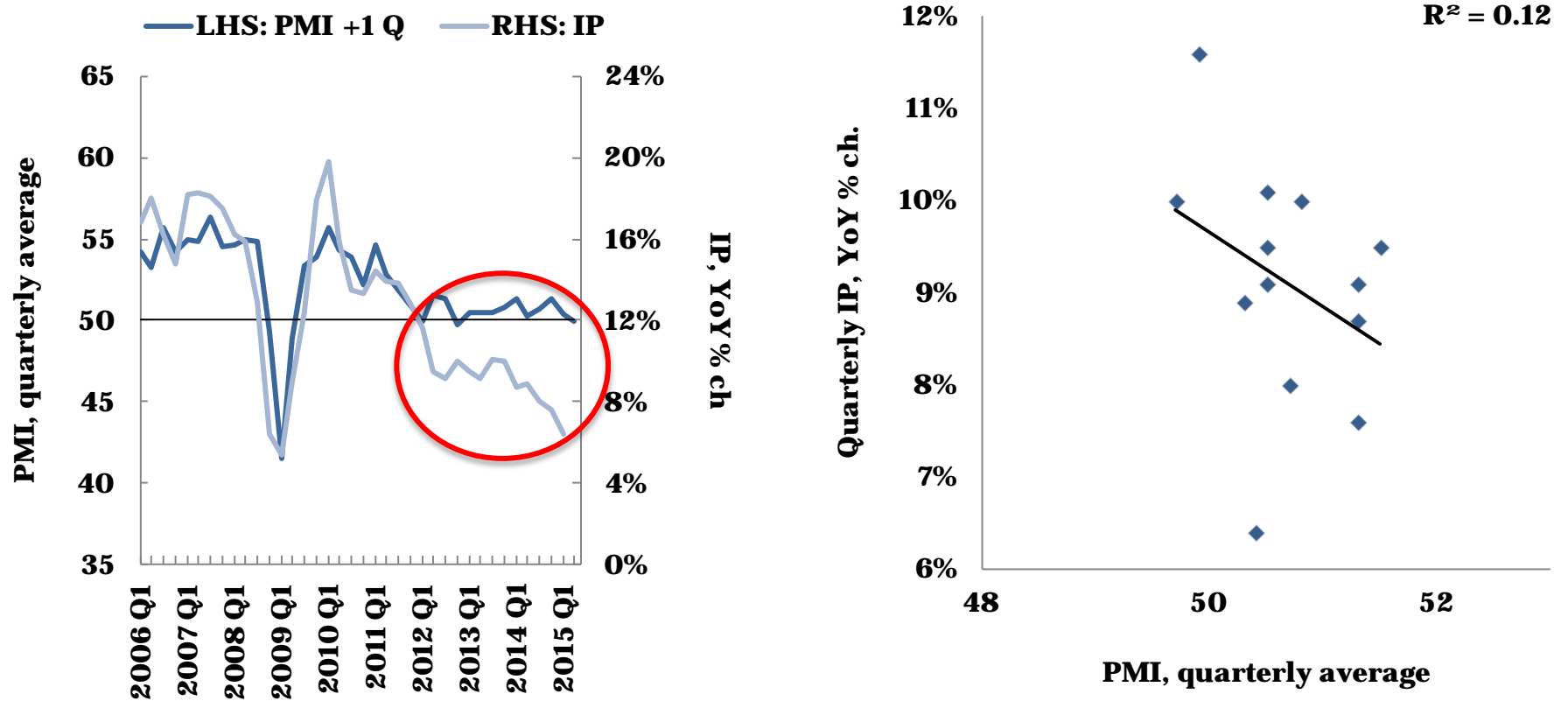


- Close correlation between PMIs & OECD IP over time
- Latest data point to slow growth in the coming months

Source: ISM, Markit, OECD, Noble Research, June 2015. Note: G3 – USA, Eurozone, Japan. Jun-Aug 2015 data are forecasts

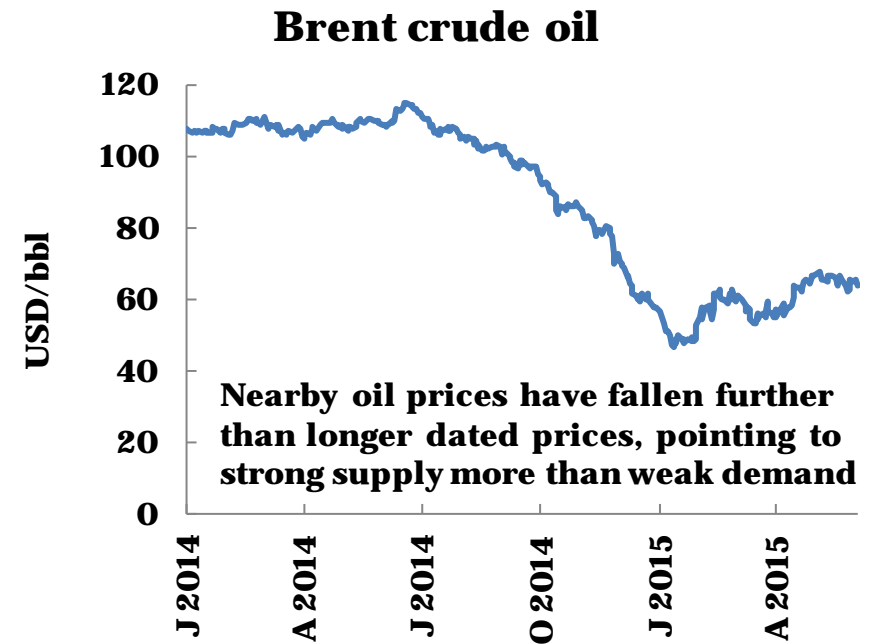
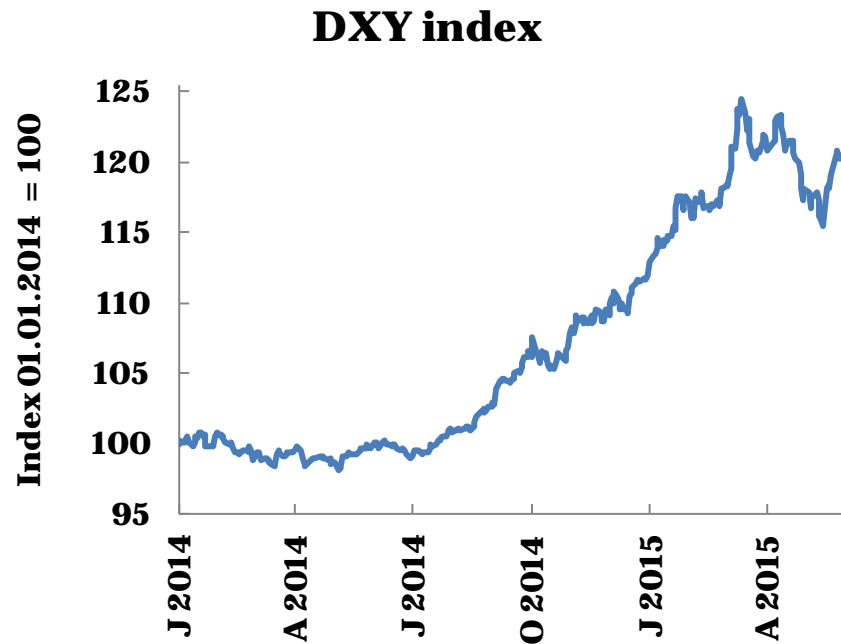
China's manufacturing output is already underperforming. IP – PMI relationship appears to have broken down

China's PMI and industrial production



Source: NBS, Noble Research, June 2015

Major “macro” moves have brought downward pressure on metals prices, including zinc

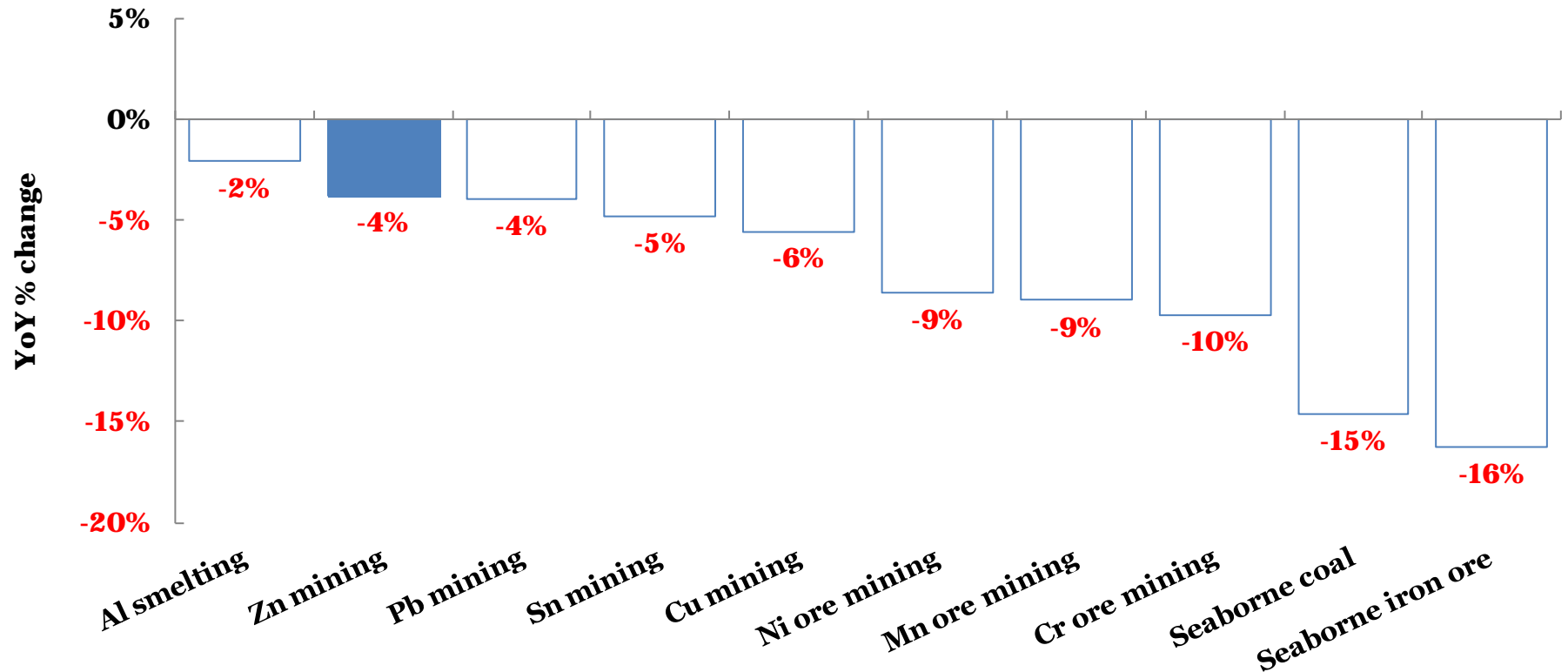


- USD dollar has risen, crude oil (and other primary energy) prices have fallen
- Seen reflecting underlying economic weakness, reducing metal producers' costs

Source: BBG, ICE, Noble Research, June 2015

Zinc has been less affected by currency depreciations vs US dollar than many other markets...

USD FX changes - May 2015 vs May 2014

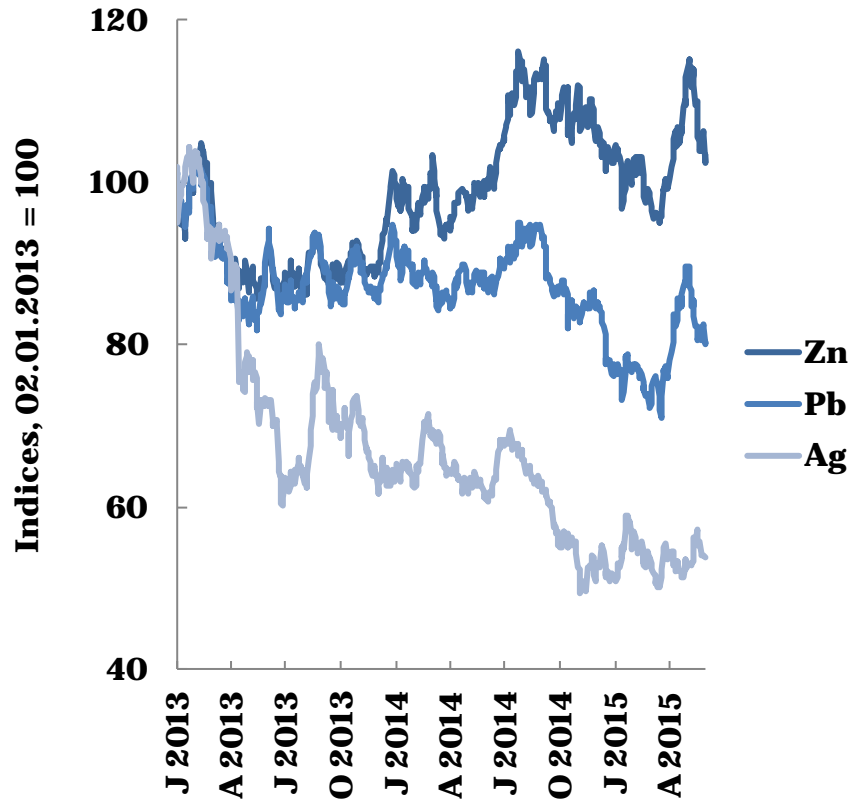


Note: production weighted average of five leading producer country currencies in each market vs USD

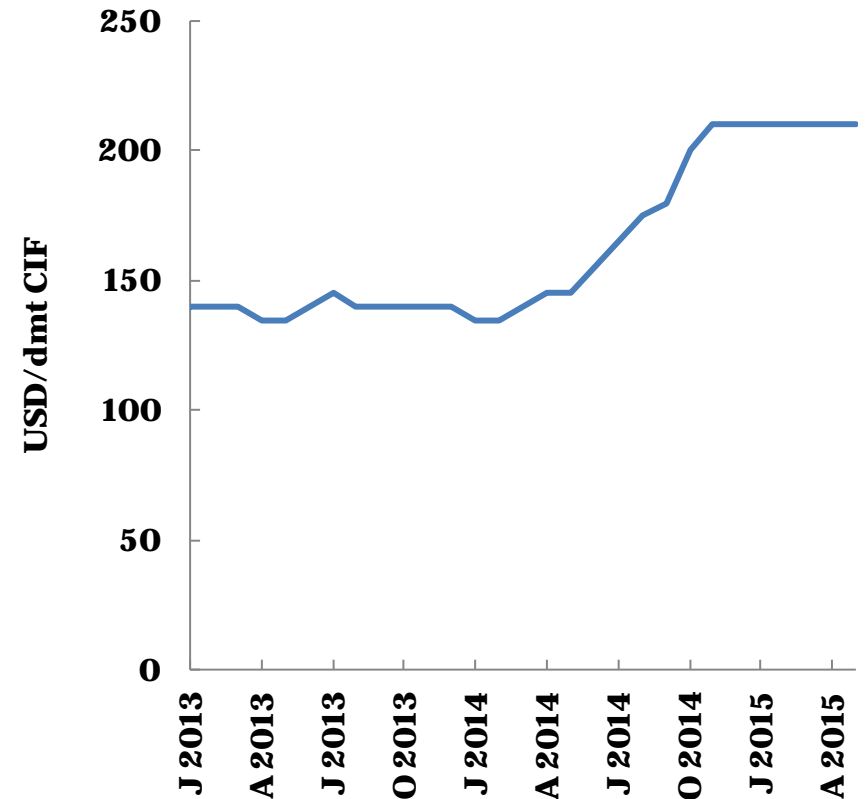
Source: Noble Research, June 2015

And falling by-product prices and rising treatment charges add to zinc mine costs

Zinc and mine by-product prices



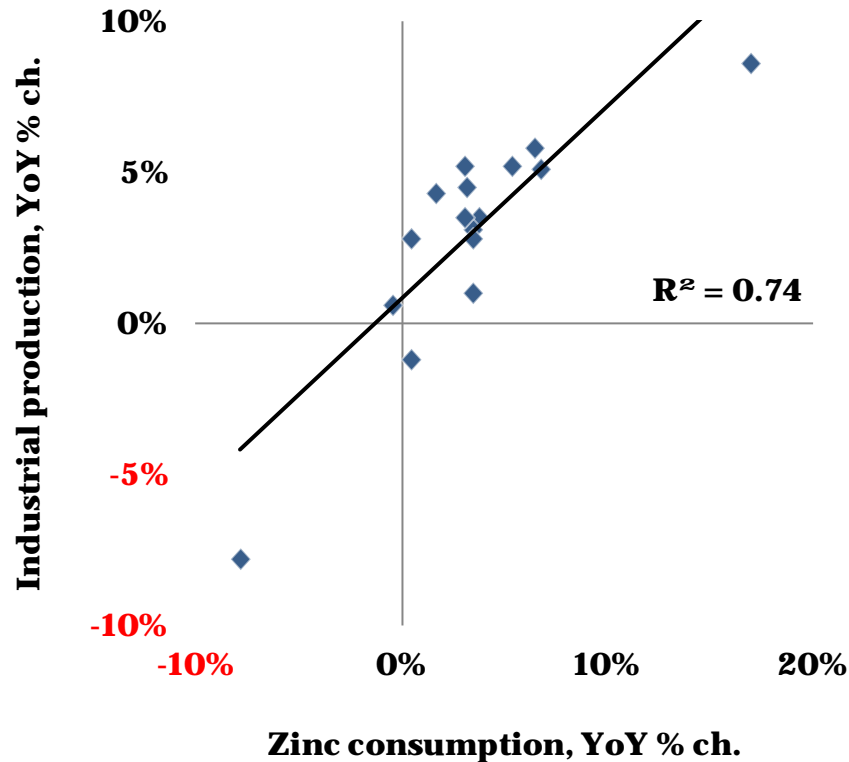
Spot TCs - zinc concentrates



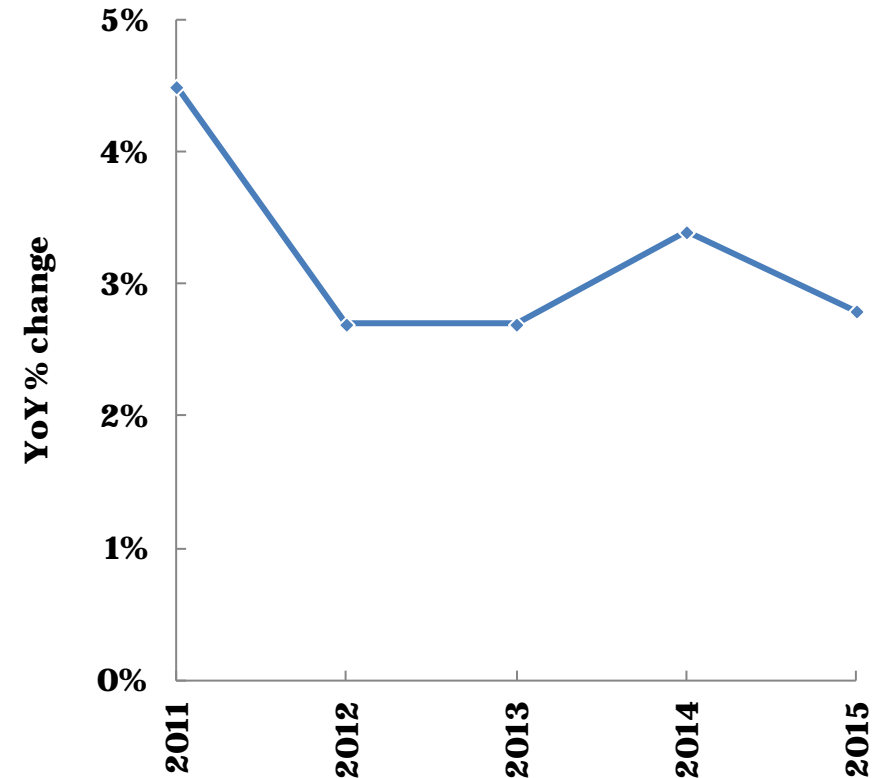
Source: CRU, LBMA, LME, Reuters, Noble Research, June 2015

Relationship between industrial production and zinc consumption

Industrial production vs zinc cons.



Global industrial production



Note: Chart 1 data 1999-2014. Chart 2 includes forecast for 2015

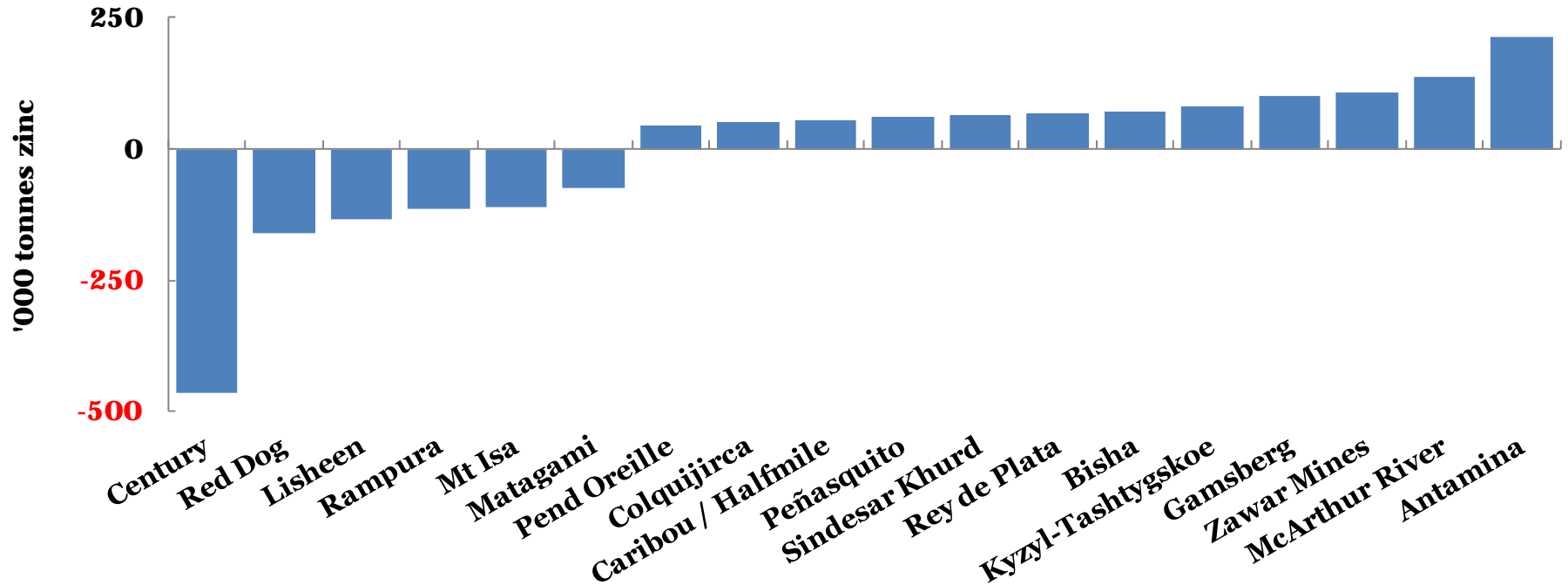
Source: CPB, CRU, ILZSG, Noble Research, June 2015

Zinc market review

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Zinc supply chain looks set to become more complex

Zinc mine output - key changes 2014-2018



- Small number of large mines depleting ... to be replaced by larger number of smaller mines

Note: all data are forecasts

Source: Company Reports, CRU, WM, Noble Research, June 2015

Zinc market – fund fatigue vs fundamental realities

- Zinc price has outperformed over last year in anticipation of major mine closures
- Reported zinc consumption – recent rate of increase above long run average but may be overstated
- Reported zinc metal production and mine output – both running at record levels
- Physical price signals signal sufficient supply in metal and concentrates markets
- Major “macro” moves – important implications for perceptions and production costs
- Short term slowdown in industrial production looks likely but longer term outlook more buoyant – positive implications for zinc demand
- Looking ahead on the supply side all eyes on upcoming major zinc mine closures. Whatever happens to market balance zinc supply chain likely to become more complex

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