



The Changing Dynamics of Gold Supply

IPMI European Chapter

20th November, 2014

About Metals Focus

- Truly independent precious metals consultancy
- Experienced team of precious metals specialists, 18-strong, in 8 countries
- Not just desk-based research – extensive travel programme, with regular visits to key market participants in major markets

Presentation Outline

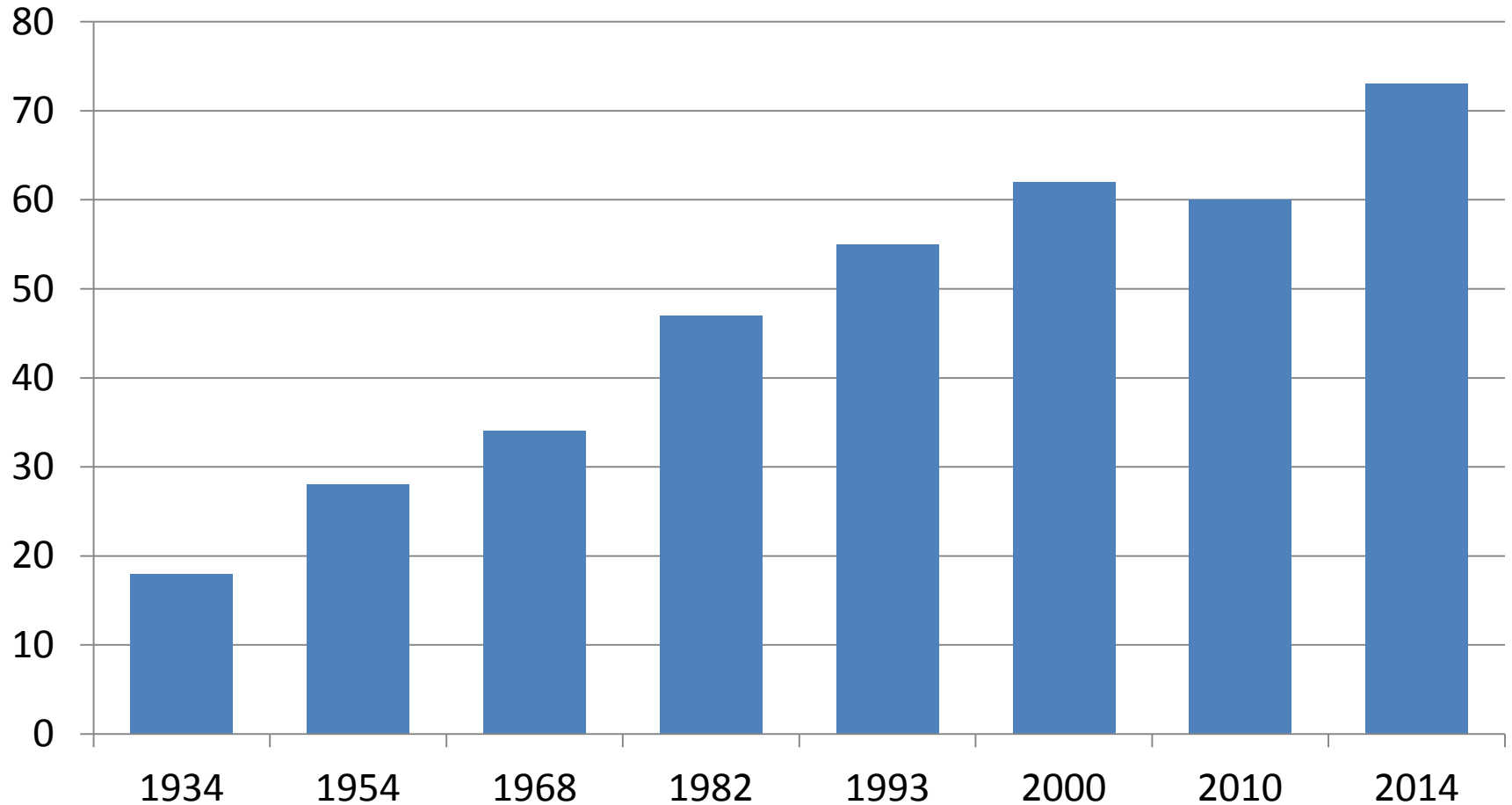
- Refining Landscape
- Scrap Supply
- Mine Production

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LBMA Gold Refineries

2014 saw one of the highest accreditations in a 12 month period



Source: London Bullion Market Association

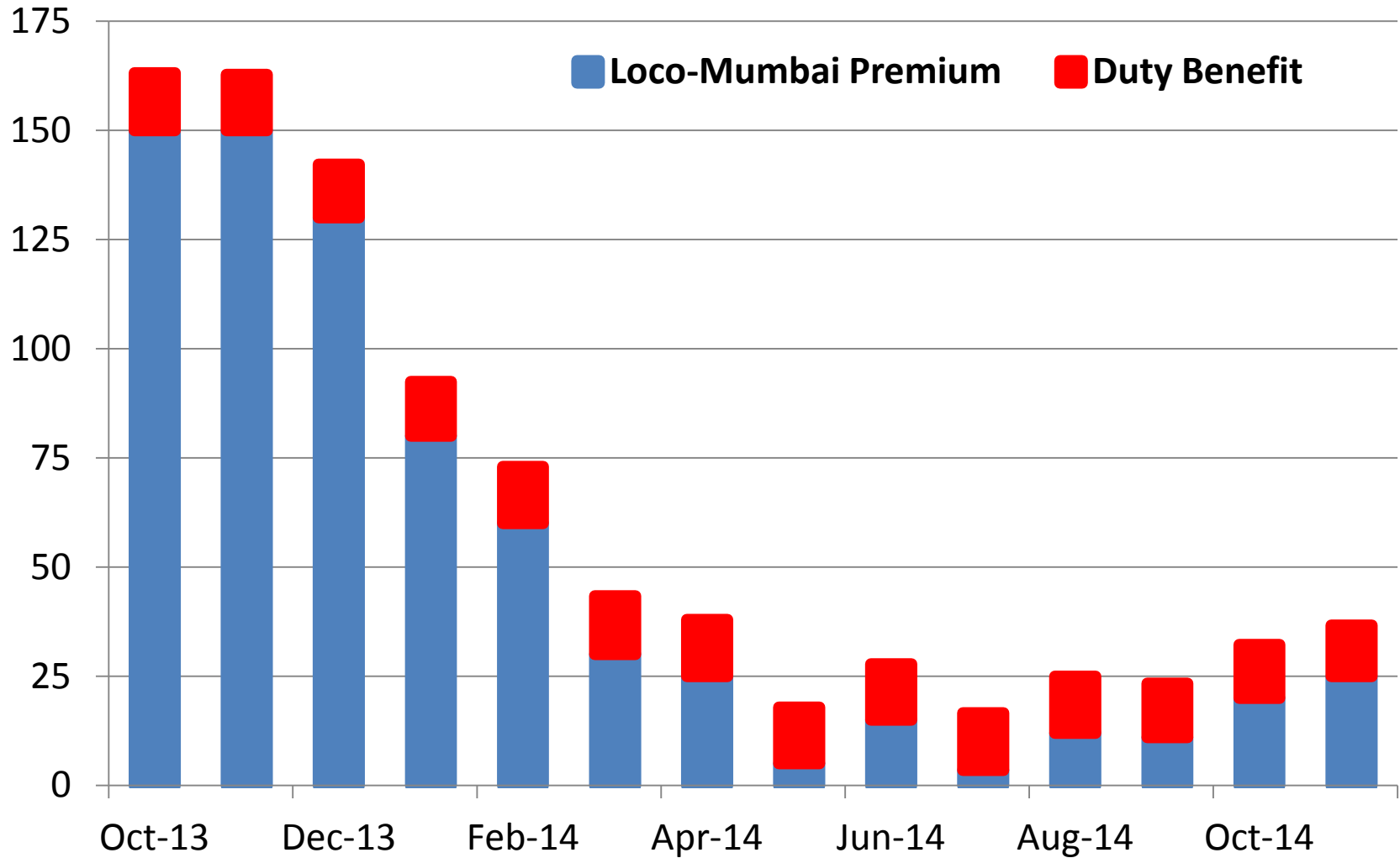


The Growth in Indian Refining Capacity

Company	Location	Annual Capacity
MMTC-PAMP India	Mewat	150 tonnes
Shirpur Gold Refinery	Shirpur	217 tonnes
Chemmanur Gold Refinery	Cochin	30 tonnes
Bangalore Refinery	Banagalore	30 tonnes
GGC Gujarat Gold Centre	Ahmedabad	30 tonnes
Zaveri & Co	Uttananchal	30 tonnes
National Refinery	Mumbai	30 tonnes
Royal Gold Refinery	Mumbai	30 tonnes
National India Bullion Refinery	Mumbai	30 tonnes
M D Overseas	Mumbai	30 tonnes
Kundan Industries	Uttananchal	30 tonnes
Bansal Impex	Ahmedabad	30 tonnes
Parekh Platinum	Mumbai	30 tonnes
Jalan Refinery	New Delhi	30 tonnes
Sai Refinery	New Delhi	30 tonnes
Edelweiss Metals - upcoming	Ahmedabad	70 tonnes
Rajesh Exports	Uttananchal	
		Total: 827 tonnes

India: premium benefit even if the duty gap is closed

US\$/oz



Source: Metals Focus



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Global Scrap Supply

40% loss from record high

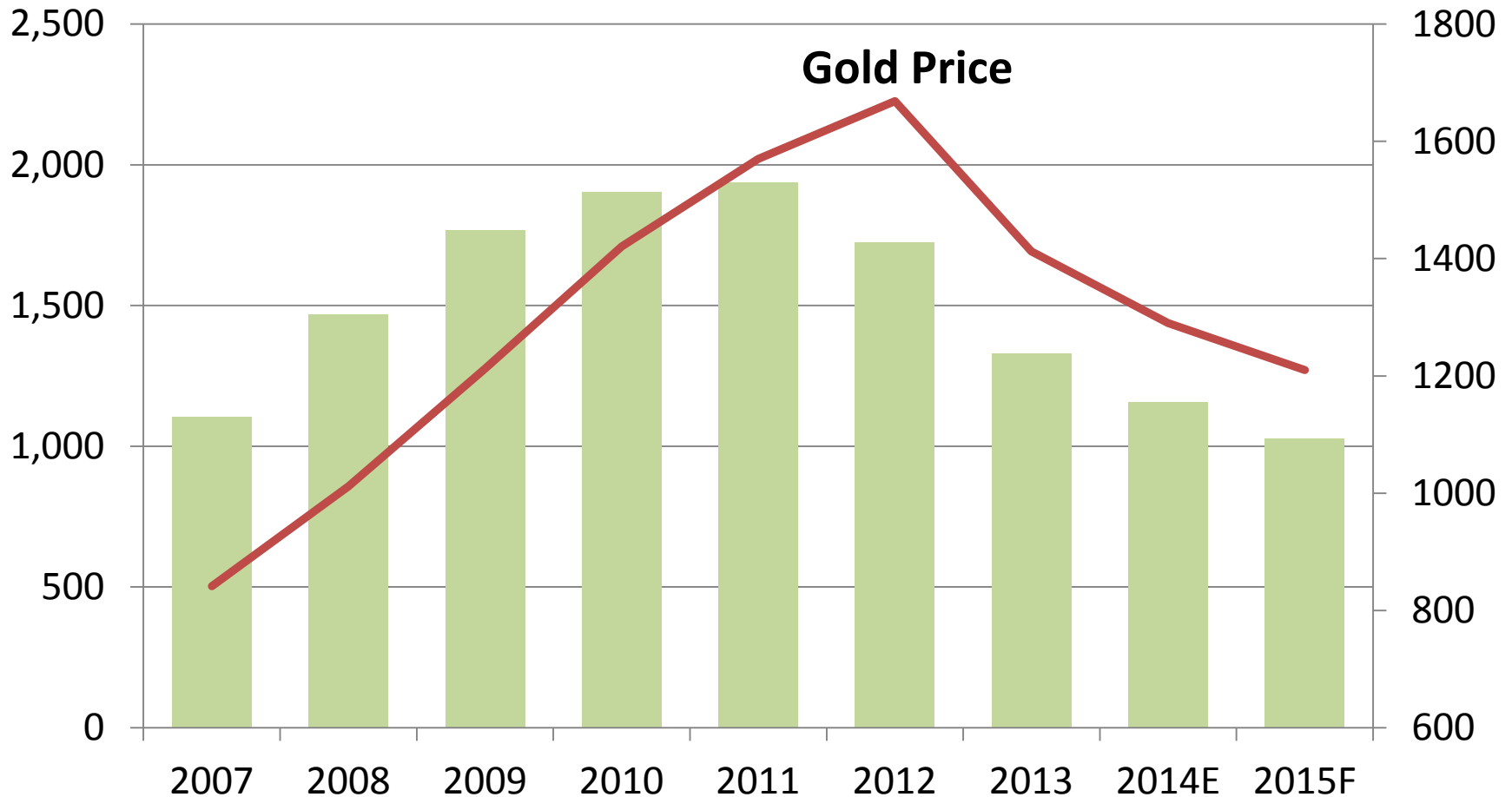
- 2014 estimate of 1,160 tonnes a shadow of the 1,940 tonnes achieved in 2011. Unlikely to turn higher in the short term
- Prices have weakened, coupled with a bearish near-term outlook
- Economic outlook improving, slowly, but no repeat of distress selling induced by 2008-09

Global Gold Jewellery Recycling

From record high to multi-year low

Tonnes

US\$/oz



Source: Metals Focus



Industrialised Markets' Scrap Supply

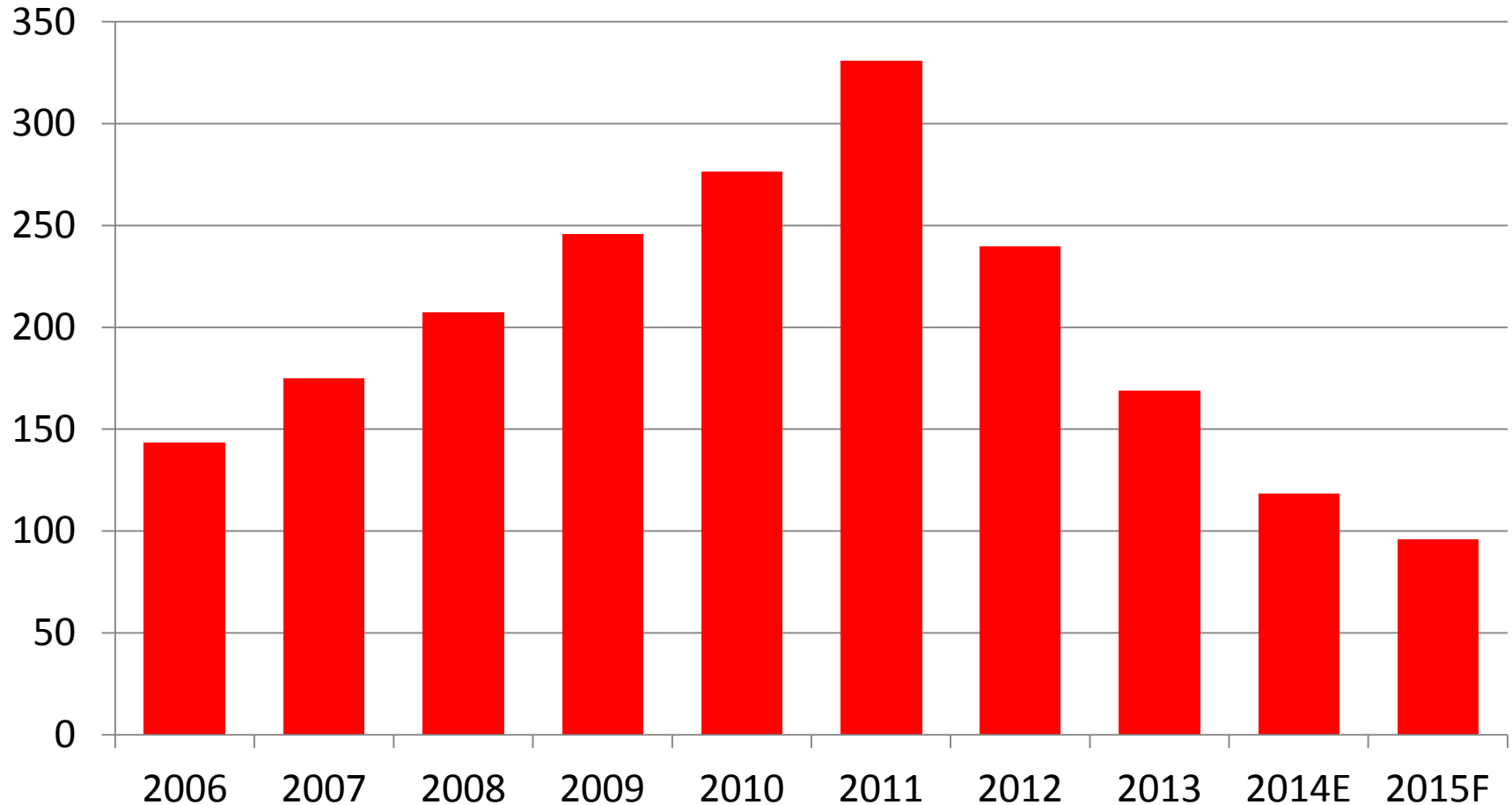
Case study: the US

- US recycling raced to a record high in 2011 of 320 tonnes
- Industry benefited from:
 - increasingly high profile scrap collection infrastructure
 - High prices
 - And, most importantly, a weak economy
- Since then, as the economy has improved scrap has fallen sharply; 2014 on course to finish below 120 tonnes
- Will this mark the end of the downturn?

US Gold Jewellery recycling

From record high to a slump, falling below pre-recession levels

Tonnes



Source: Metals Focus

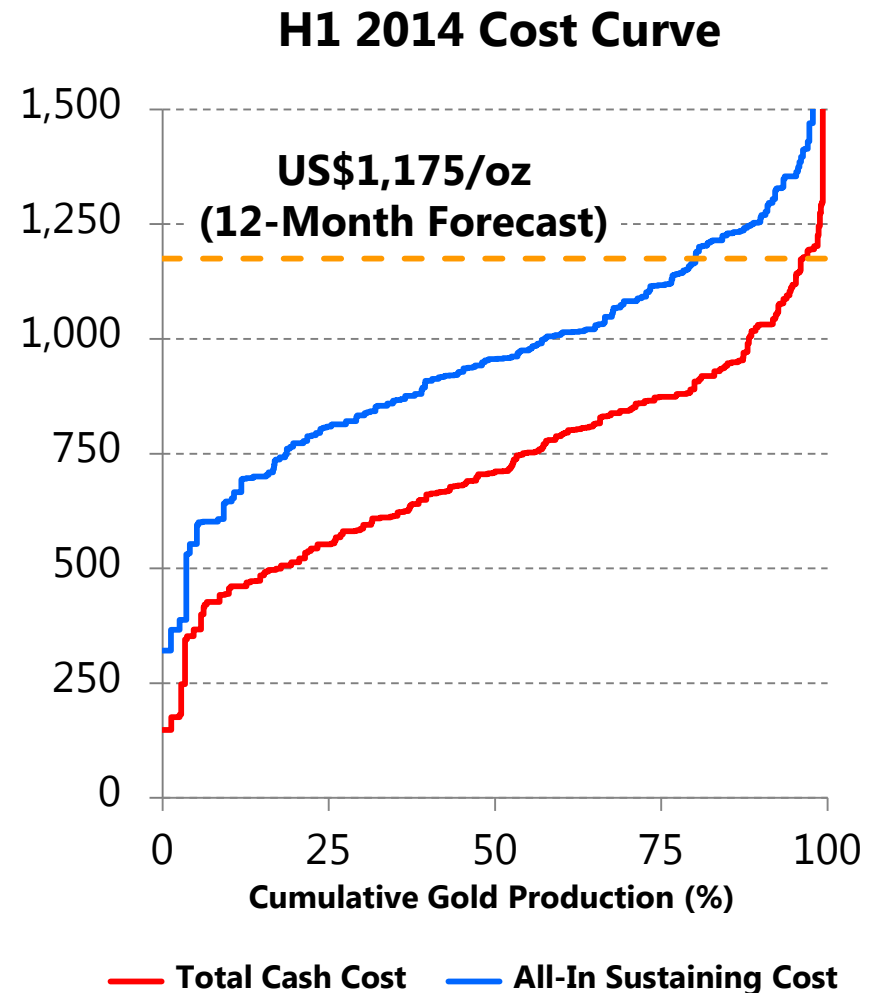


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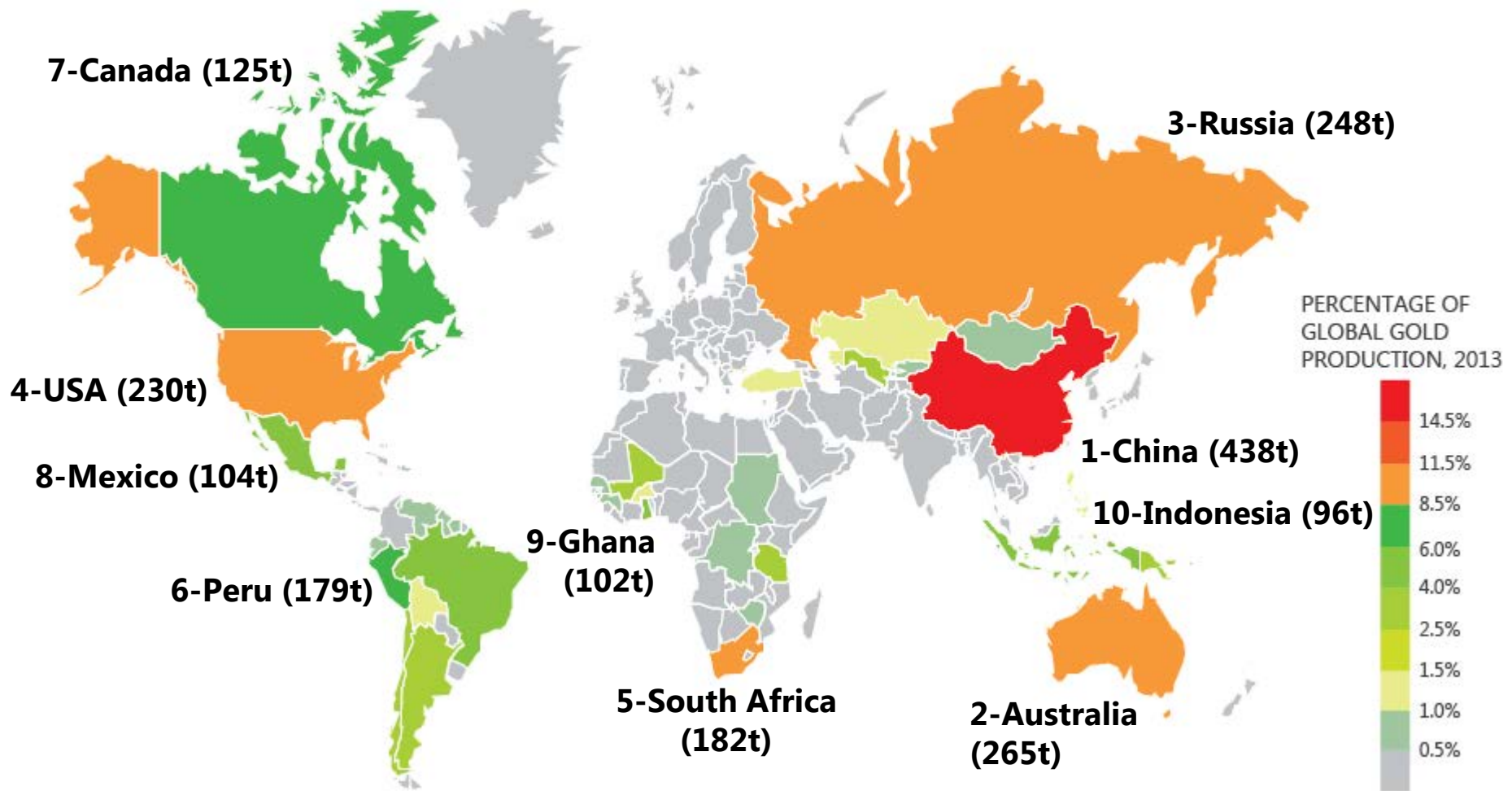
State of the gold mining industry

- 20% of the curve is loss making on an all-in sustaining basis, representing some 280t of annualised production.
- However, less than 5% are on a total cash cost basis.
- Potential for further cost reductions, helped by the depreciation of many producer currencies.
- Following a 2% gain this year, near-term gold mine supply expected to plateau, before declining in 2017.



Source: Metals Focus Gold Mine Cost Service

Global gold production in 2013

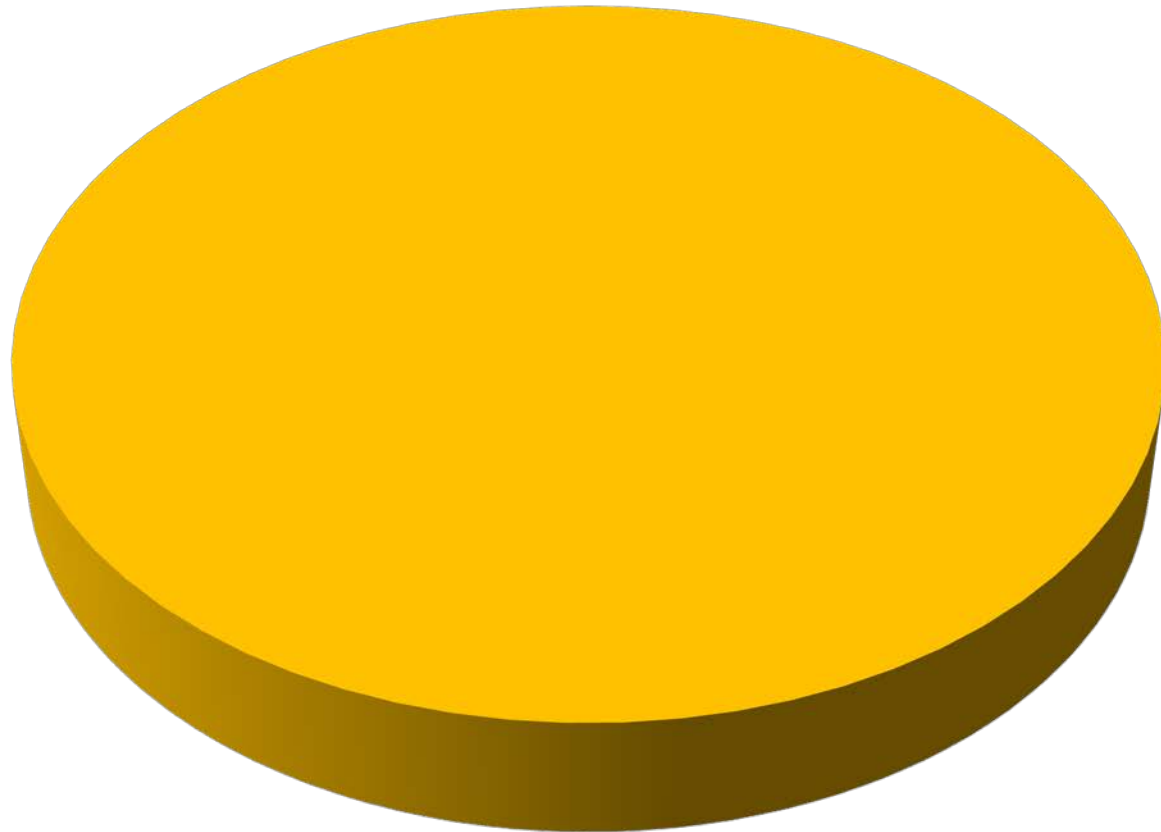


Source: Metals Focus

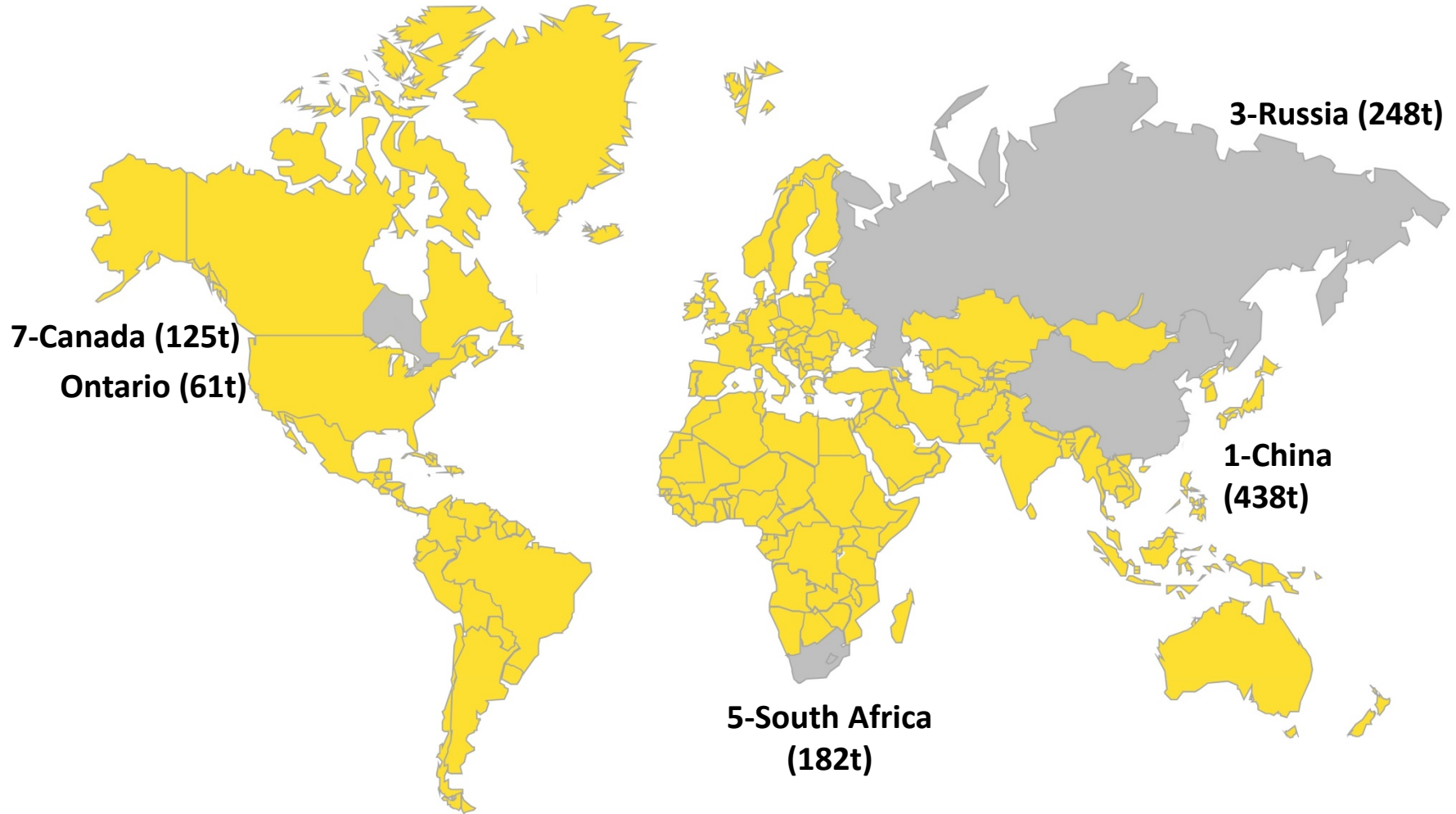
Breakdown of global gold production

How much doré is "readily" available?

Global Gold Mine Supply; +3,000 t/yr



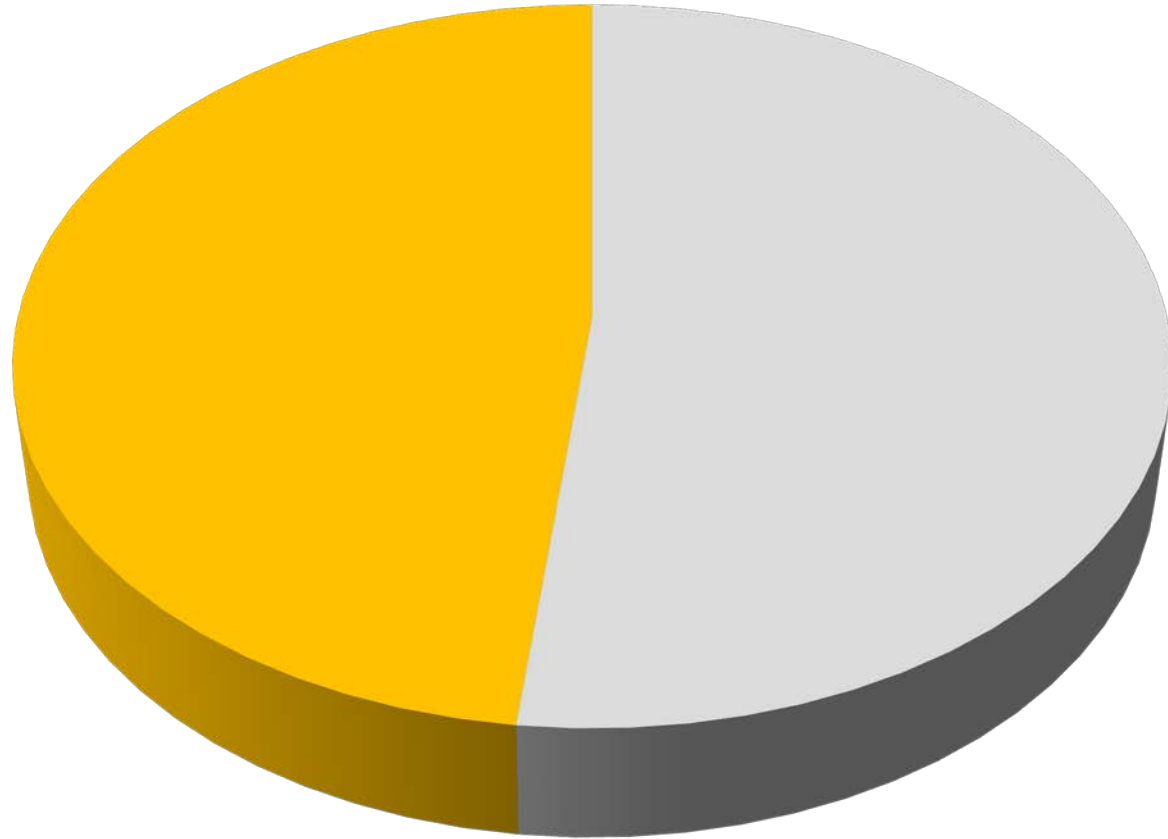
Analysis of captive markets



Source: Metals Focus

Breakdown of global gold production

How much doré is "readily" available?

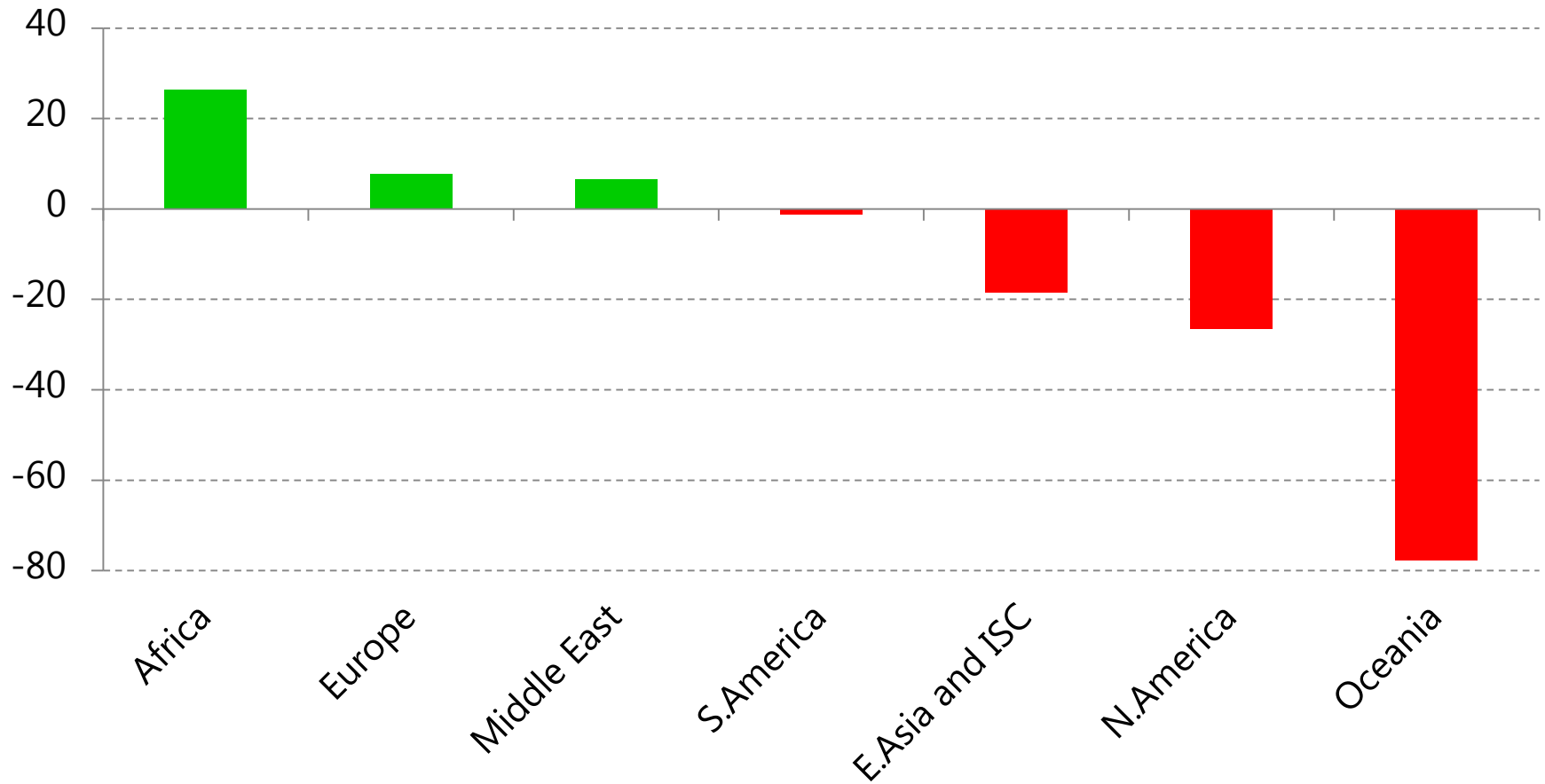


~1,450t/yr, or under 50% of global gold mine supply

Outlook for gold doré supply

Global gold doré production capacity, winners & losers, 2013 vs 2018F

Tonnes



Source: Metals Focus Doré Flows Service, November 2014



Outlook for gold doré supply

SOUTH AMERICA



- **Argentina's** production boosted by the ramp-up of Cerro Negro (Goldcorp), which poured first gold in July 2014.
- In **Brazil**, Yamana Gold brought two mines into production last year (Pilar and Santa Luz), as did Carpathian Gold with Riacho dos Machados. A number of project have the potential to start in the next 5 years.
- Newmont has begun construction of Merian in **Suriname**, and the mine is scheduled to enter production in late-2016, with a potential for 300-500koz/yr.
- **Guyana** Goldfields' Aurora project in construction. First pour expected in H1 2015. Currently expected to produce 125-300koz/yr.

Outlook for gold doré supply

AFRICA



- **Democratic Republic of the Congo** has seen three mines enter production in under two years. Twangiza and Namoya (Banro Corporation) and Kibali (JV: Randgold-AngloGold Ashanti). At full capacity, +600koz/yr of consolidated production.
- West Africa has seen a swathe of new projects over the past five years. And the region remains highly prospective.
- True Gold (Karma) and Roxgold (Yaramoko) have both recently secured funding to construct projects in **Burkina Faso**.
- There are currently a handful of other greenfield projects in West Africa with the potential to start up over the next 5 years.

Outlook for gold doré supply

NORTH AMERICA



- Growth in Canada partially offset by declines in the USA; Mexico maintaining production levels following a decade of sustained growth.
- Along with China, Canada has some of the best potential gold production growth of any country.
- Outside of Ontario, **Canadian** production to benefit from the ramp-up of several mines that have recently entered production, such as Canadian Malartic and Westwood. In addition, Éléonore poured first gold in October, and at full capacity (H1 18) will produce 575-625koz/yr. There are also a swathe of development projects with the potential to enter production in the next five years.

The Changing Dynamics of Gold Supply

- Refining capacity continues to rise, India the most recent and arguably a high profile example of this trend
- Competition also intensifying in the gold refining industry because of:
 - - Lack of distress selling and weak gold prices resulting in a structural decline in global recycling
 - - Global mine supply peaking this year, then plateaus before starting to drift lower (most likely in 2017). Despite this, some exciting opportunities, especially in Africa, South America and Canada.

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