

# Tin Market Outlook: Long-term potential, short-term setbacks



ITRI Explorers and Developers Group Australian Tour, November 2014  
Peter Kettle, Manager – Markets, ITRI Ltd

## Long-term outlook in six slides

- History: Prices vs stocks
- Swings in China trade balance
- Usage opportunities and risks
- Changing supply geography?
- Project pipeline stressed
- Price scenarios

## What went wrong in 2014?

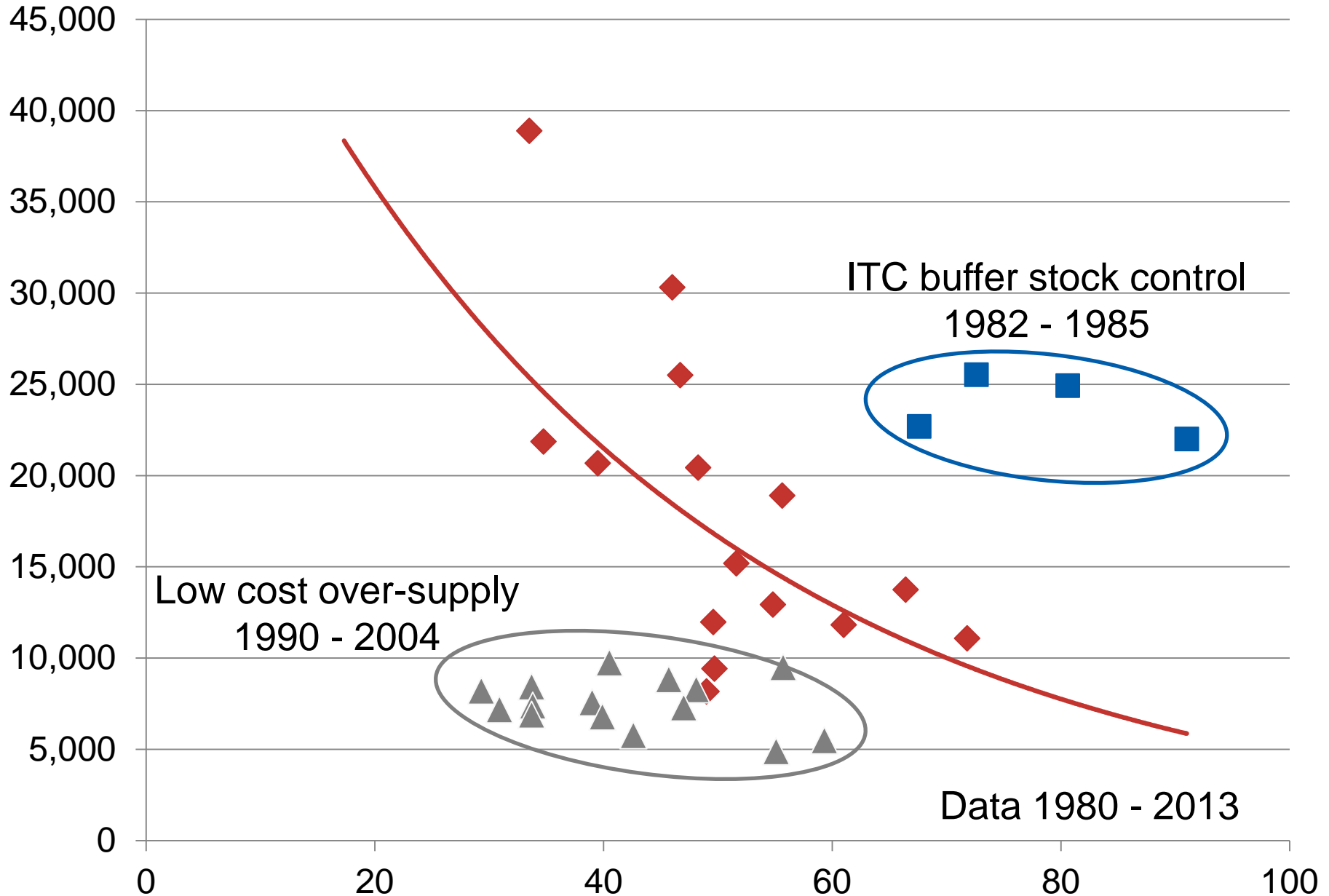
- Bulls disappointed (again)
- China balance altered
- Indonesian export stop-go
- Economic/financial picture weaker

## Positives for producers

- Good news from tin use survey
- Changes in Indonesia?
- Cost curve identifies price floor
- Deficits are real
- Prices lower now, higher later

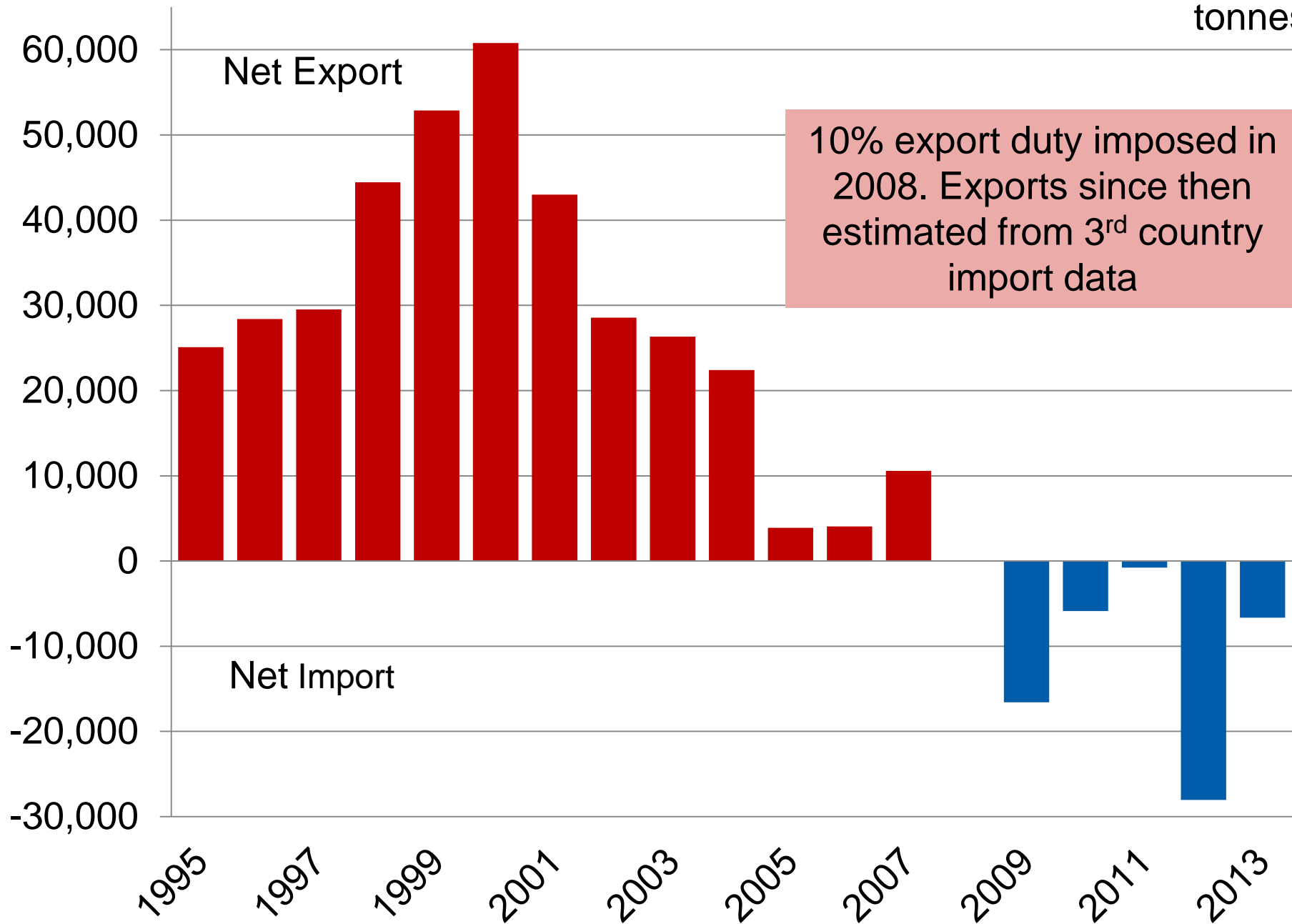
# LME prices vs visible stocks

LME price in constant 2010 US\$ vs visible stocks ('000t)



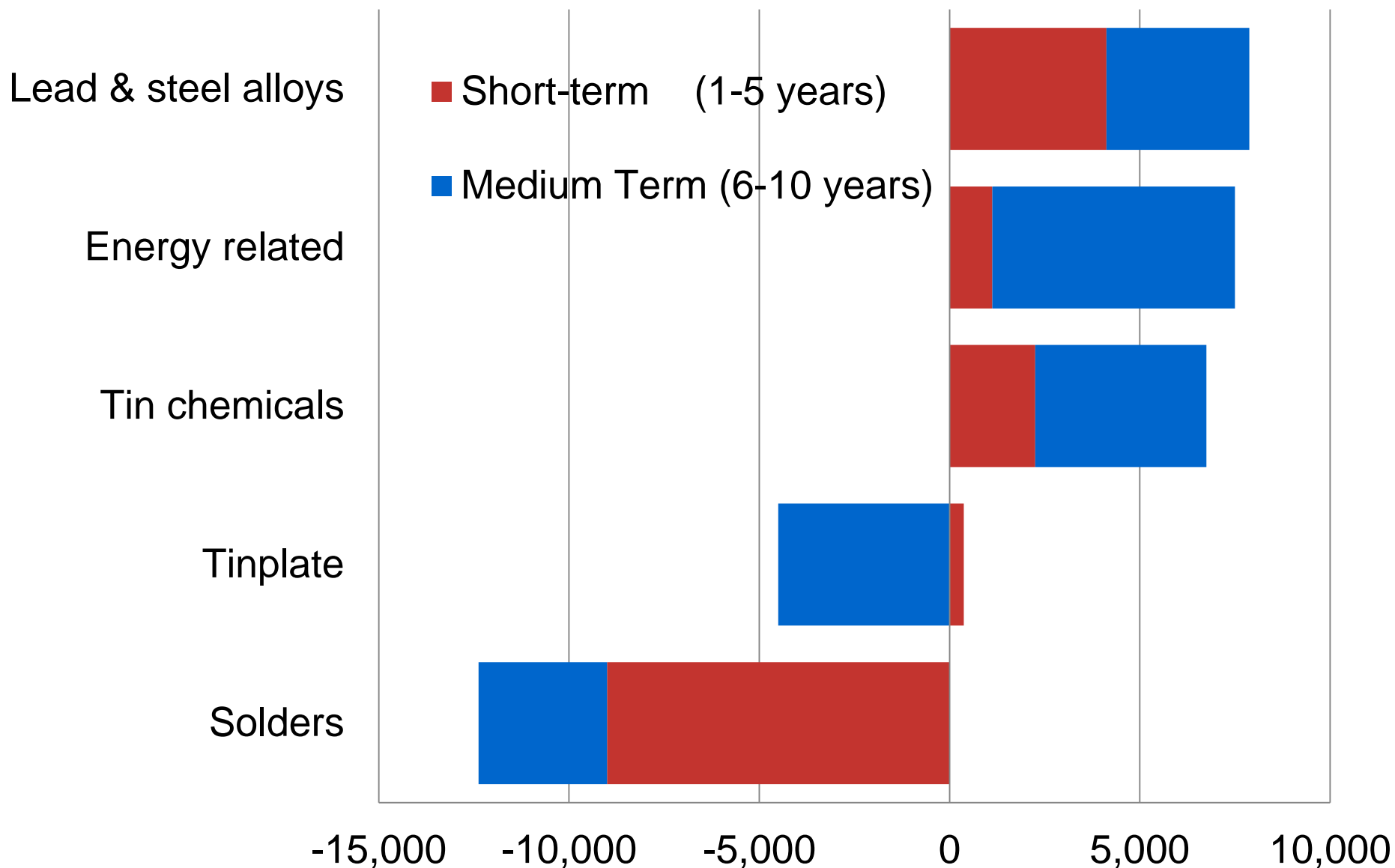
# China refined tin trade balance

tonnes



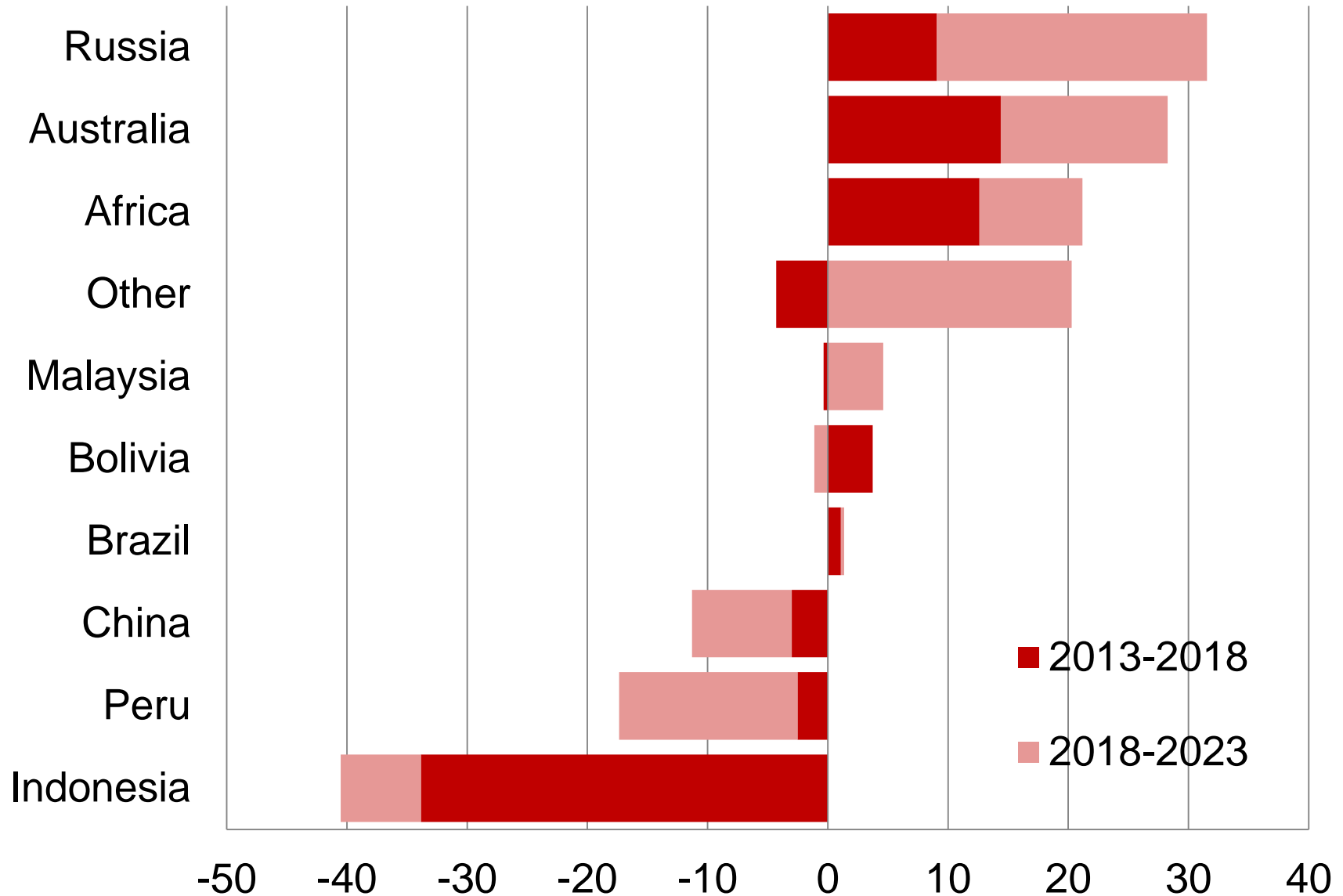
# Technology risks over time

Potential net usage gains or losses by sector and timing, tpy



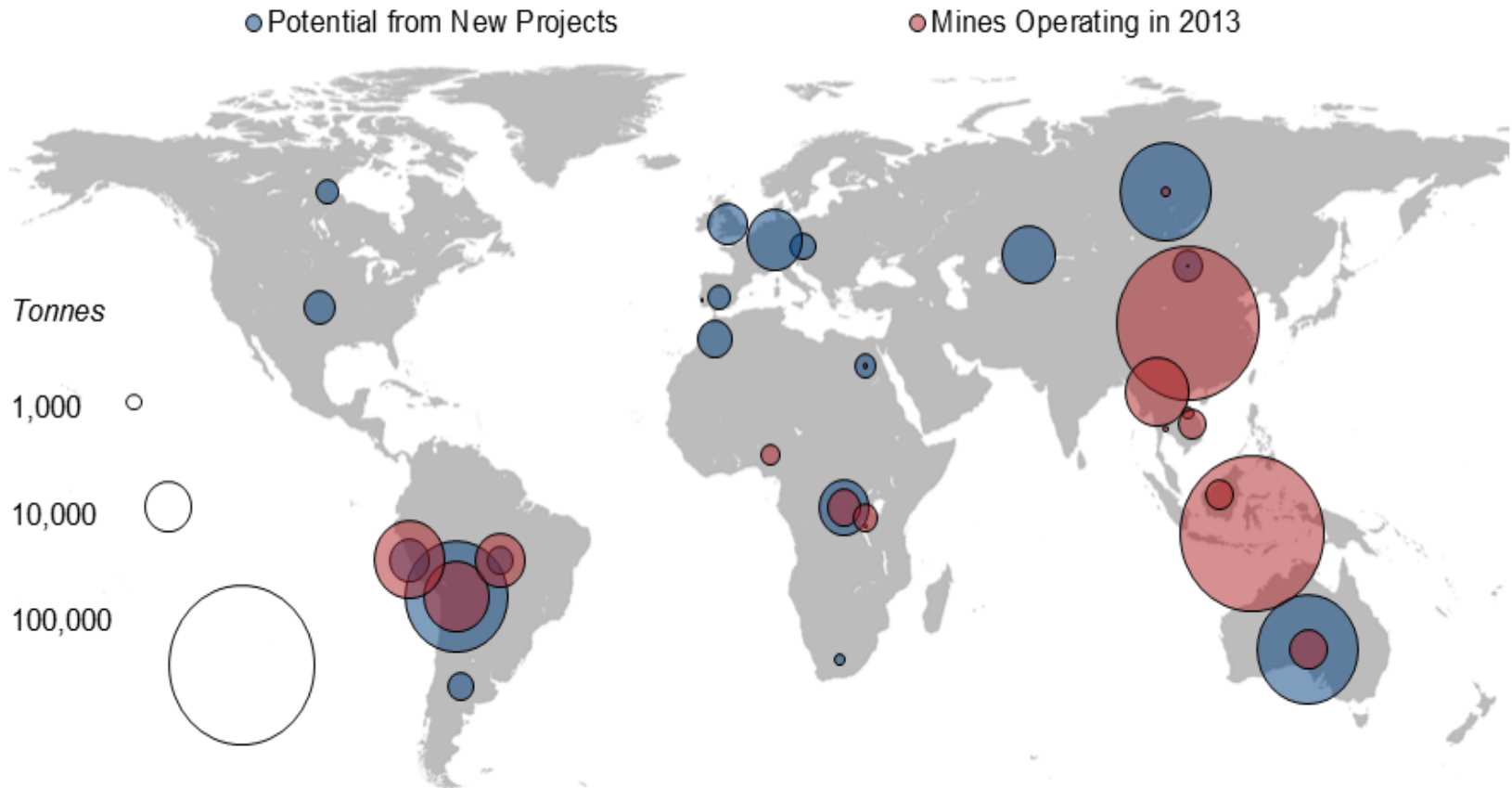
# Main changes in mine production

Potential changes in tin-in-concentrate production, '000 tpy



# New projects in old production centres

## Global Annual Tin Production

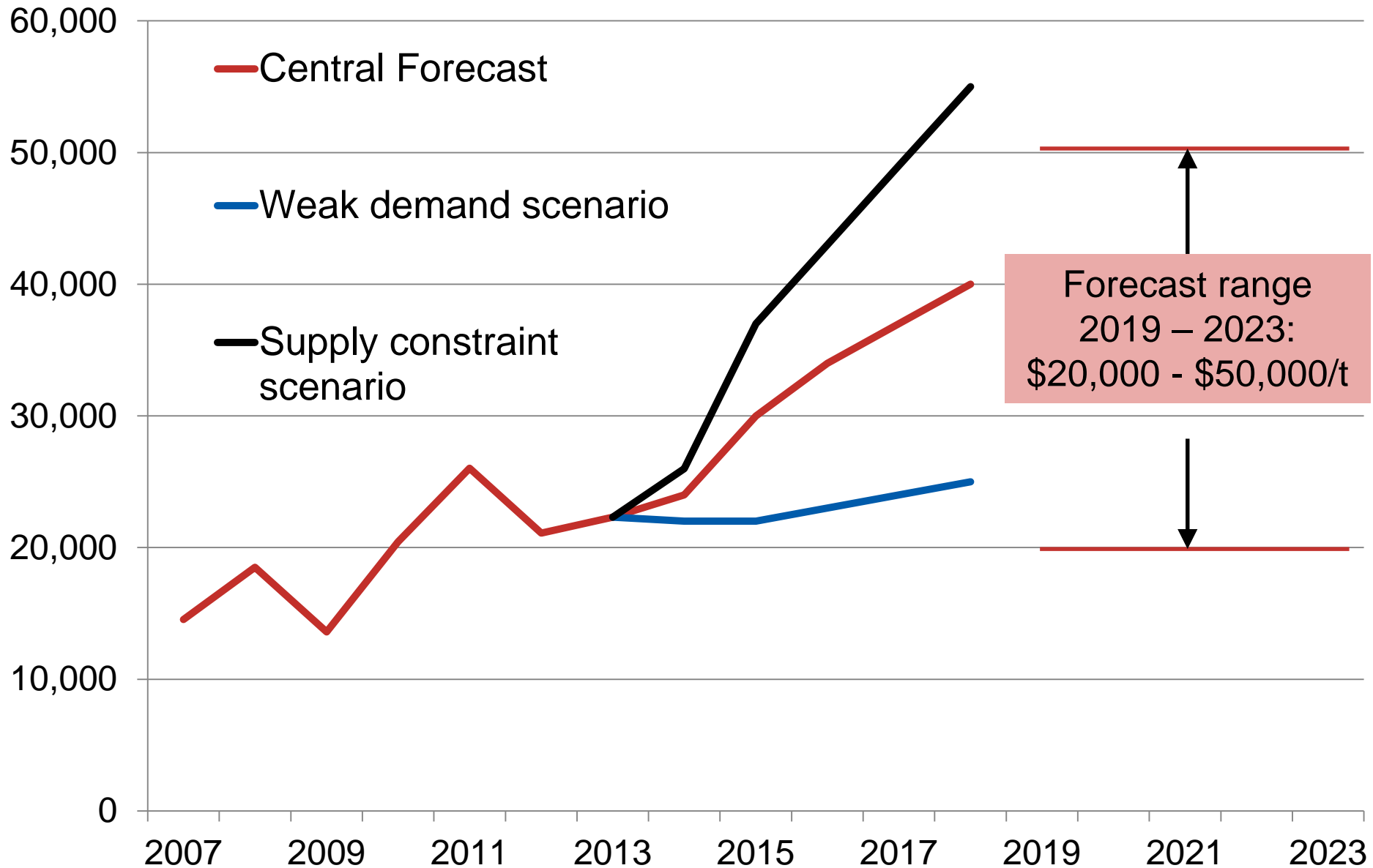


Data: ITRI , Greenfields Research

36% of potential production from new tin sources in high investment suitability countries compared to 2% in 2013 (from Renison in Australia)

# Price scenarios to 2023

US\$/tonne



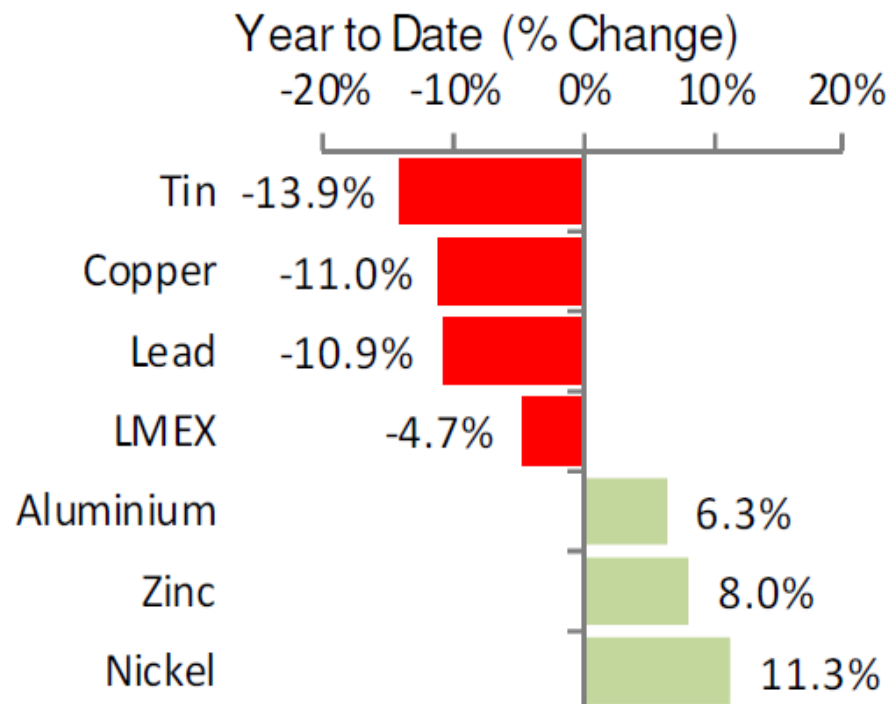
Forecast range  
2019 – 2023:  
\$20,000 - \$50,000/t



# What went wrong?



## Performance Year-to-Date\*



*BNP Paribas Base Metals Weekly*

## Forecast tin deficit unlikely to materialise in 2014 - industry group

Reuters News 19 August 2014

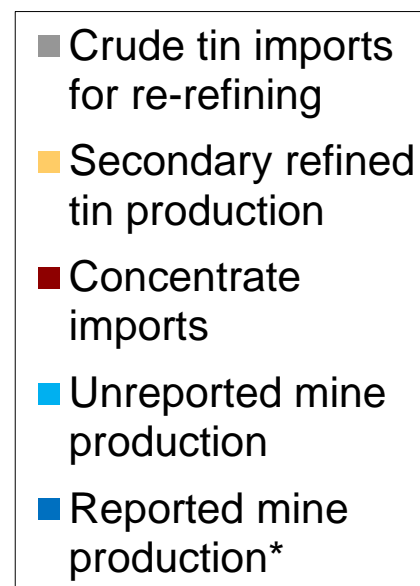
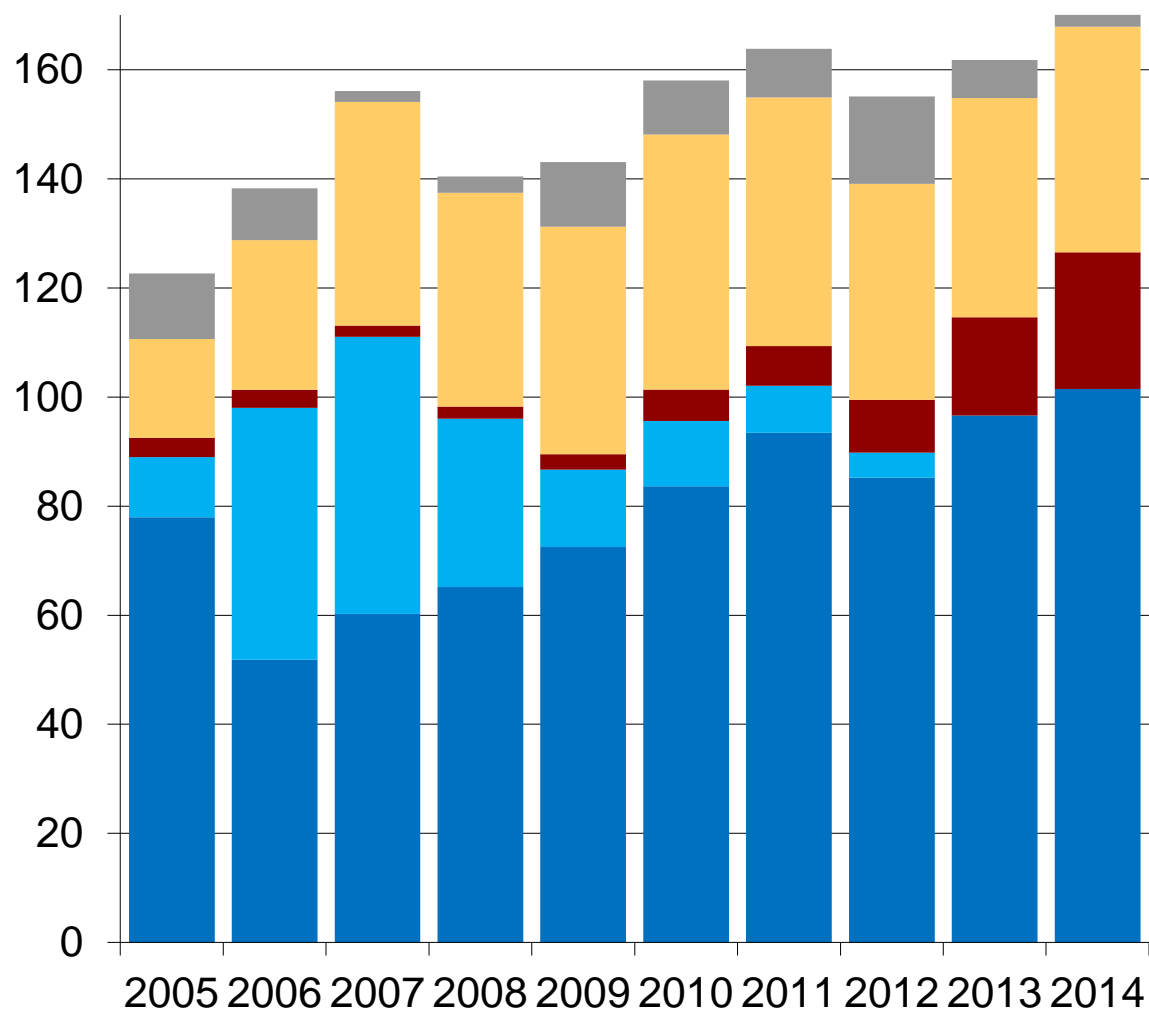
"Until recently we were forecasting a deficit in the order of 10,000 tonnes this year, but the latest indications are that **second-quarter production in both Indonesia and China was considerably higher than expected**," Kettle told the Reuters Global Base Metals Forum.

"In addition, the electronics industry has been very sluggish in the first half of the year. So the forecast deficit has pretty much disappeared."

# China raw material supplies



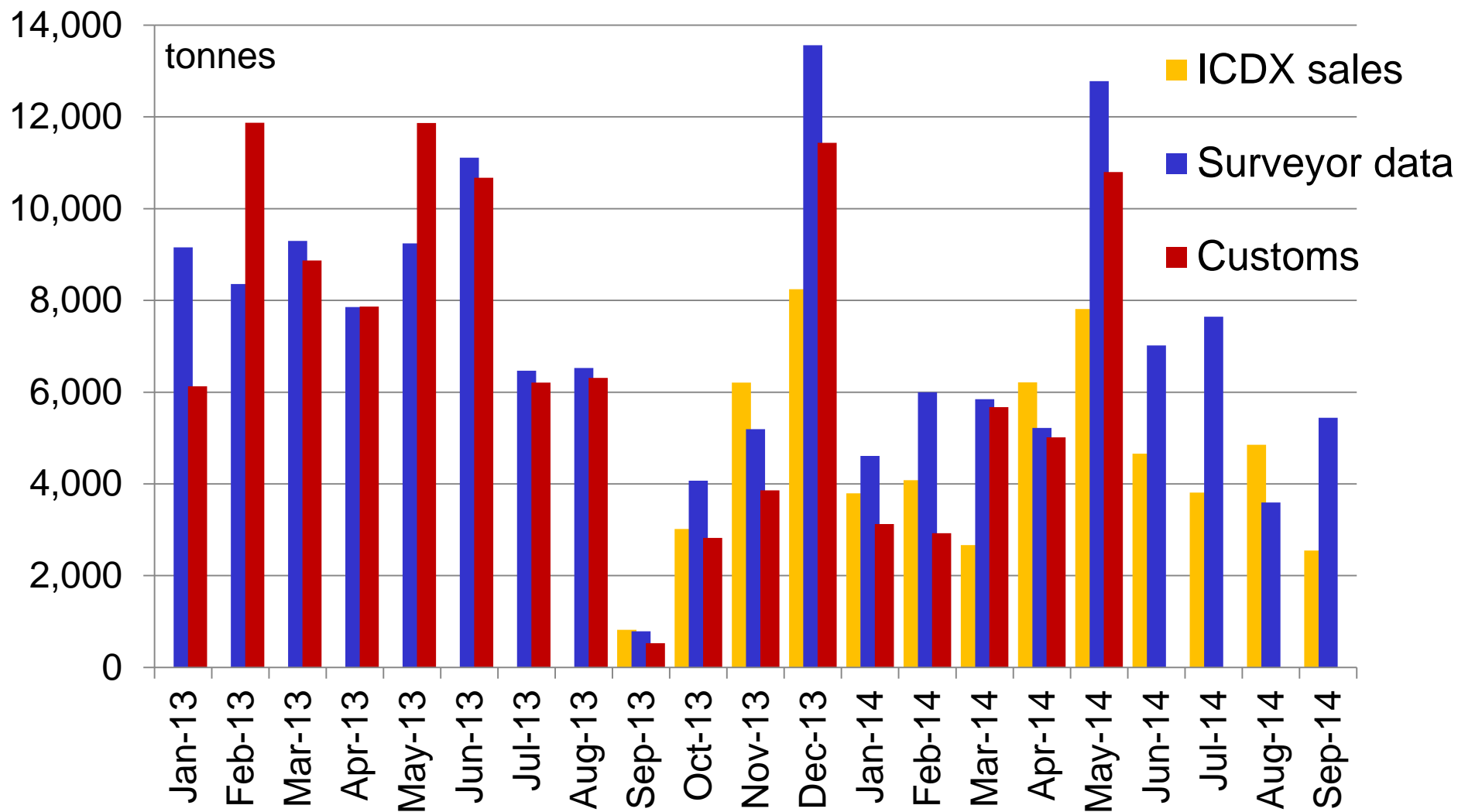
'000 tonnes



\* Including unreported mine production from 2013; the official mine production has stopped to publish from 2013

Data: ITRI, CRU, CNIA

# Indonesian export indicators





WORLD ECONOMIC OUTLOOK (WEO)

## Legacies, Clouds, Uncertainties

October 2014

### Fund managers most bearish on growth, stocks for 2 years -survey – RTRS

LONDON, Oct 14 (Reuters) - Global fund managers are their most gloomy on the outlook for global growth and stock markets in two years as they adjust to a world of diminishing central bank stimulus, a survey showed on Tuesday.

The Bank of America-Merrill Lynch poll for October showed **a sharp increase in money managers' risk aversion**, with their equity allocation slashed to a 34 percent overweight from 47 percent in September. "Concerns over the imminent end of quantitative easing in the U.S. have left investors much less confident in the outlook for the global economy and corporate profitability," BAML said.

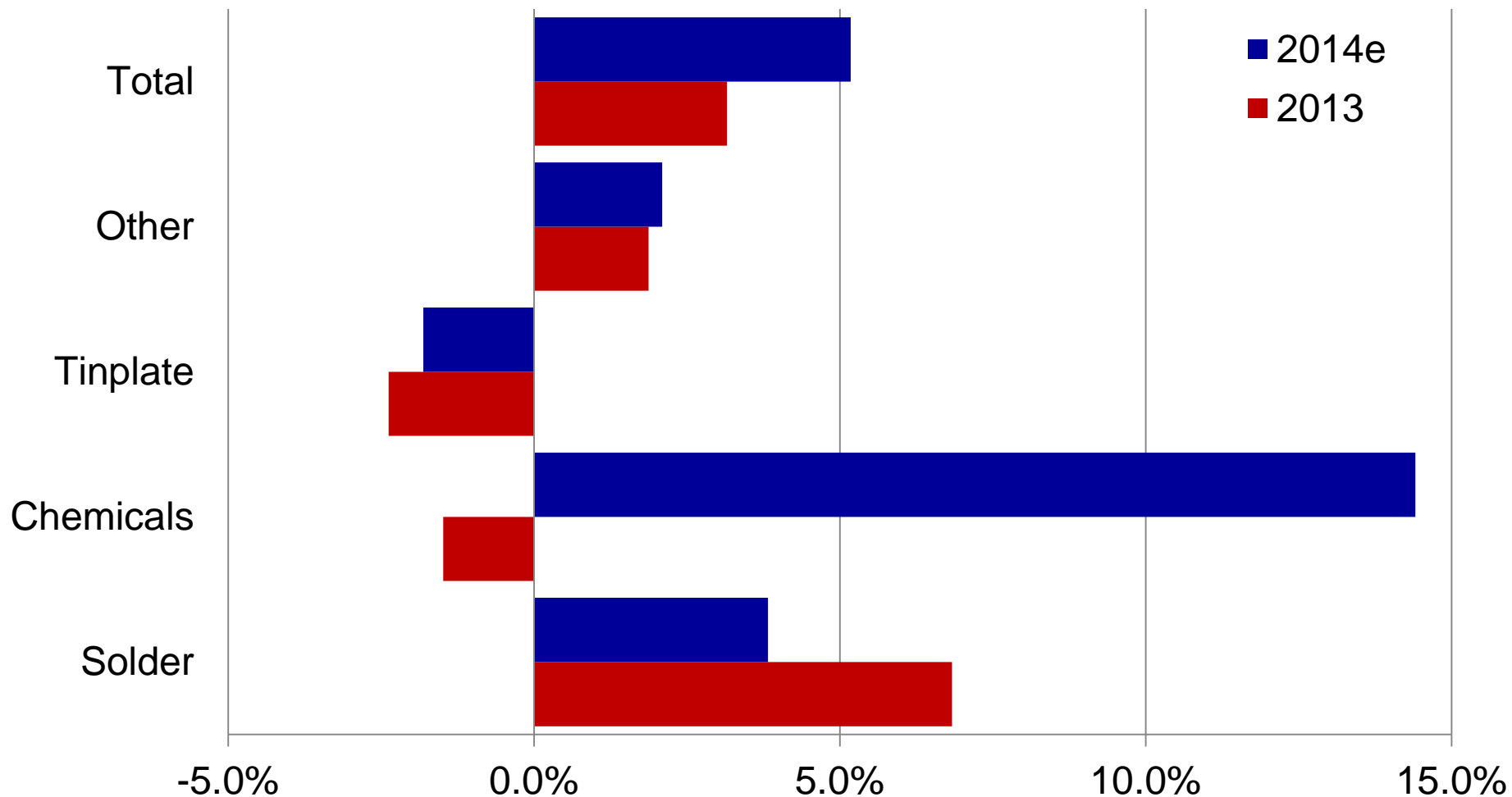


- ◆ Uneven fragile growth
- ◆ Risks from protracted low inflation
- ◆ Financial sector excesses
- ◆ Simmering geopolitical tensions
- ◆ Emerging markets slowing

# Tin use survey – initial results



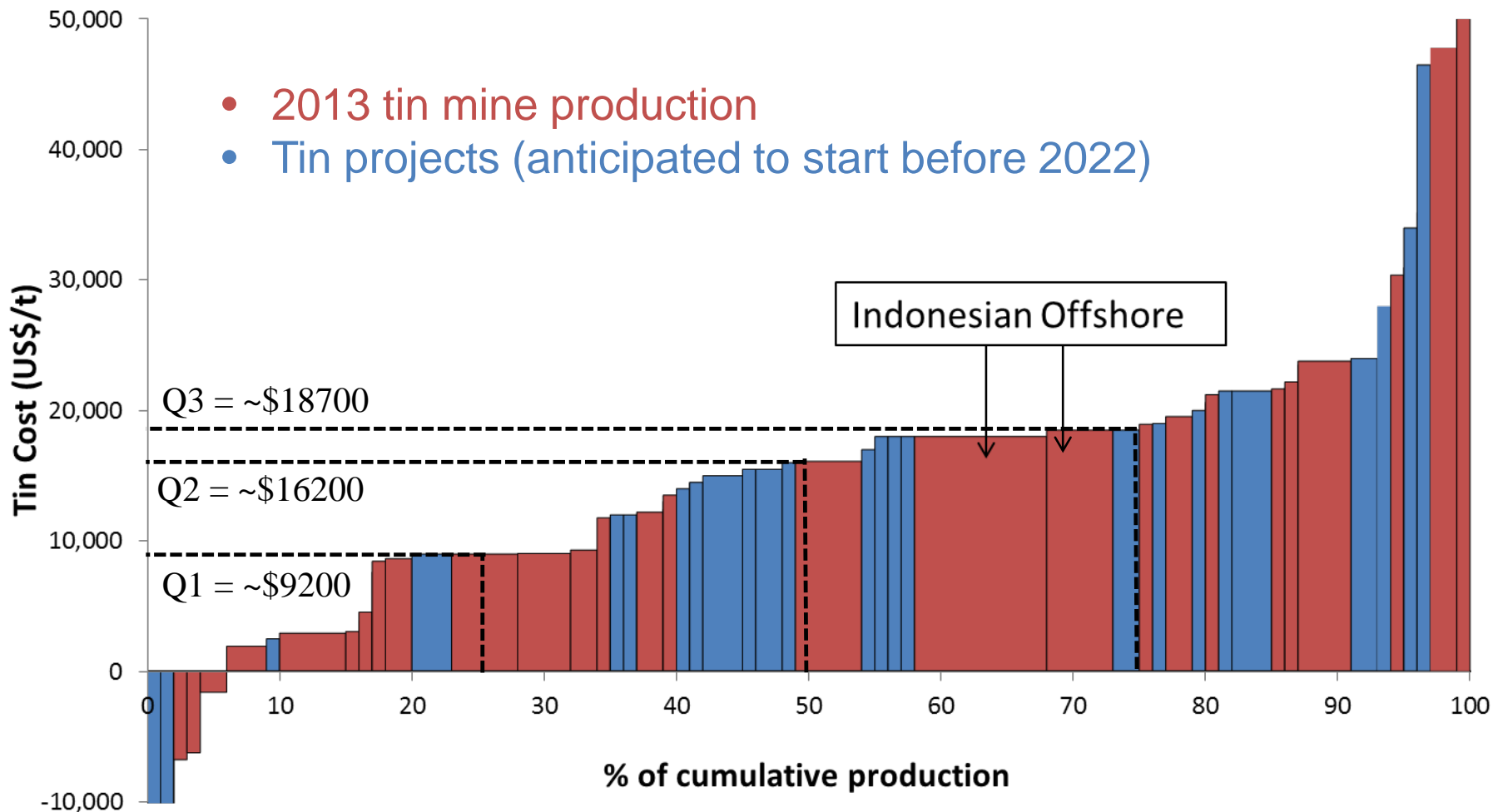
Average changes in refined tin use, based on small sample of companies outside China



# Cost curve provides price floor



## ITRI Net of By-Product Full Cost (US\$/tonne)



# Market usually in deficit



| <b>World Supply/Demand Balances in Refined Tin</b> |             |             |             |             |             |             |             |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ('000 tonnes)                                      |             |             |             |             | Forecast    |             |             |
|  | 2009        | 2010        | 2011        | 2012        | 2013        | 2014        | 2015        |
| <b>World</b>                                       |             |             |             |             |             |             |             |
| World Refined Production                           | 339.7       | 354.6       | 354.3       | 334.7       | 340.4       | 354.1       | 357.0       |
| DLA Sales  | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| World Refined Consumption                          | 322.3       | 362.2       | 359.4       | 339.5       | 348.7       | 354.3       | 364.2       |
| <b>Global Market Balance</b>                       | <b>17.4</b> | <b>-7.6</b> | <b>-5.1</b> | <b>-4.8</b> | <b>-8.3</b> | <b>-0.2</b> | <b>-7.2</b> |
| <b>Reported stocks</b>                             |             |             |             |             |             |             |             |
| LME  | 26.8        | 16.4        | 12.1        | 12.8        | 9.7         | 7.0         | 6.0         |
| Producers  | 28.0        | 20.8        | 25.0        | 15.9        | 13.7        | 15.0        | 10.0        |
| Consumer/other                                     | 11.6        | 11.1        | 9.6         | 10.7        | 10.9        | 10.0        | 9.0         |
| <b>Total</b>                                       | <b>66.4</b> | <b>48.3</b> | <b>46.7</b> | <b>39.5</b> | <b>34.3</b> | <b>32.0</b> | <b>25.0</b> |
| <i>World Stock Ratio</i>                           |             |             |             |             |             |             |             |
| <i>(weeks consumption)</i>                         | 10.7        | 6.9         | 6.8         | 6.0         | 5.1         | 4.7         | 3.6         |

- **Long-term story is unchanged:** “there is a high probability of supply shortages developing in the next five years, even if growth in usage is slow.”
- **Short-term setbacks:** supply surges from Myanmar and Indonesia; weakness in key demand sectors; adverse macro-economics
- **Reasons to be cheerful:** tin users positive; more order in Indonesia (?); low prices curtail supply; stocks trend downward.