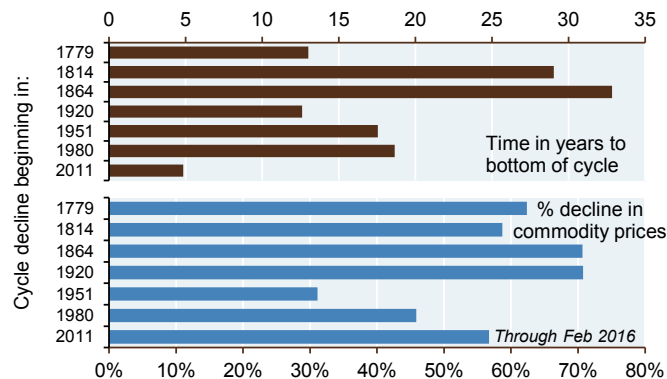




[I] How far along in the commodity super-cycle, and is the oil bounce sustainable?

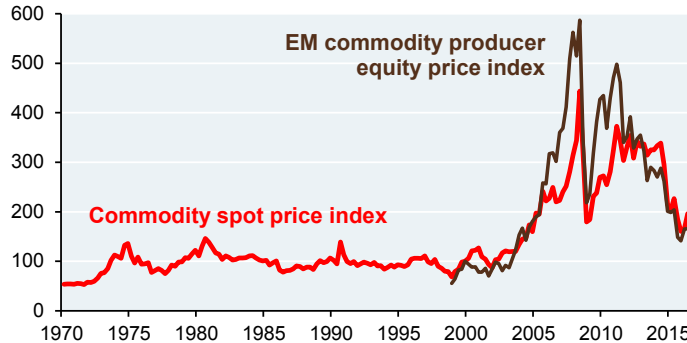
Mary Erdoes (head of our Asset Management business) showed me data from Paul Tudor Jones dating back to the 1700s. Tudor’s data shows how commodity super-cycles generally took from 15 to 30 years to bottom after the peak. The implication: there’s a long way to go before the current commodity super-cycle ends, since we are only 4-5 years into the process. But as we first wrote in February, commodity prices generally declined by 50%-70% in prior super-cycles. In that regard, a lot of damage has already been done: by February 2016, commodity prices had already declined by 55% from their peak. For investors, I think “price” is more important than “time” when thinking about where we are in this cycle.

The collapse in commodity super-cycles since 1779



Source: Tudor Investment Corporation, Bloomberg. February 29, 2016.

EM commodity producer equities and commodity spot prices, Index level (Dec. 1999 = 100)

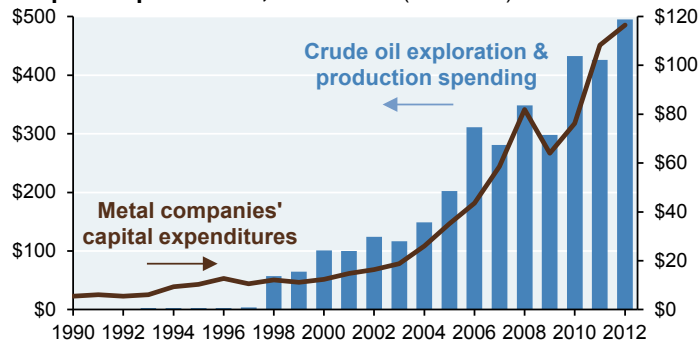


Source: S&P, MSCI, Bloomberg. June 14, 2016.

To be clear, this commodity super-cycle was a huge one. The 3rd chart shows the \$3.6 trillion spent on oil exploration and mining since 2004 when the super-cycle began. The latest reports suggest that the copper market may be oversupplied for another 5 years. But as usual, producers of copper, nickel, zinc and aluminum have responded with 35%-65% cuts to capital spending. Given long lead times, the impact of these capex cuts will likely be felt in *supply* terms in a few years. Typically, *price* responses happen sooner.

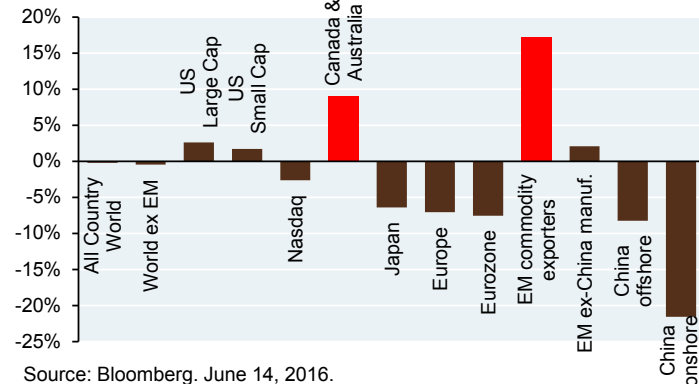
As a sign that investment consequences of the commodity unwind are in their later stages, consider the YTD performance of global equity markets. Emerging markets commodity exporters are leading, followed by commodity-rich Canada and Australia. All things considered, the period from 2011-2014 was the time to position for the commodity super-cycle collapse; now, we believe it’s more about sifting through rubble for long-term opportunities.

Global crude oil exploration & production and mining: capital expenditures, USD billions (both axes)



Source: World Bank. June 2015.

YTD total returns in USD on major equity markets/regions

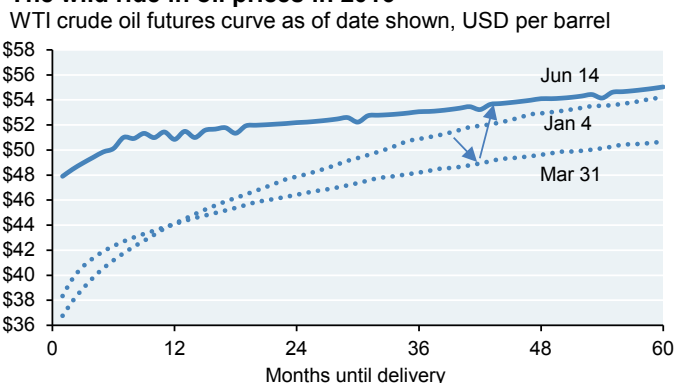


Source: Bloomberg. June 14, 2016.



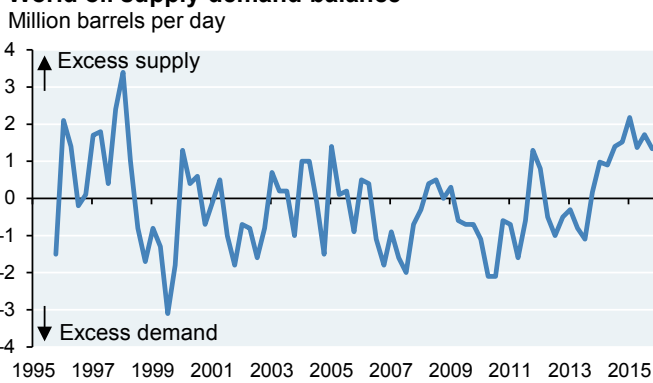
Is the oil bounce sustainable? Oil prices have risen sharply in 2016, particularly at the short end of the curve. Is the bounce for real? We think it is. While the world is still awash in supply (2nd chart), there has been an abrupt 35%-40% decline in global oil capital spending (3rd chart) which will likely affect future supply. The 75%+ drop in the US rig count is another sign of this phenomenon. Capex declines are primarily taking place outside OPEC, where average field decline rates are expected to rise back to 5% per year⁶. Furthermore, oil investors were positioned very bearishly in early 2016, setting the stage for rumors about OPEC production freezes, even when unsubstantiated, to impact oil prices (4th chart).

The wild ride in oil prices in 2016



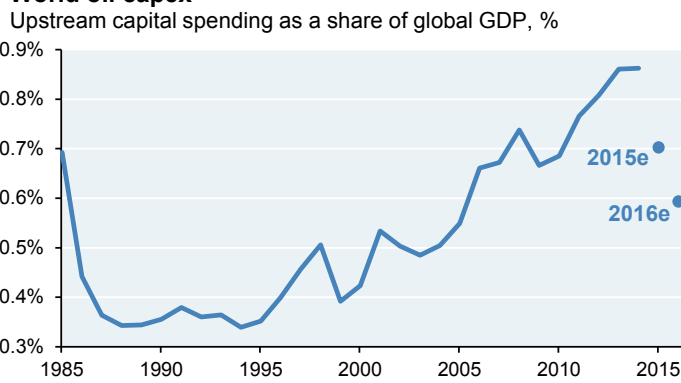
Source: Bloomberg. June 14, 2016.

World oil supply-demand balance



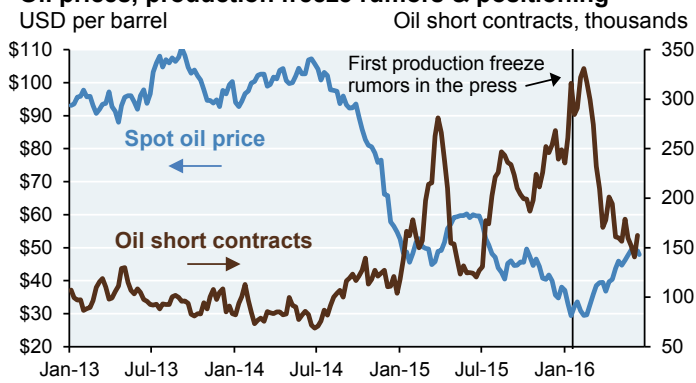
Source: IEA, Bloomberg. Q1 2016.

World oil capex



Source: Barclays, IMF. December 2015. Estimates for 2015 & 2016.

Oil prices, production freeze rumors & positioning



Source: Bloomberg, CFTC, JPMAM. June 14, 2016.

On oil demand⁷, we expect consumption to grow at its recent pace of ~1.3% per year. While consumption has declined by 10% in the OECD since 2005, it has risen by 37% outside the non-OECD⁸, primarily due to demand related to transportation. In barrel terms, the non-OECD finally overtook the OECD in 2013.

Bottom line: extrapolating oil demand growth and future supply in an environment of sharply reduced non-OPEC capital spending, the current oil glut could turn into an oil supply deficit sometime in 2017-2018, in which case the oil price rally makes sense to us.

⁶ As per Wood Mackenzie, non-OPEC **field decline rates** averaged 5%-6% per year from 2006 to 2011. Non-OPEC decline rates dropped to 3%-4% in 2013-2014 as higher oil prices made some expensive recovery techniques more economically viable. However, **Wood Mackenzie now expects field decline rates to rise back to 5% by 2017.**

⁷ **Is renewable energy growth affecting oil demand?** We doubt it. A research firm we subscribe to wrote in 2015 that reasons for lower oil prices include “technological advances that are rapidly improving the economics of solar, wind and battery power.” Really? If so, there would need to be a lot of oil used for electricity generation that could be displaced by renewable energy, or rapid electric car growth. However, oil used for electricity is just 5%-6% of global oil production (having declined sharply in the 1980s and 1990s), and EV growth is very slow (see page 7).

⁸ While **Chinese** demand for coal and other commodities declined in 2015, Chinese oil demand grew at 5.7% in 2015 and rose 3% y/y in Q1 2016. While heavy industry and construction activity have fallen, car sales are rising.