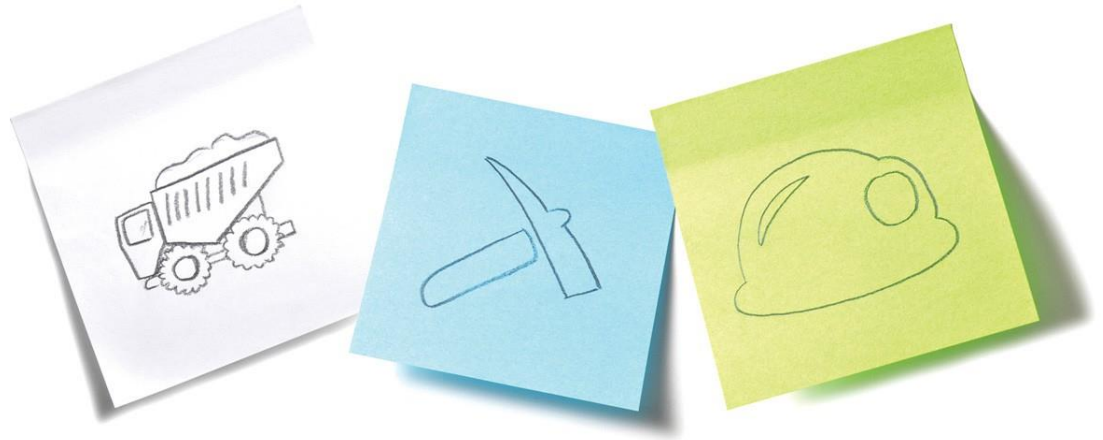
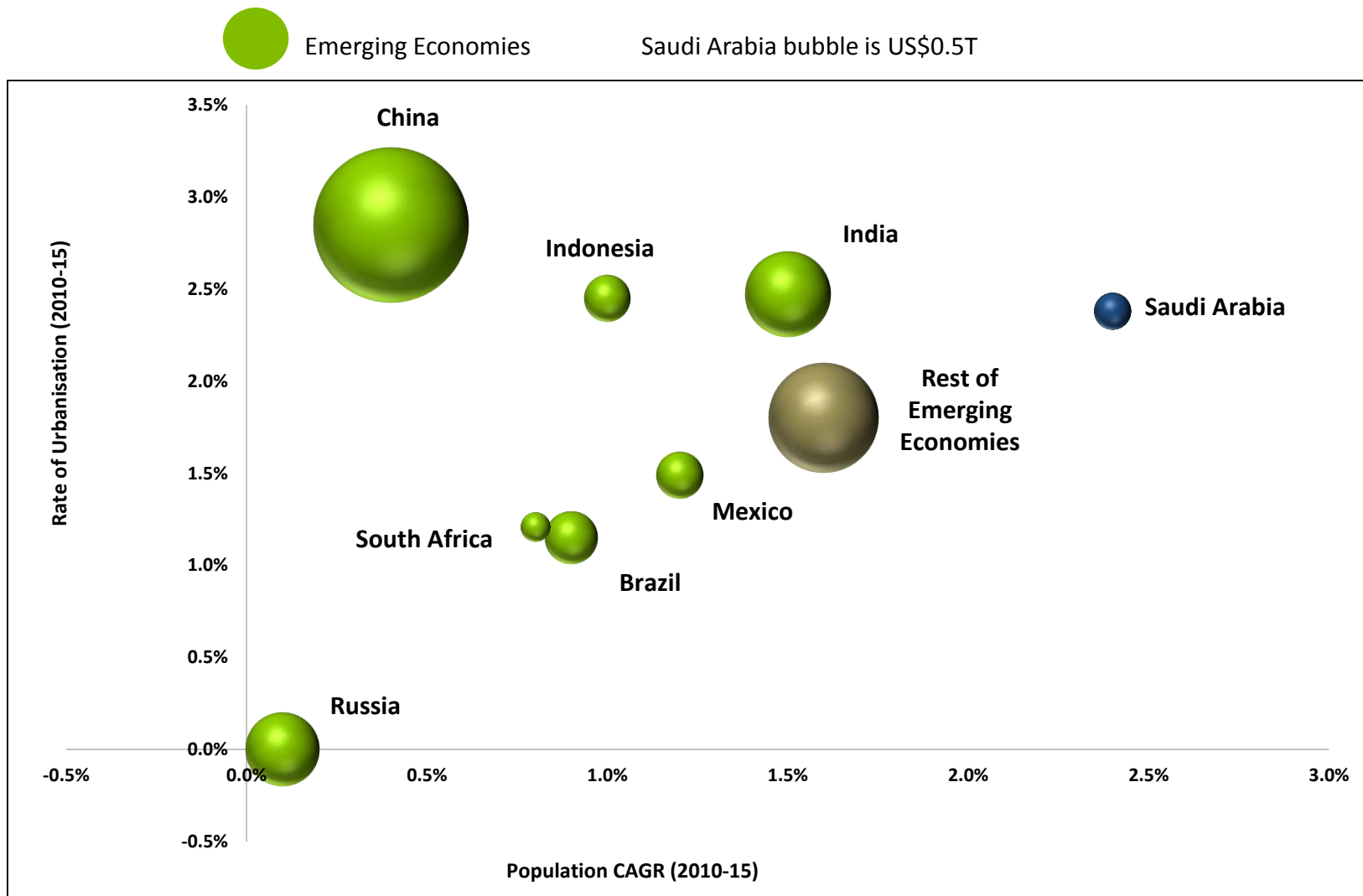


Mining – infrastructure for greater competitiveness



Philip Hopwood
Global Mining Leader
Sept 2015

Emerging market infrastructure investment...a positive growth catalyst?

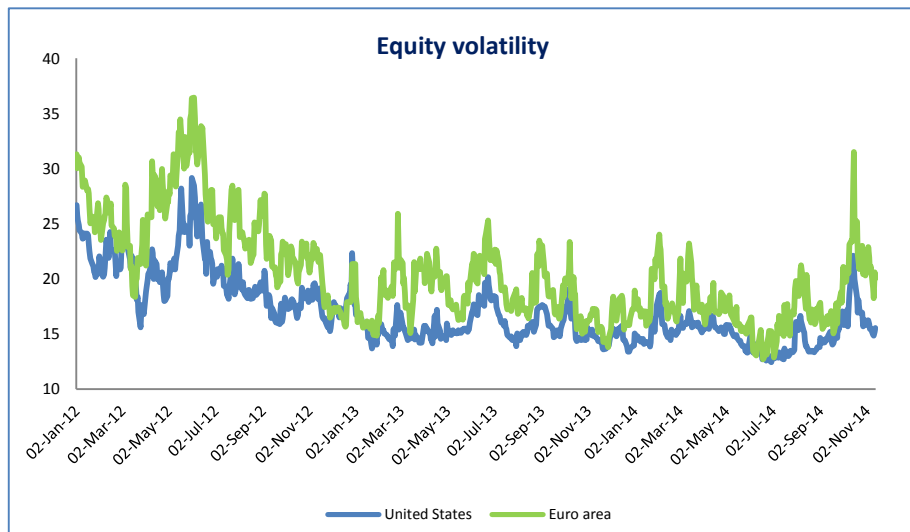


Source: Statista, EIU, Central Intelligence Agency

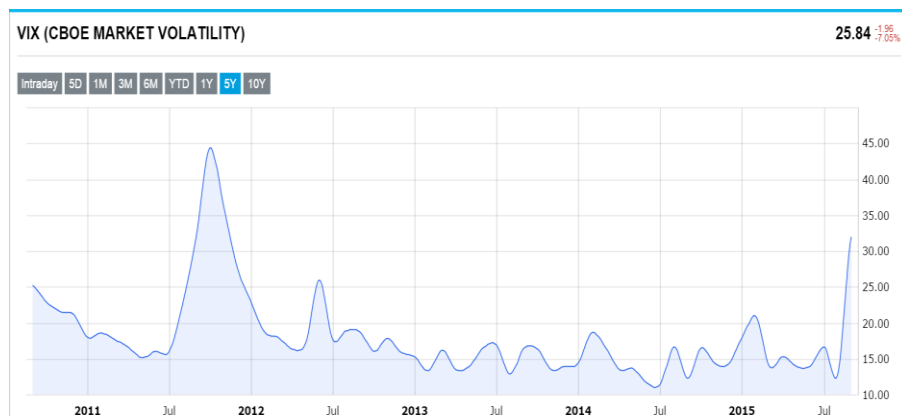
Note: Size of the bubble is infrastructure spending US\$T during 2008–17

Setting the Economic Context

Is volatility is starting to creep up?

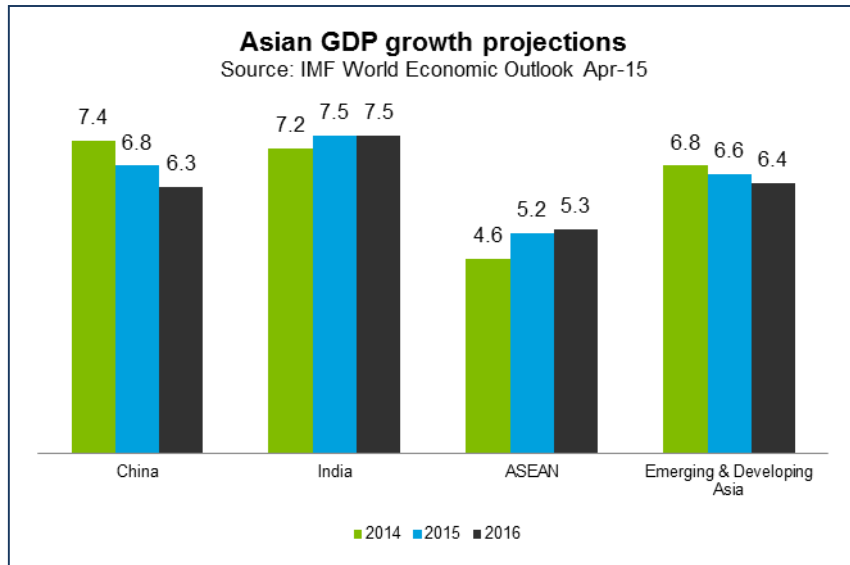


VIX Volatility Index : 5 year trend

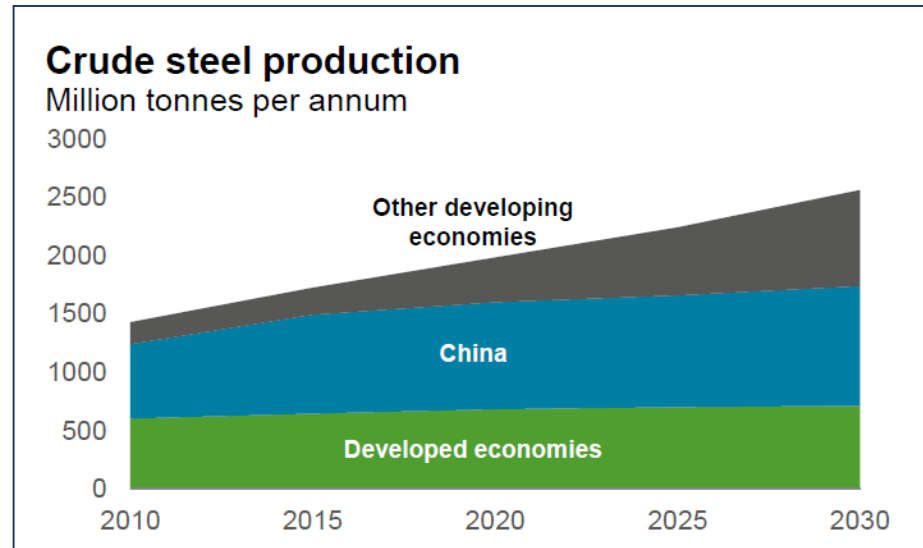


- Volatility is everywhere: geopolitical, currency crisis (Euro, Russia), economic unrest (Greece bailout talks), divergent growth outlooks (US vs. Europe), Central banks following v. different monetary policies (Fed vs. ECB and BOJ) inflated asset values (property, equities) and commodity price shocks (oil, iron ore)
- Changes in US monetary policy also expected to increase volatility: as the Fed slowly withdraws its safety net, markets typically become riskier and more volatile
- Heightened risk exposures: in a market of virtually zero interest rates, many asset owners have taken on more risk than they would normally do to compensate for low yields.

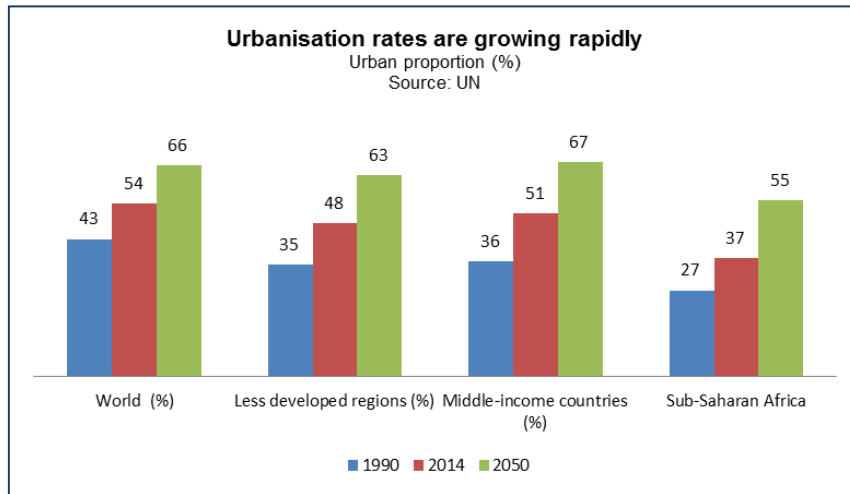
Long-term support fundamentals in place



Appetite for commodities

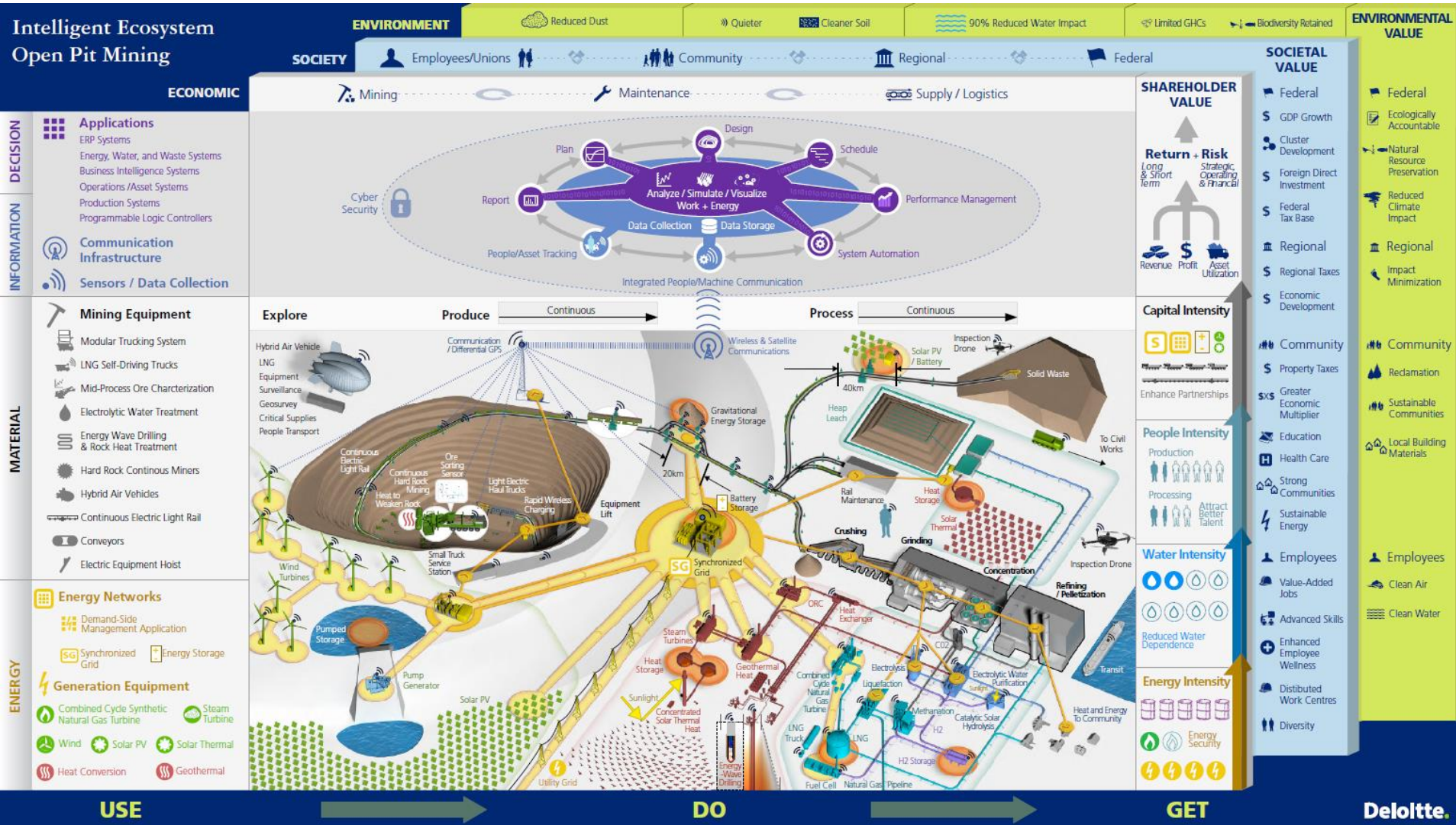


Emerging Markets urbanisation theme continues



- Urbanisation and industrialisation expected to continue to support long-term commodity demand
- In 2014, 54% of global population living in urban areas. Expected to rise to 66% by 2050. Nearly 2.5b increase in urban population expected by 2050!
- 9% of the world's population will be living in just 41 megacities (>10m inhabitants) by 2030
- Easy to get swayed by all the negative market sentiment on China (and emerging markets), losing sight of the (still supportive) fundamentals. Chinese urbanisation rates forecast to increase from ~55% to ~65% by 2025
- Strong commodity demand expected from other emerging market economies. Rising steel output in India and ASEAN

Fully automated synchronized Mining ecosystem



Tracking the Trends

The top 10 issues mining companies will face in the coming year

1

Back to basics

The pursuit of operational excellence

2

Innovation is the new key to survival

It's about more than just cost control

3

The new energy paradigm

Reducing project power costs

4

Dwindling project pipelines

Walking the supply/demand tightrope

5

Financing's great disappearing act

The implications reverberate across the market

6

Survival of the juniors

Navigating troubled waters

7

Seeking new skillsets

Shifting industry realities call for a new generation of talent

8

Riding the waves of geopolitical uncertainty

From best guess planning to embracing uncertainty

9

Rising stakes around stakeholder engagement

Companies struggle to balance competing interests

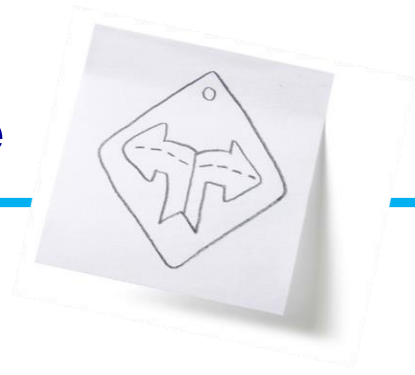
10

Engaging with government

Finding new ways to communicate and collaborate

10 Engaging with government

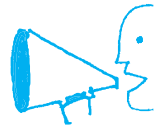
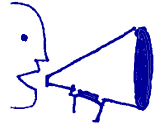
Finding new ways to communicate and collaborate



Both miners and governments should work together to appreciate each other's motivations and constraints

Governments often fail to appreciate the drivers of mining investment...

Emerging market demand	Commodity prices
Declining ore grades	Operating and capital costs
Scale and diversity	Infrastructure and regulatory constraints
Reserves replacement	Cost and availability of finance



...and miners often underestimate the issues impacting governments

Votes	Employment
Infrastructure	First Nations
Federal/Provincial	Social License
Electoral Commitments	Media





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