



THE INDEPENDENT AUTHORITY
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ZINC MARKET OUTLOOK

HIGHER PRICES ARE STILL IN PROSPECT

Helen O'Cleary

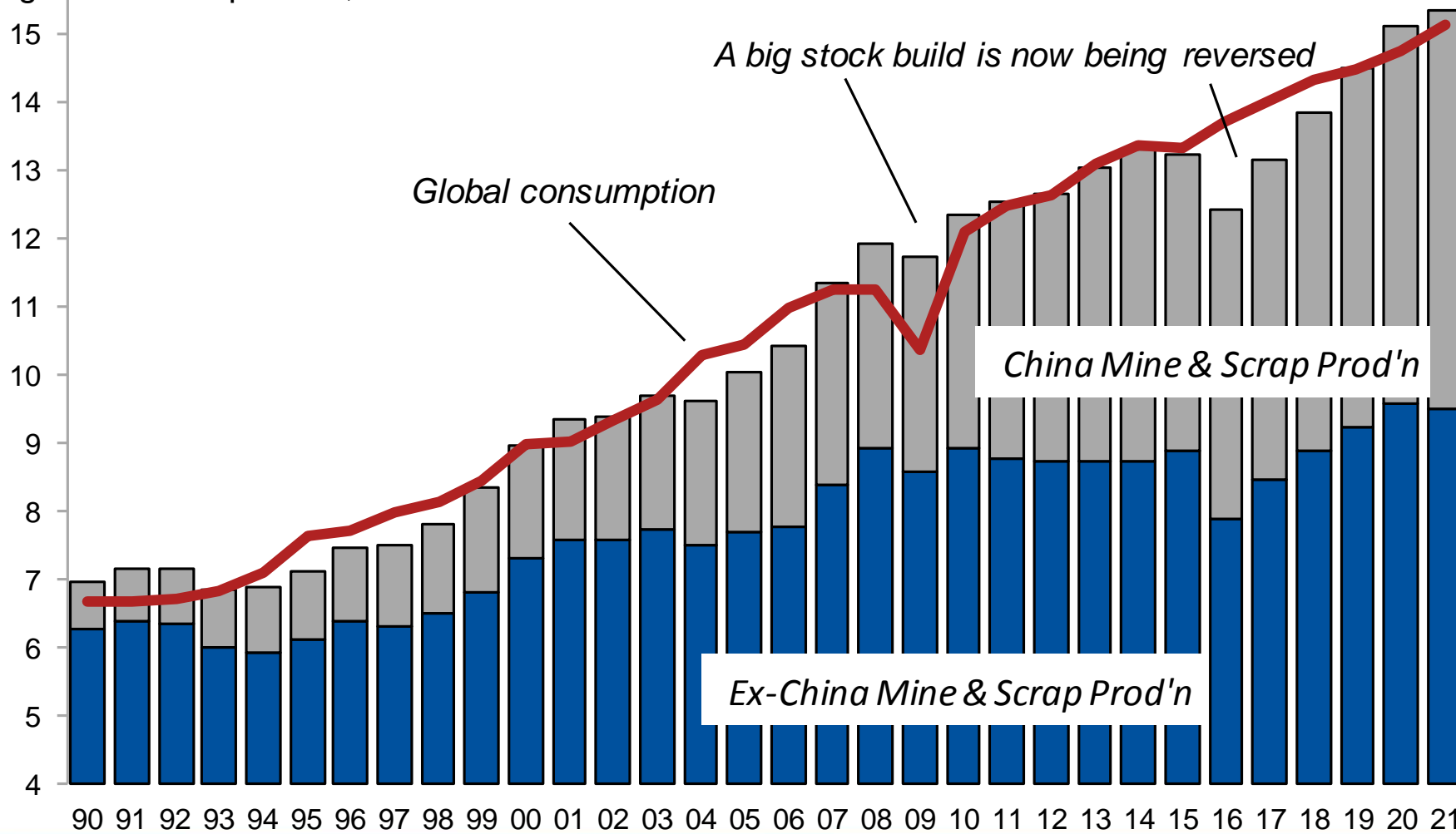
2017 IZA Zinc Conference
Brussels, 8-10 May 2017

Deficit markets will lead to higher prices soon

- **Zinc stocks grew sharply during the great recession**
- **Mine cutbacks and a Chinese slowdown have now reversed the flow**
- **There is no data to give a definitive view of the market balance**
- **Chinese official mine production data are not very reliable**
- **We do not know for sure the scale of the market excess**
- **But nobody else does either.....!**

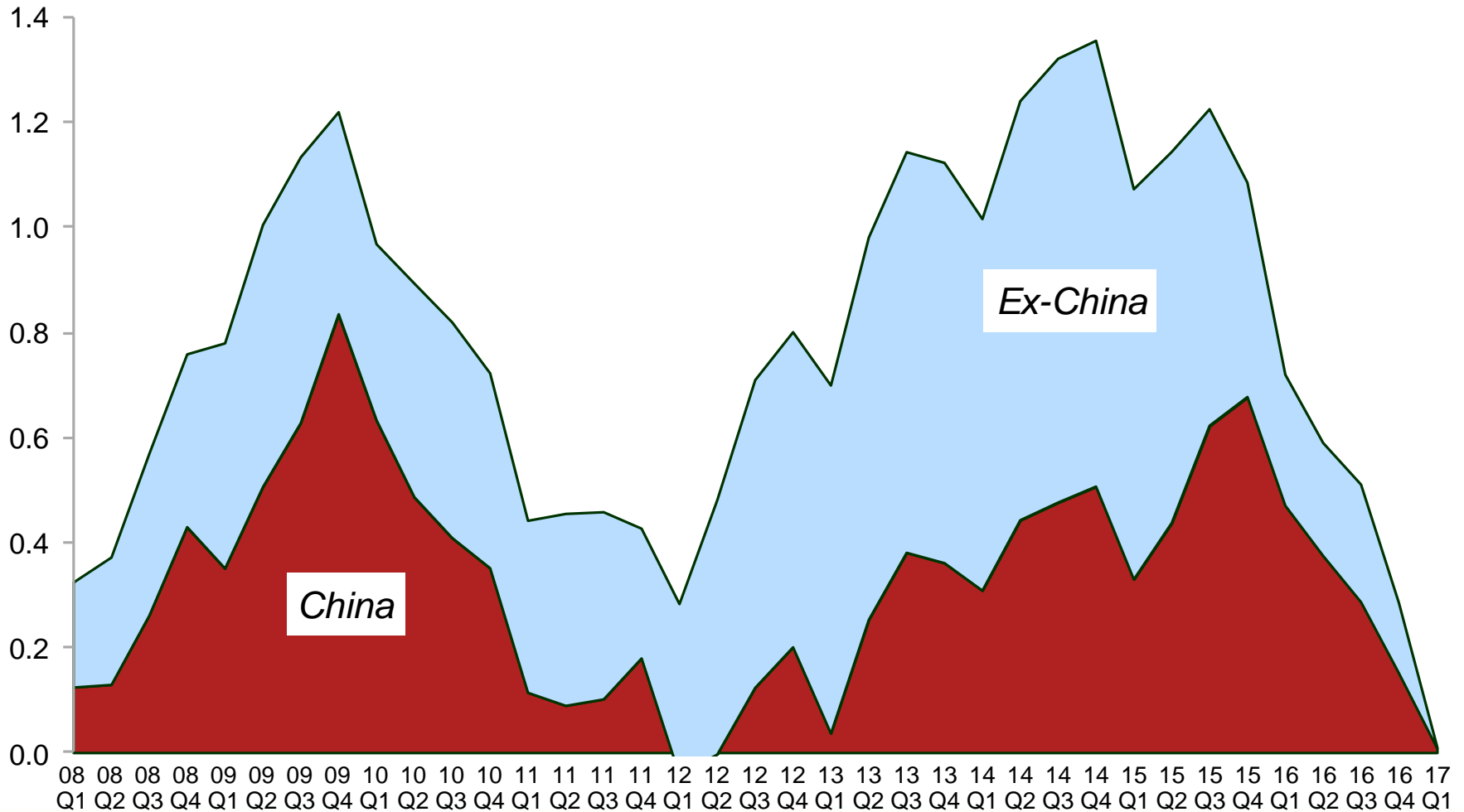
Stocks accumulated in 2008-09 are now being drawn down

global developments; million tonnes recoverable zinc



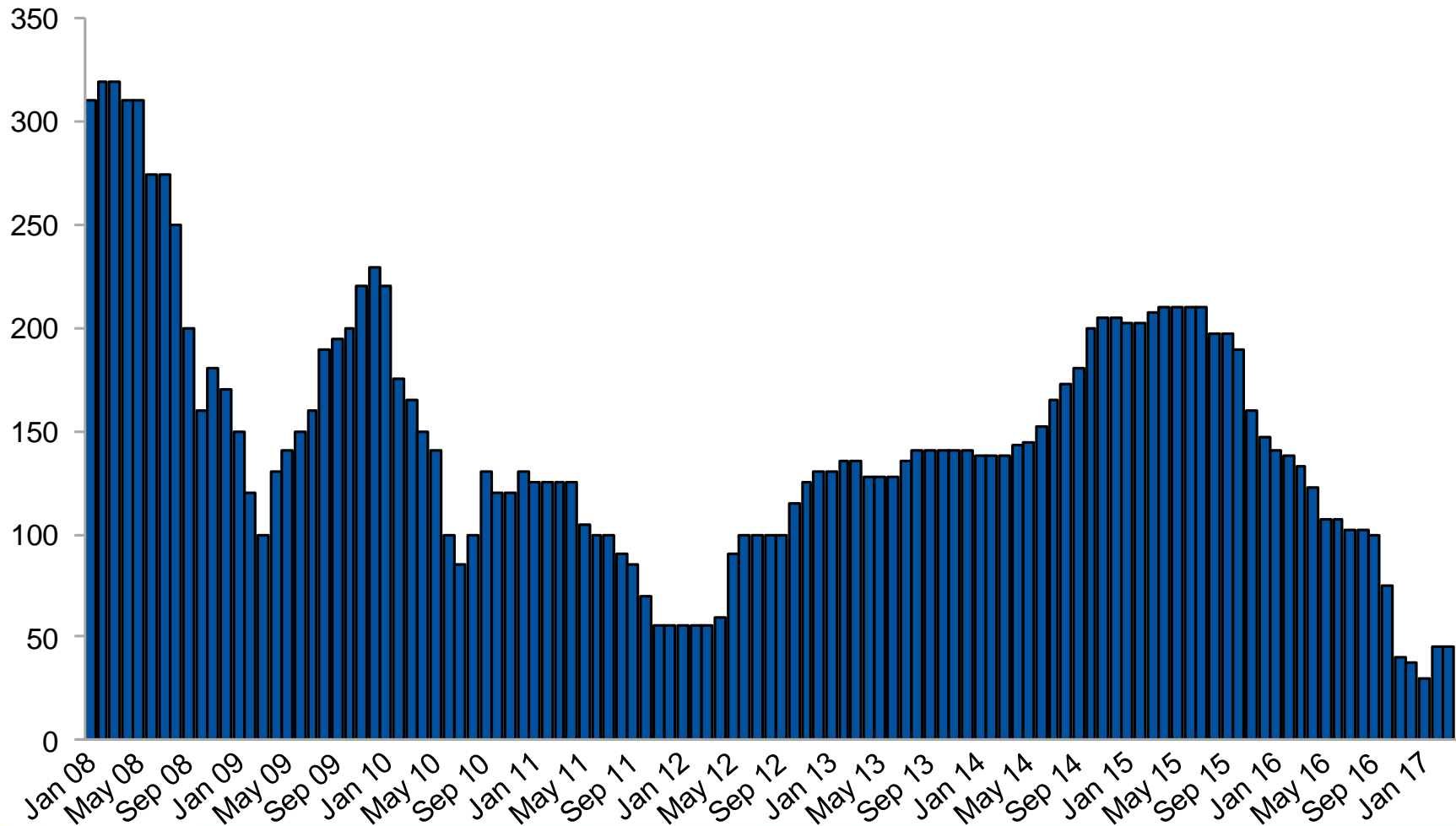
All excess concentrate stocks should now be exhausted

cumulative concentrate stock surplus; adjusted; million tonnes zinc



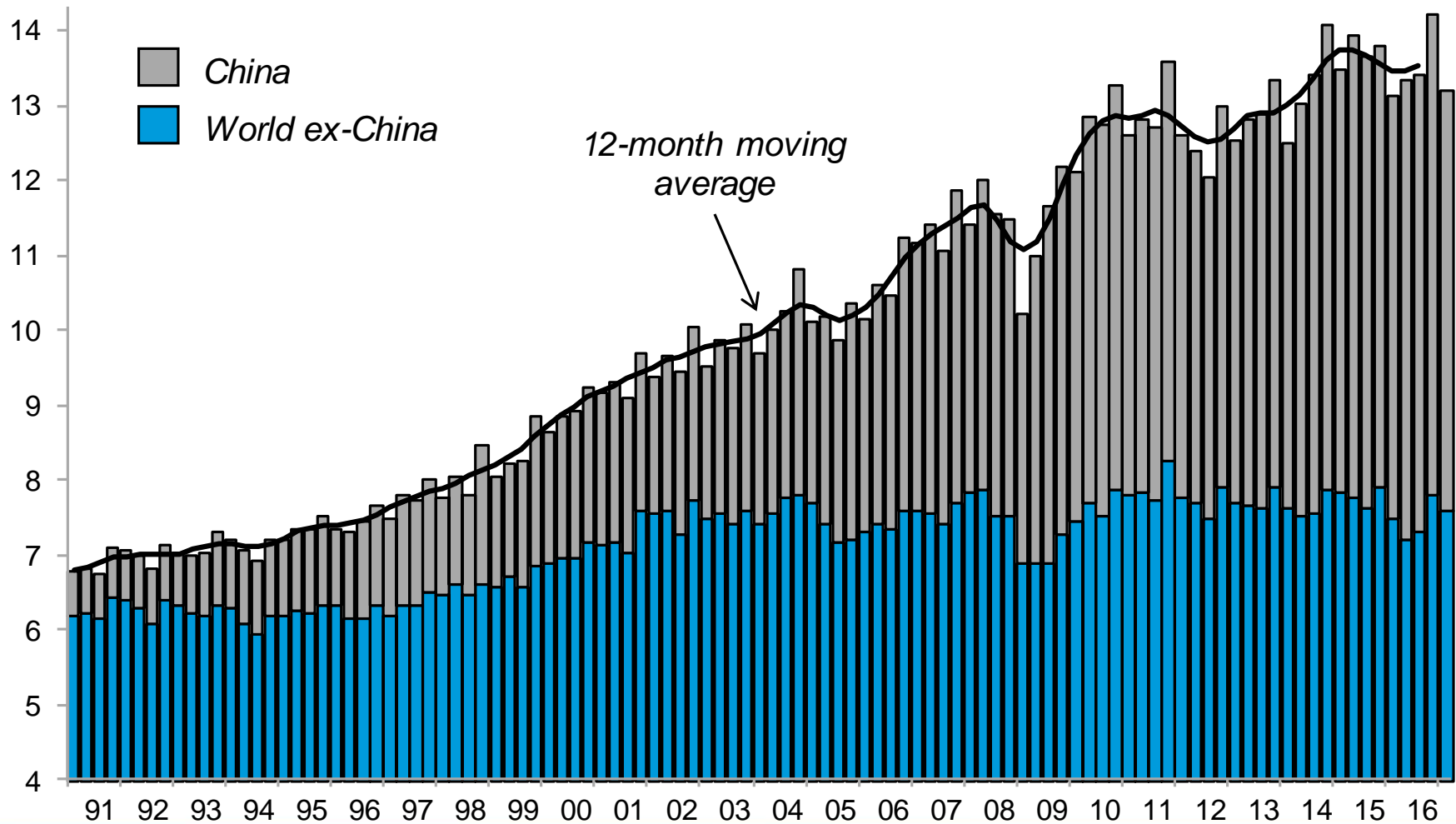
Spot TCs reflect this, especially for Chinese imports

US\$/t concentrate



Total refined production has still not fallen greatly

million tonnes at an annual rate

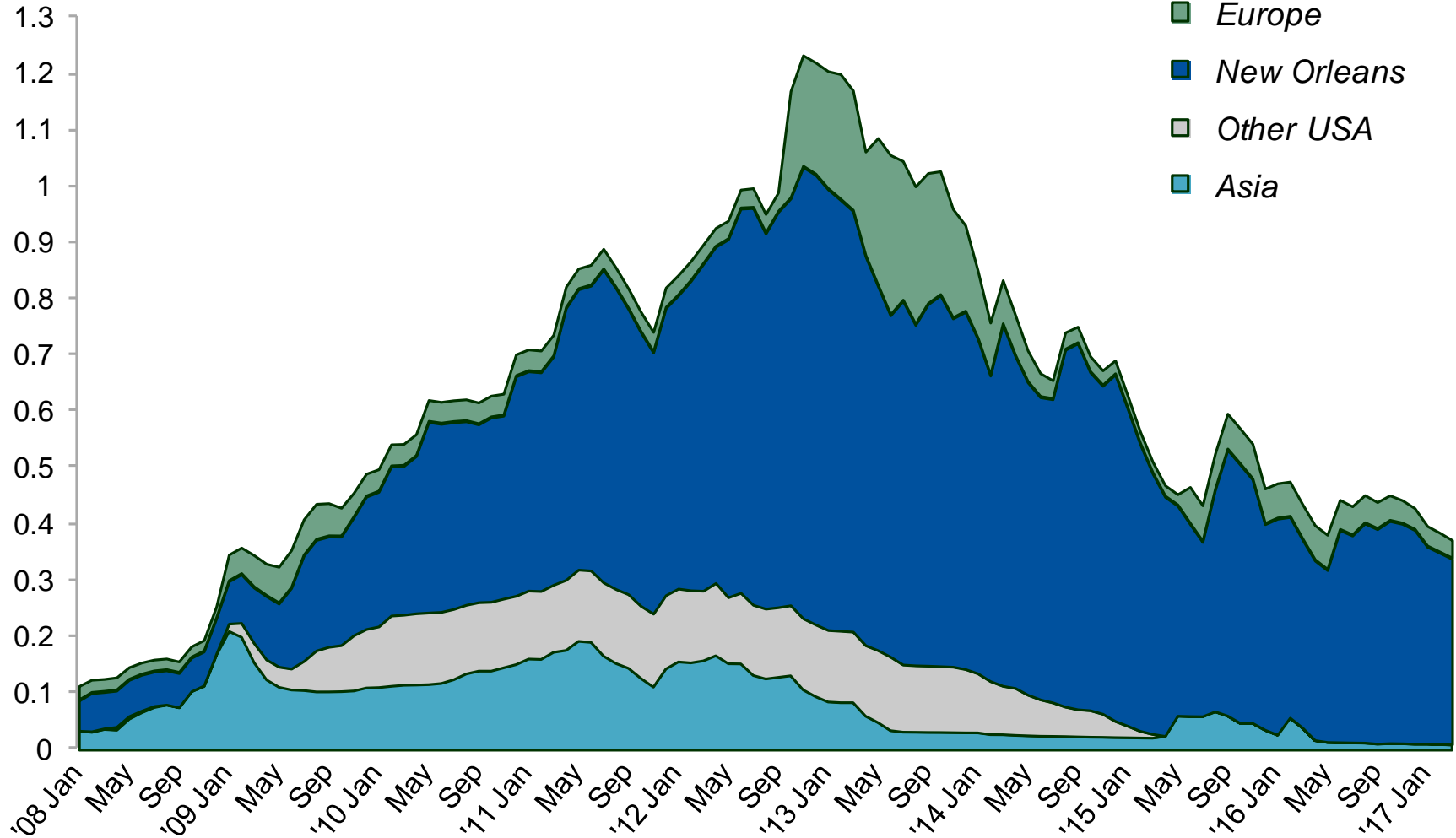


Chinese smelter output should begin to fall soon

- **A series of maintenance closures should have started to affect output in April**
- **Most smelters in northern China are maintaining high operation rates**
- **But Zijin's Baiyonnaoer has now joined Xing'An Copper and Zinc in reducing operating rates**
- **Some smelters in Yunnan have been forced to cut or halt production**
- **In Hunan output remains low due to a large cutback at Zhuzhou**
- **Elsewhere maintenance cutbacks and closure due to environmental issues have also contained output**

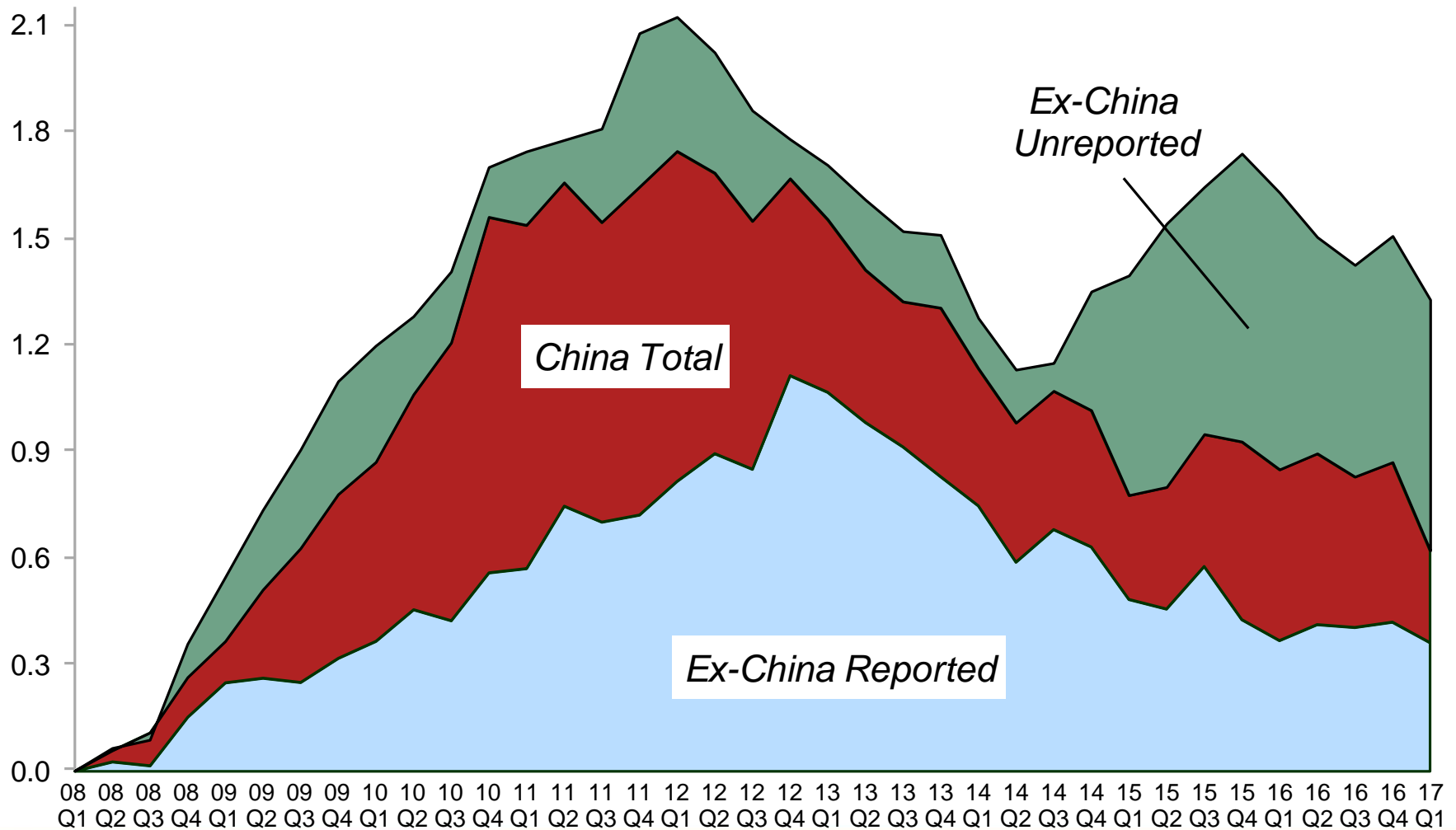
LME stocks are being drawn down...

million tonnes



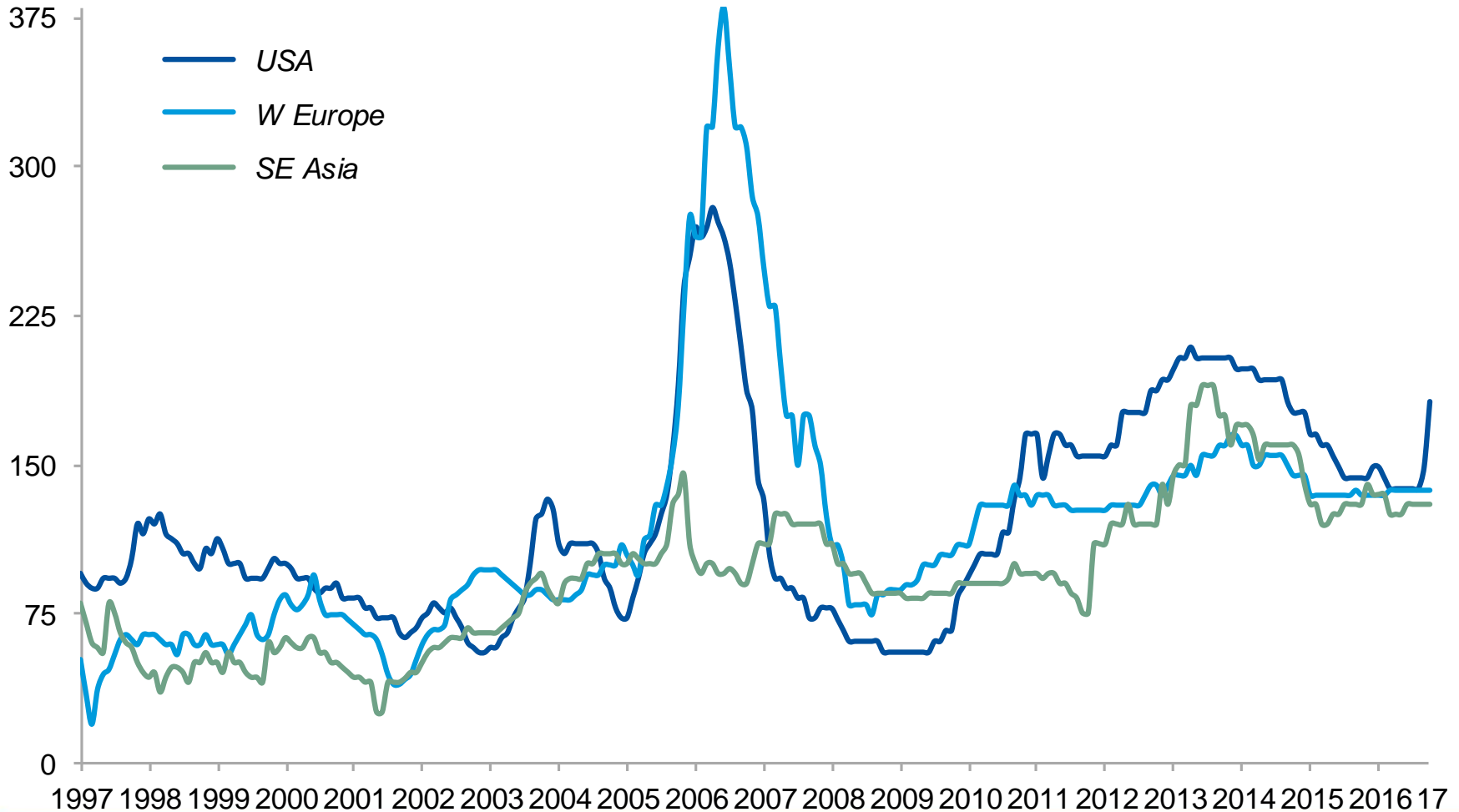
...but total metal stocks are still substantial

cumulative refined stock surplus; adjusted; million tonnes



US spot premia are up, but tightness is shape specific

regional premia for SHG; US\$/t

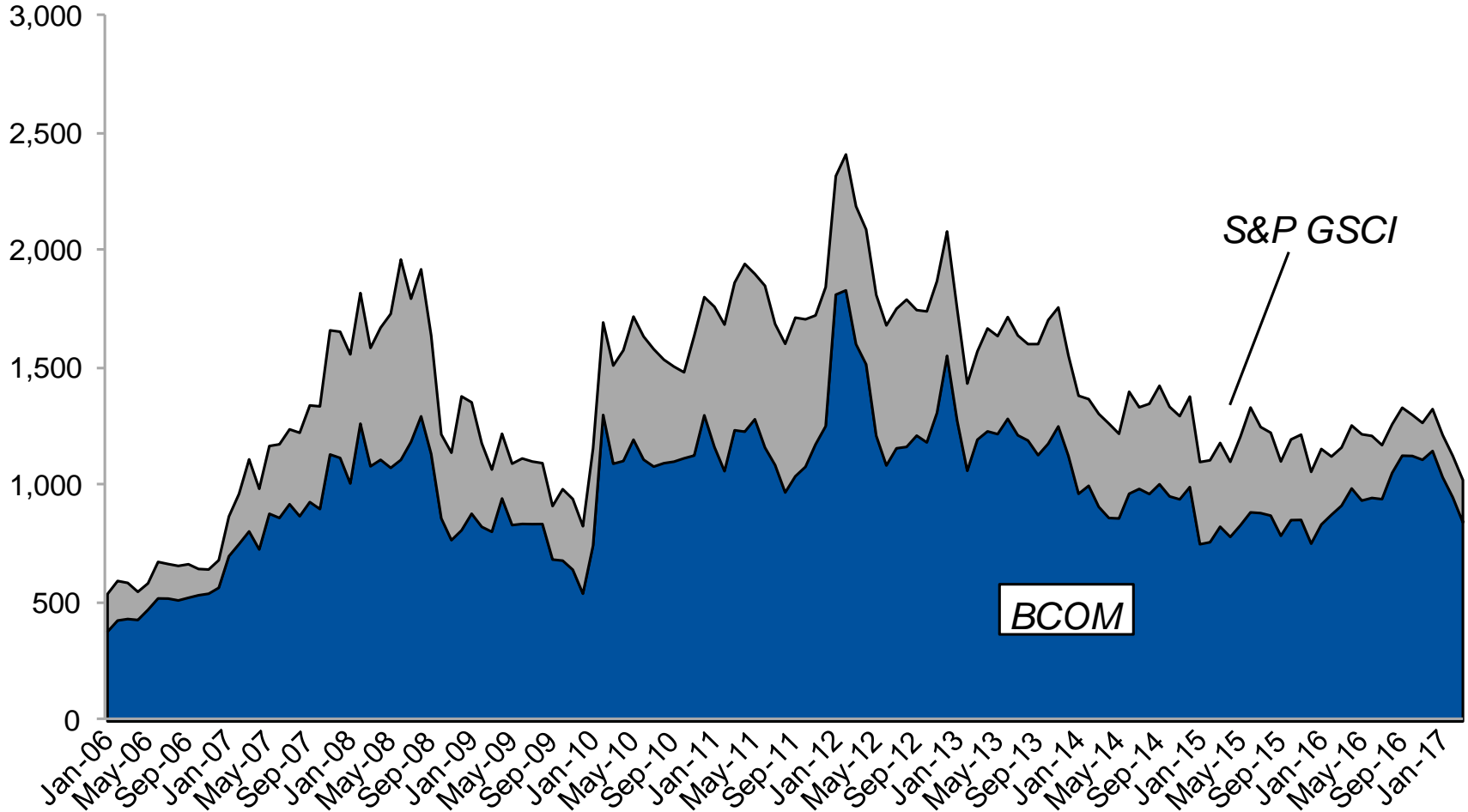


Supply disruptions have affected US premia

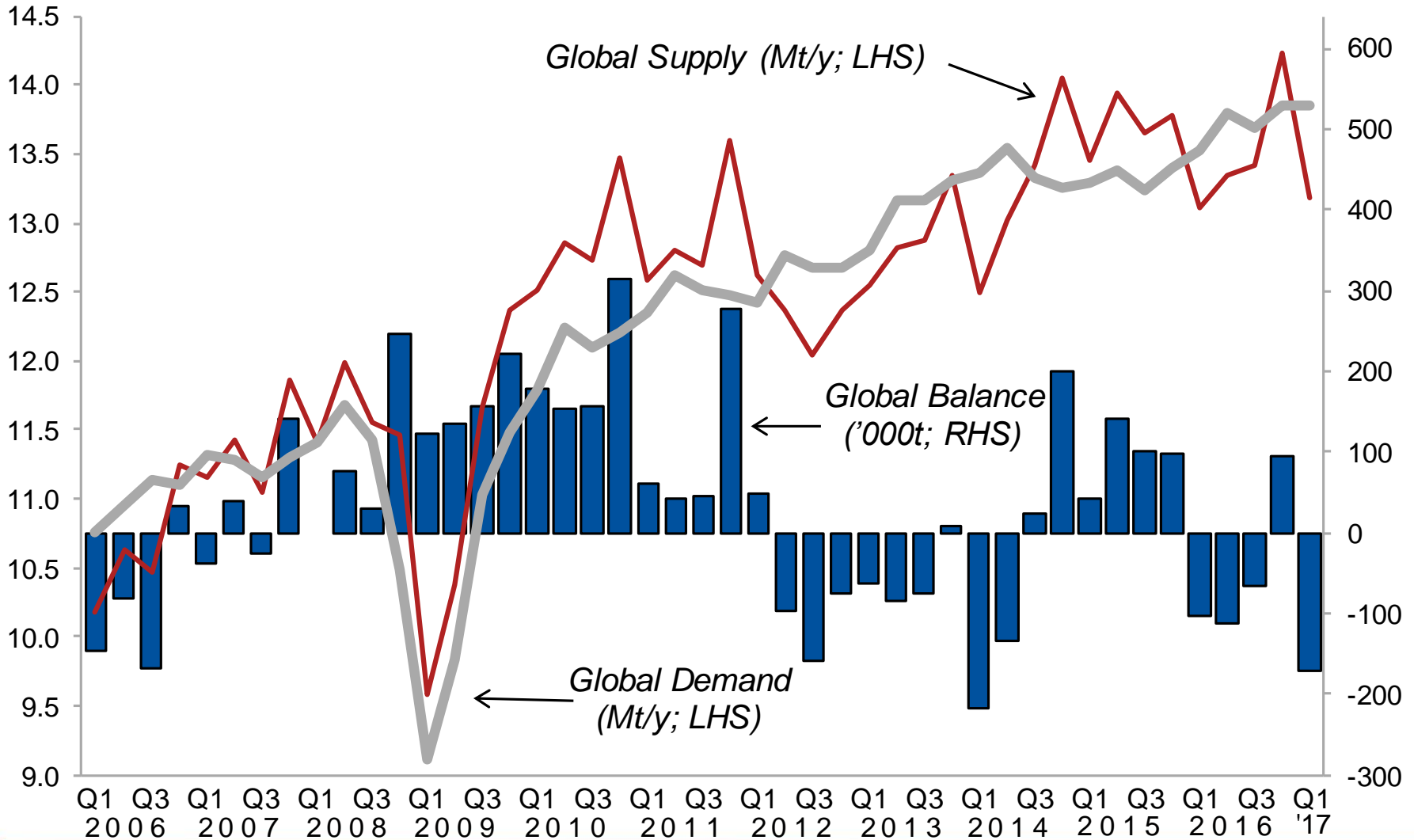
- **The strike at Noranda Income Fund's Valleyfield smelter has reduced output to around 50% of capacity (Valleyfield produced 277,000t in 2016)**
- **Votorantim's Cajamarquilla smelter was operating at a reduced rate in April following disruption to its concentrate supply**
- **Spot premia in the US market are up by more than 2¢/lb**
- **Some of the shortfall of SHG slab may be met from global stocks**
- **Smelters elsewhere with spare capacity may be able to increase output to cover the shortfall**
- **The European and Asian markets remain well-supplied, although tightness in the US market is supporting premia elsewhere**

Zinc funds under management fell sharply in 2017 Q1

net forward position; '000t zinc

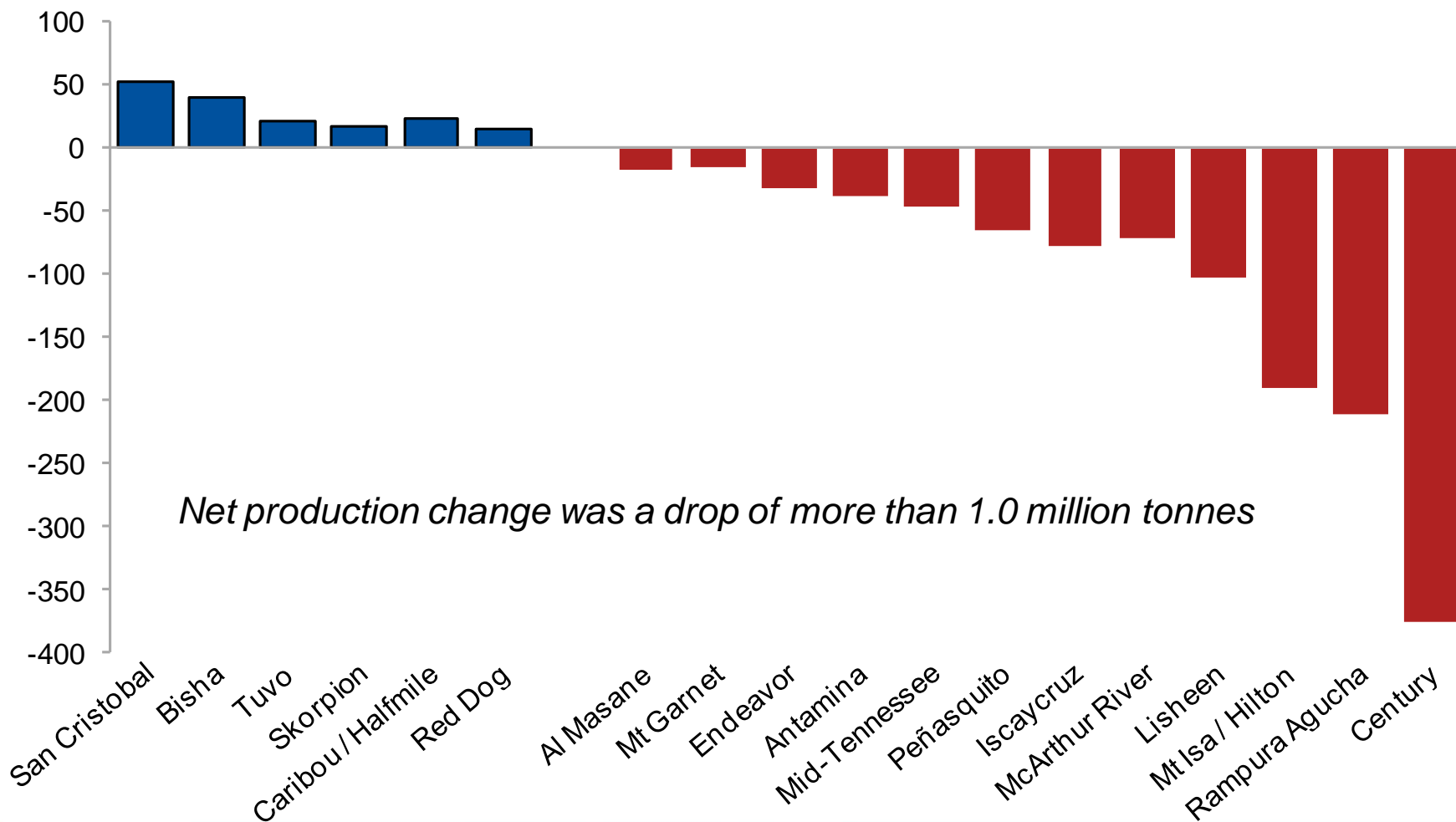


The market has been in deficit in 4 of the last 5 quarters



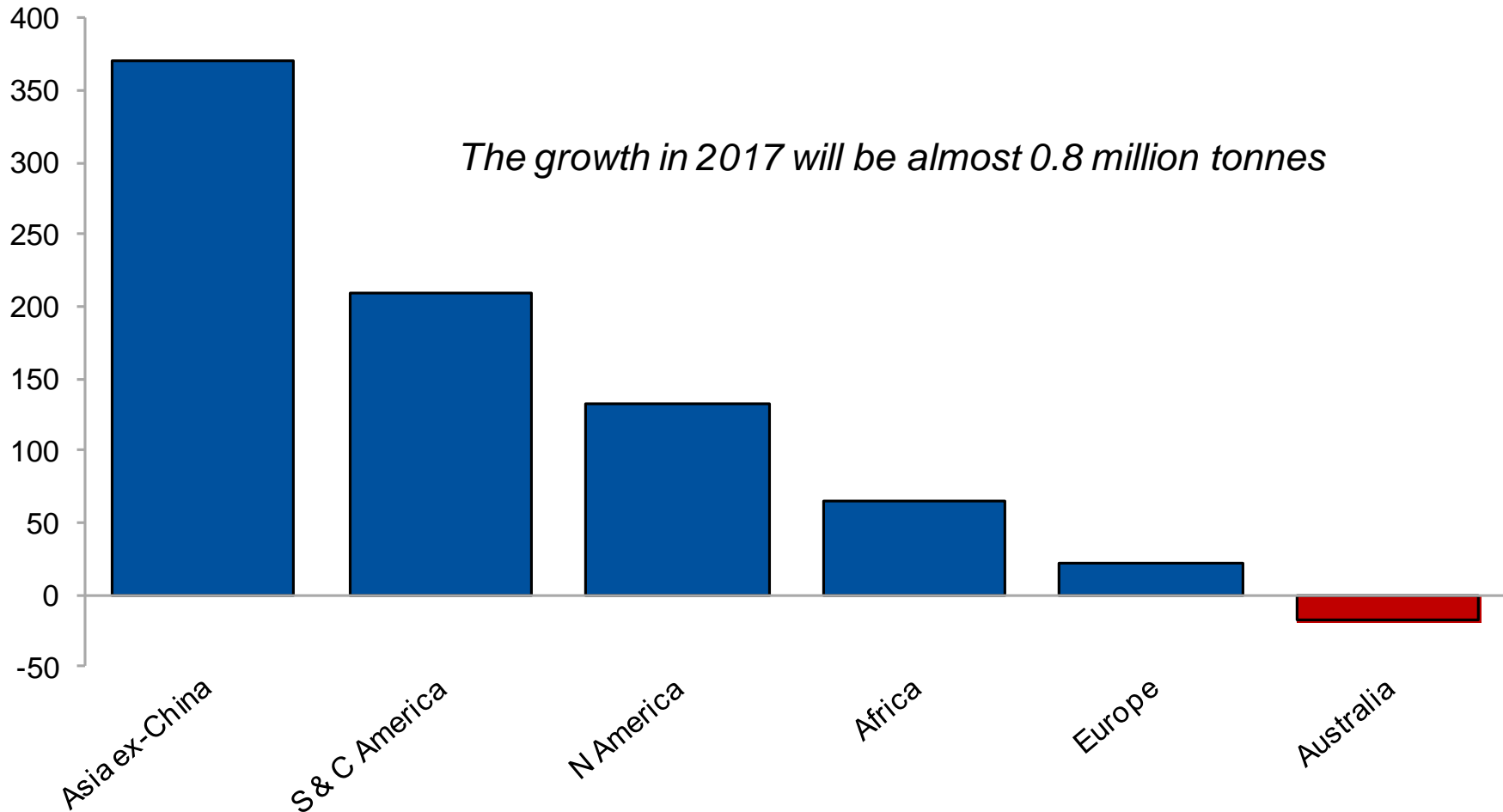
But this took major mine closures to achieve

2015-16 production change; '000t zinc



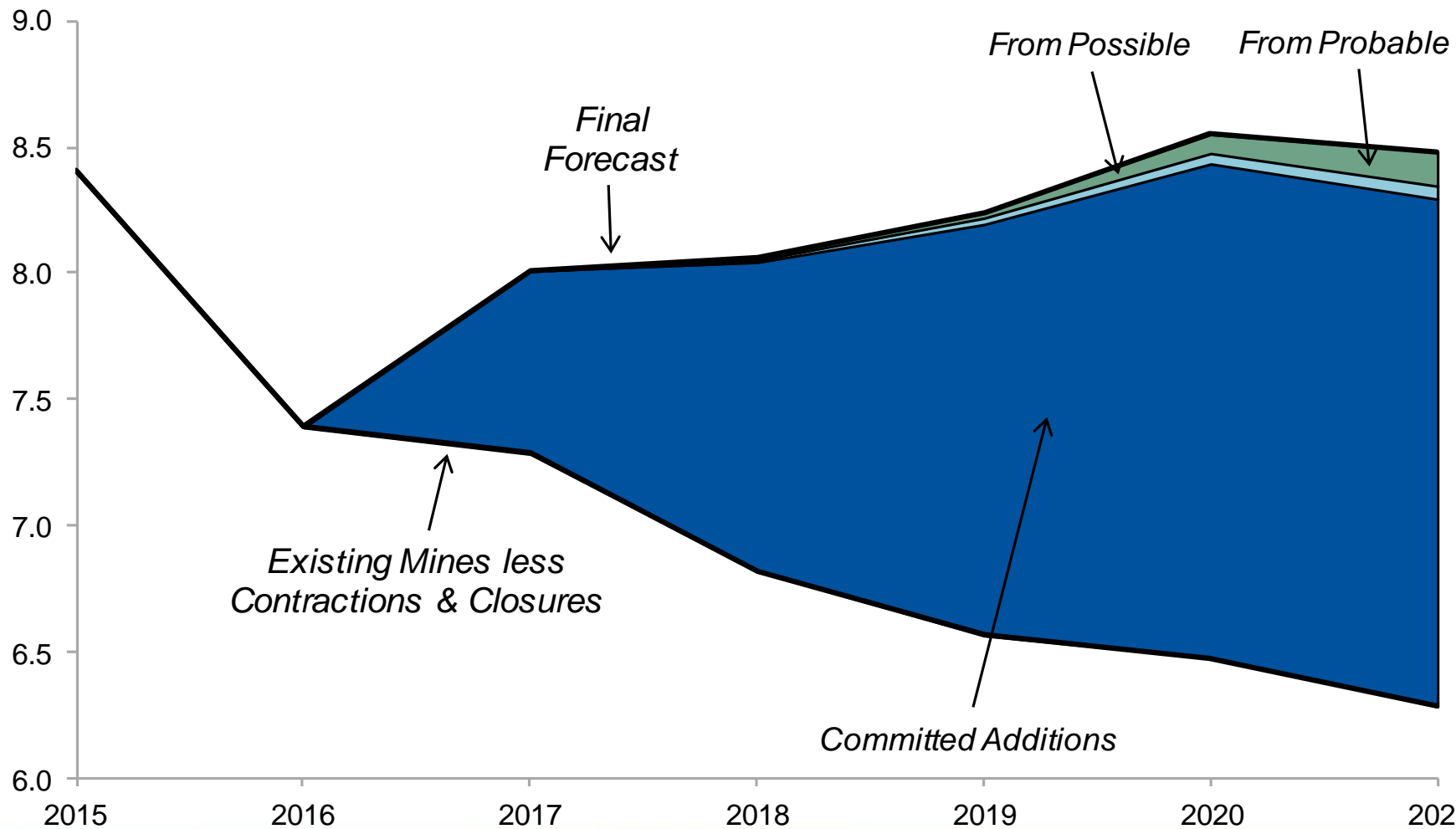
Mine supply will increase in most regions in 2017

2016-17 production change; '000t zinc



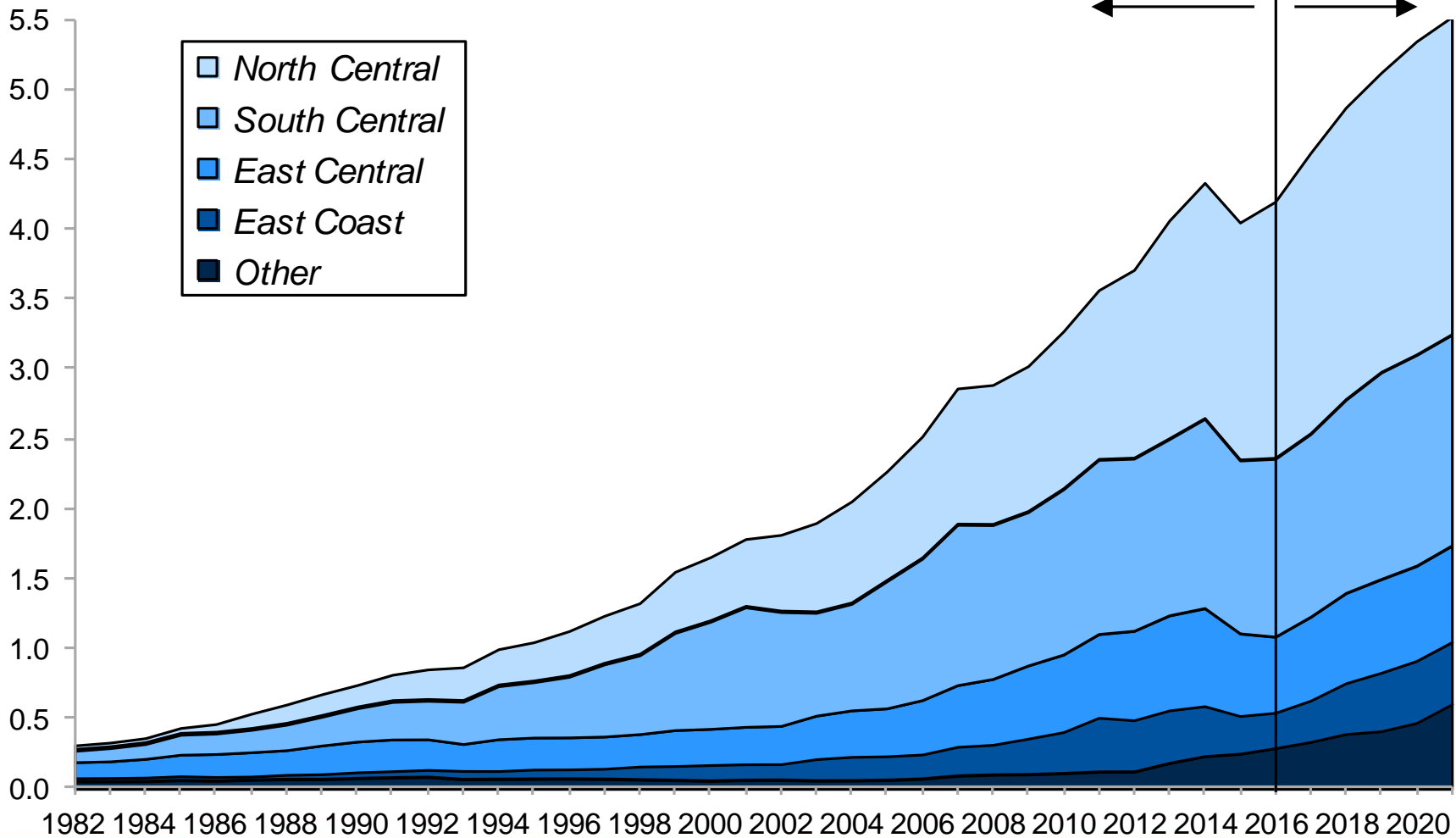
Ex-China mine supply will swell over our forecast period

par forecast of ex-China mine production; million tonnes

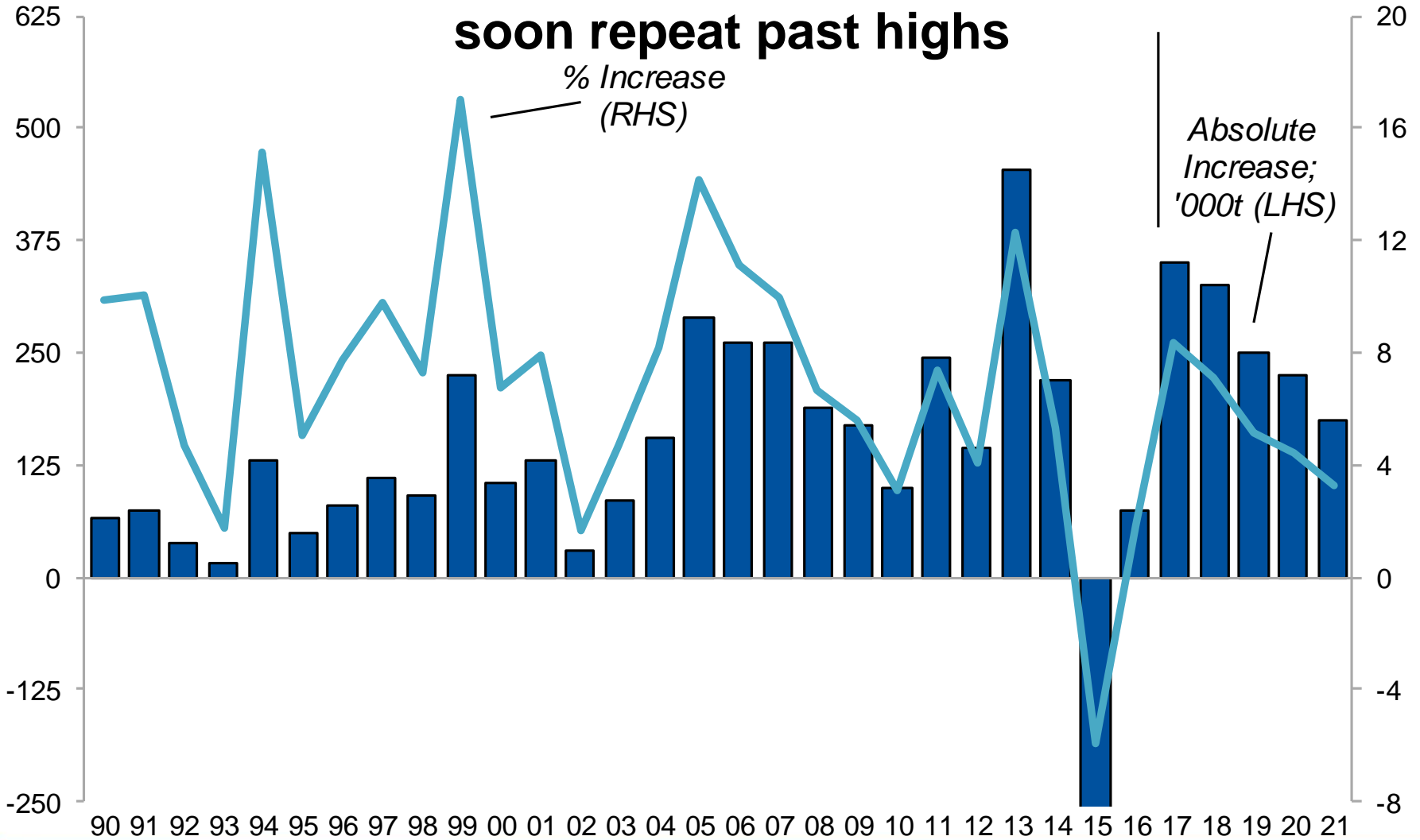


2016-21 growth may be significant in China too

million tonnes

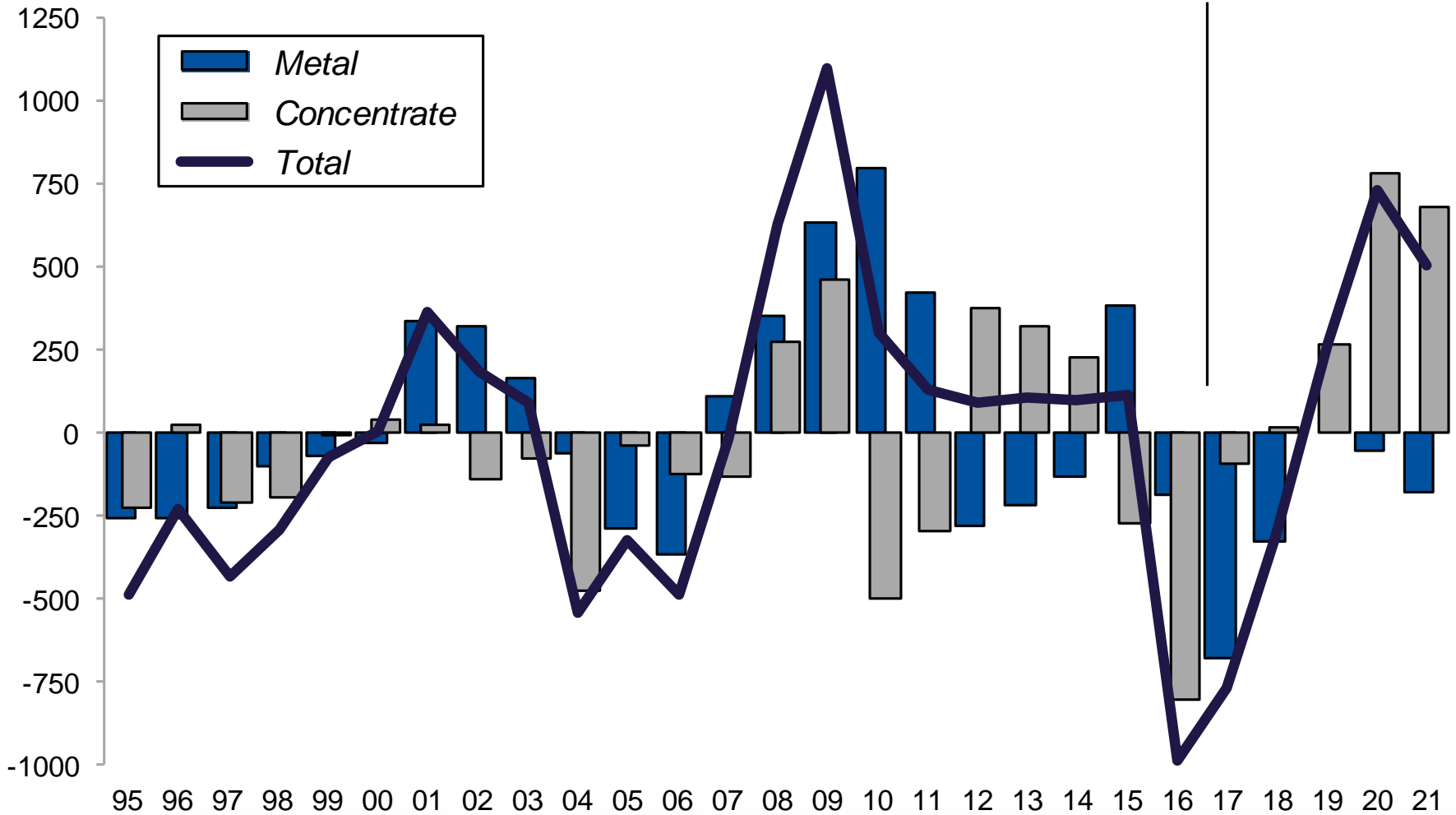


We even assume that Chinese mine production growth will soon repeat past highs



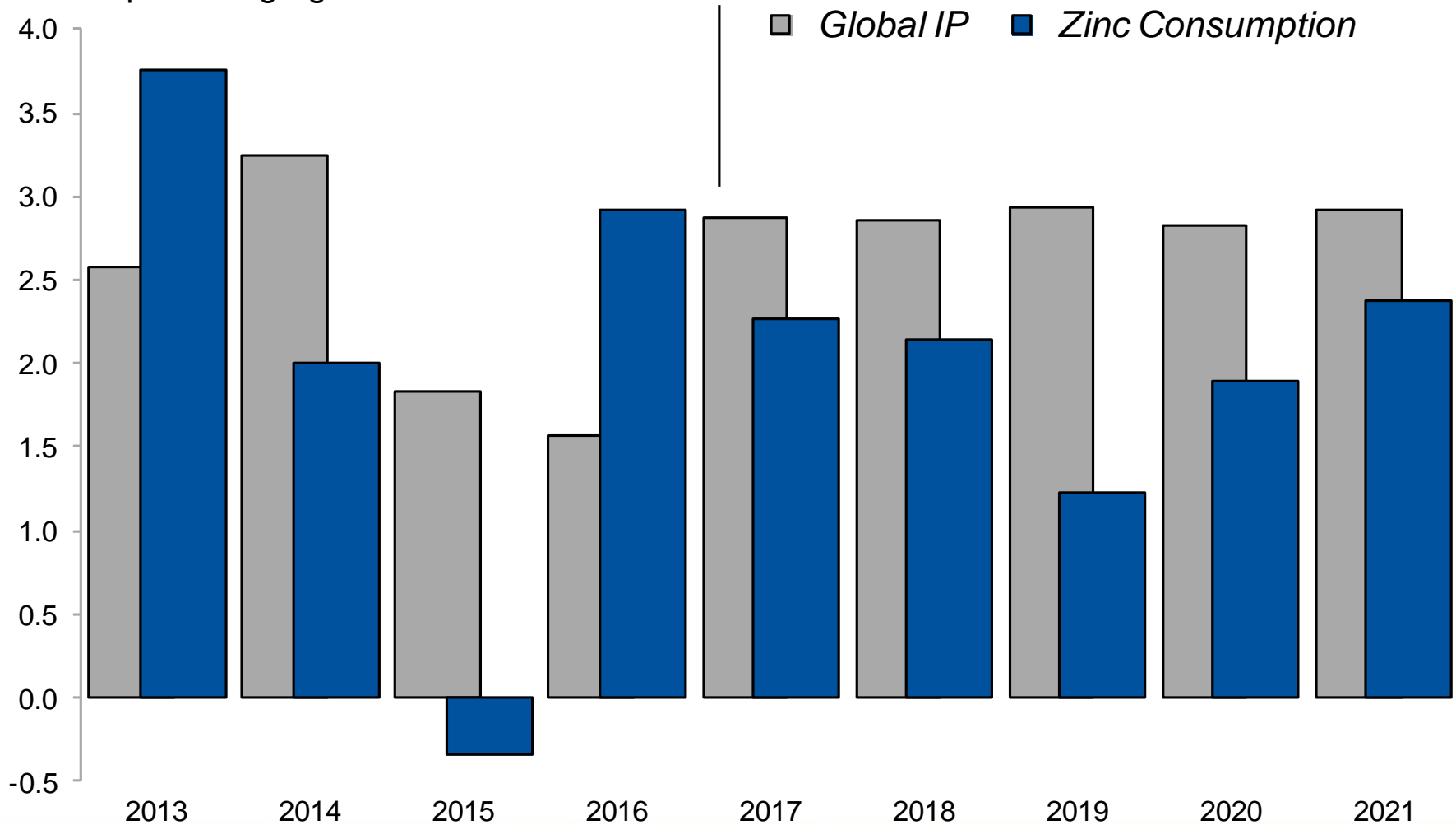
The world metal market will stay in deficit in 2017-2018

global market balances; '000 tonnes contained zinc



Demand may become constrained as prices rise

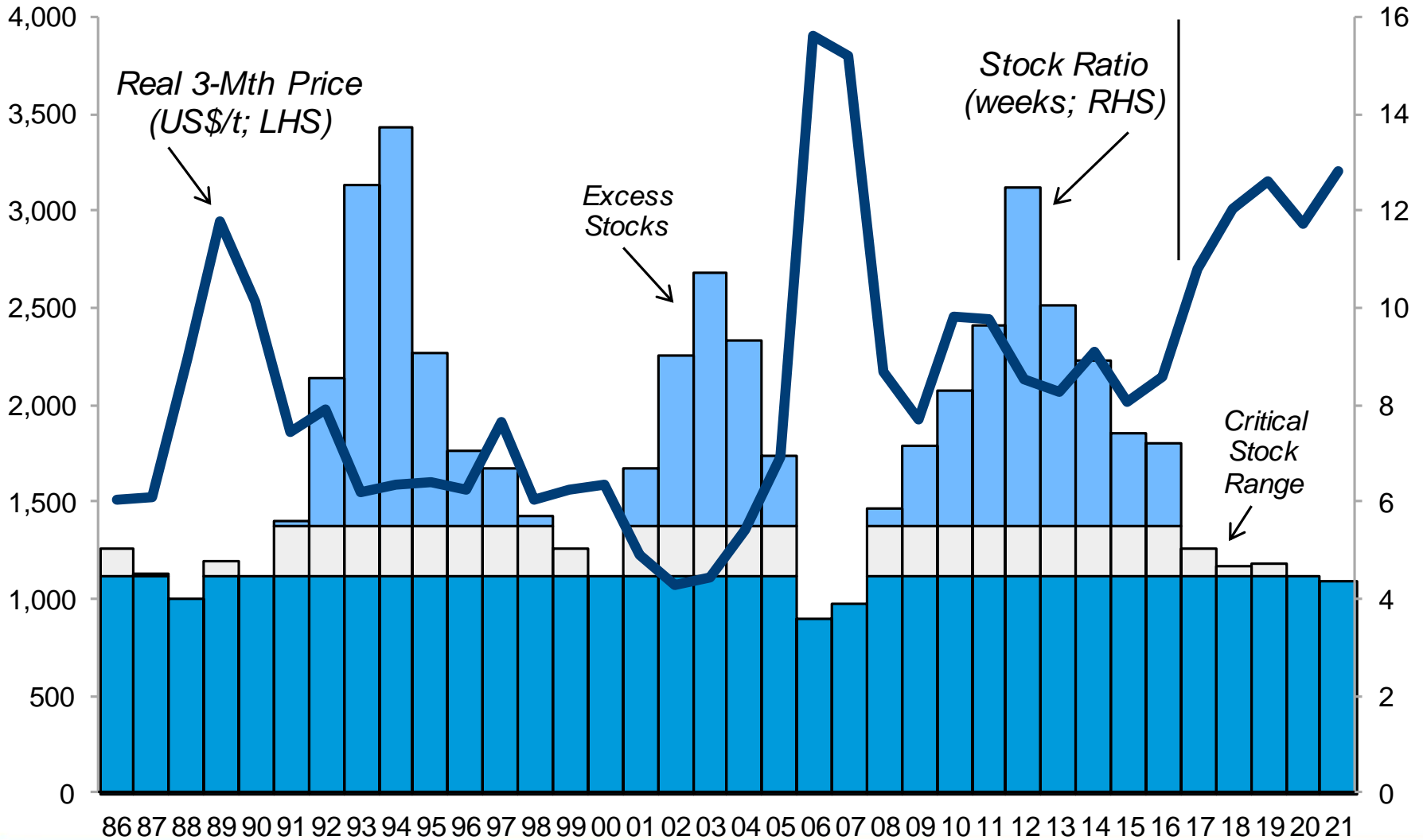
annual percentage growth



Lost demand will not be regained

- **Optimisation is an ongoing process and efficiencies of use could improve in China and elsewhere**
- **As zinc's price moves above \$3,000/t, galvanisers may struggle to pass on zinc surcharges**
- **Galvanisers may switch to alloys containing less zinc or newer ones which can be applied more thinly**
- **Non-automotive die casting applications are relatively quick to engineer**
- **The big threat is in automotive body sheet (this will be permanent but will need a lot of aluminium)**

Latest forecast has a spike in 2019 and recovery in 2021



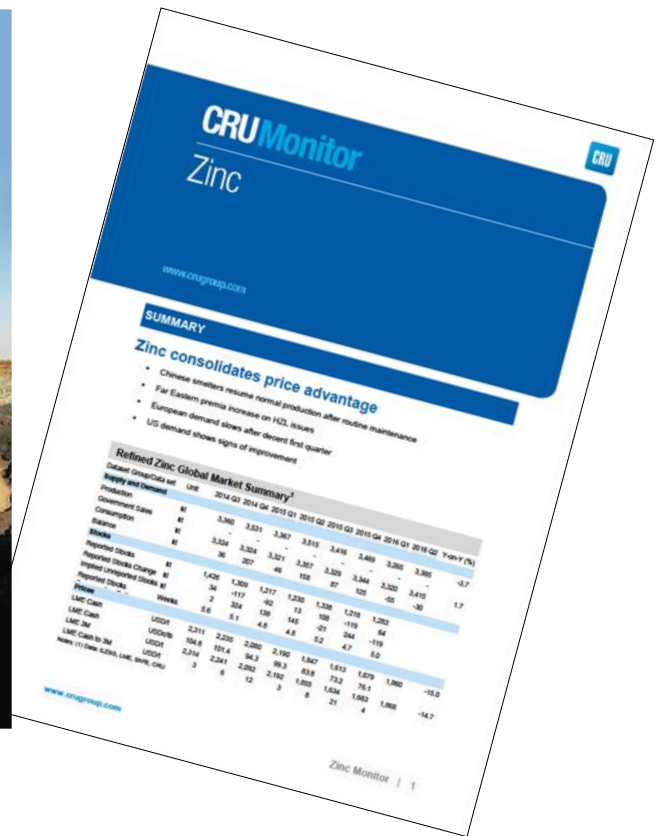
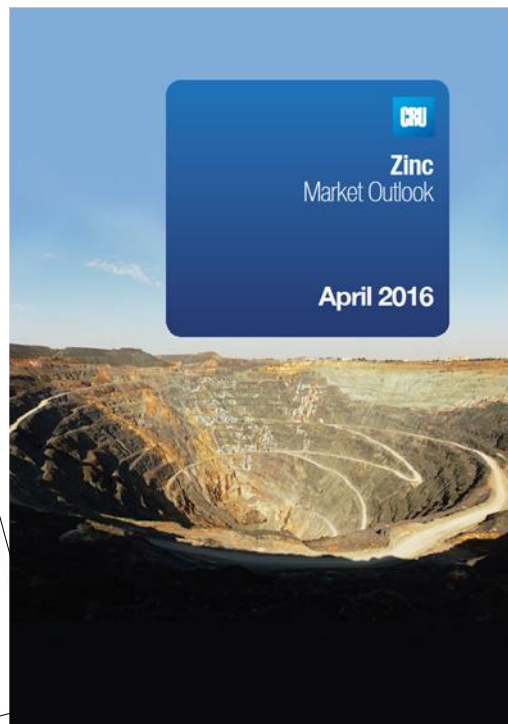
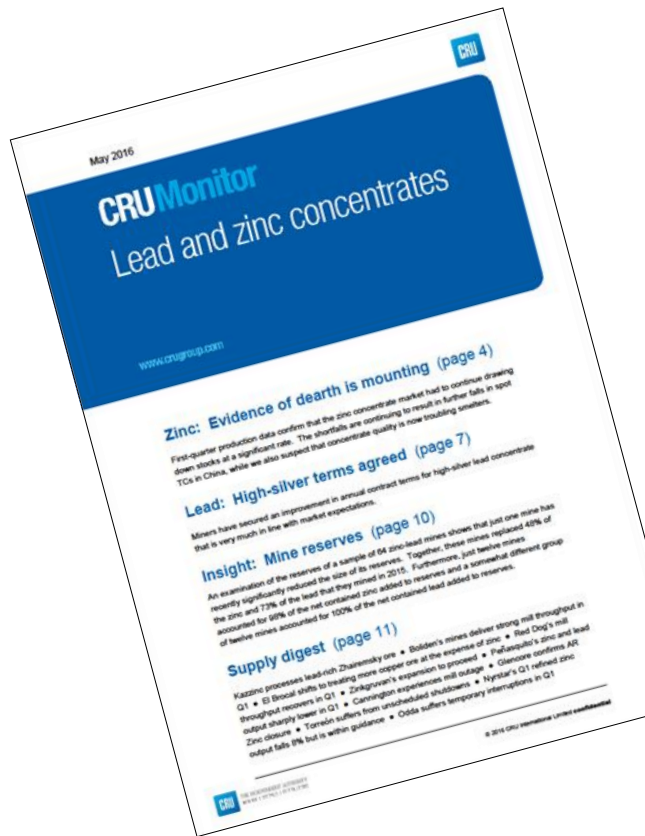
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