Metals Market Outlook—2Q2018 Update

POLICY RISKS STOKE ALREADY TIGHT CONDITIONS

A deeper look at our metals outlook released in the Q2 Scotiabank Global Outlook.

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Overview: Robust Global Growth Complements Tighter Metals Supply

- Industrial metals are benefiting from strong economic tailwinds as factories around the world demand more raw material inputs to satisfy booming global growth (chart 1).
- A series of sanctions, trade disputes, and environmental initiatives have further complicated metals supply chains, making it more difficult to get tonnage just as demand swells.

Copper: Temporary Fallback Sets Stage For Next Move Higher

- Copper prices are expected to grind higher over the next half-decade and our outlook sees steady supply shortfalls in each of the coming five years that grow larger as the mine supply pipeline continues to empty.

Zinc: Prices Primed For One Last Push Before New Mines Quell Rally

- Zinc continues to enjoy the strongest fundamental support within the metals complex and prices currently stand at more than ten-year highs.
- Concentrate deficits remain acute, though supply tightness is expected to ease through the latter half of 2018 as we begin to see recently higher prices finally entice more mine supply onto the market.

Nickel: Much Needed Supply Deficits Reducing Excess Stocks

- The nickel market has entered a period of chronic supply deficit after a decade of surplus and inventories have fallen by more than 30% since early 2016.
- Inventories remain very high relative to base metal peers and prices are expected to only gradually trend higher as surplus stocks are drawn down.

Aluminium: Sleepy Metal Awoken by Abrupt Political Risks

- It's been an exceptionally volatile year for the aluminium market as expectations of global supply availability were jerked around by Chinese environmental run-cuts, US tariff policy, and US sanctions against Russian oligarchs.
- Despite these risks, we believe that the aluminium market will remain in mild surplus through the next half-decade.

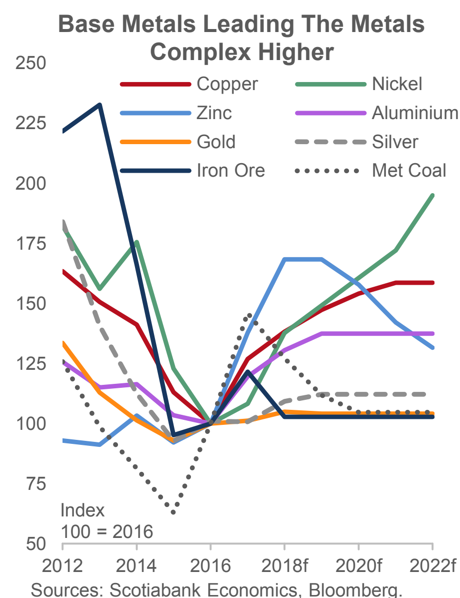
Steel Complex: Prices Easing as Chinese Construction Slows

- Bulk commodities underpinning the world's steel industry are expected to feel the broad weight of slowing Chinese construction activity as credit stimulus is withdrawn and housing prices continue to ease.

Gold & Silver: Range-Bound Between Rates and Risks

- Gold prices have remained firm as a weakening US dollar, heightened geopolitical risk, and slowing equity market performance offset the headwinds of rising global interest rates.
- We expect silver to outperform range-bound bullion given silver's dual precious/industrial nature receiving a boost from strong global economic conditions.

Chart 1



Sources: Scotiabank Economics, Bloomberg.

		'16	'17	'18f	'19f	'20f	'21f	'22f	LT
Base Metals									
Copper	USD/lb	2.21	2.80	3.10	3.25	3.40	3.50	3.50	3.00
Nickel	USD/lb	4.36	4.72	6.00	6.50	7.00	7.50	8.50	7.50
Zinc	USD/lb	0.95	1.31	1.60	1.60	1.40	1.35	1.25	1.00
Aluminium	USD/lb	0.73	0.87	0.95	1.00	1.00	1.00	1.00	1.00
Bulk Commodities									
Iron Ore*	USD/t	58	71	63	60	60	60	60	60
Met Coal**	USD/t	143	209	182	160	150	150	150	140
Precious Metals									
Gold	USD/oz	1249	1265	1310	1300	1300	1300	1300	1300
Silver	USD/oz	17.1	17.1	18.5	19.0	19.0	19.0	19.0	19.0

* 62% fe, N China; ** Premium Hard Coking Coal

OVERVIEW: GLOBAL GROWTH COMPLEMENTS TIGHTER METALS SUPPLY

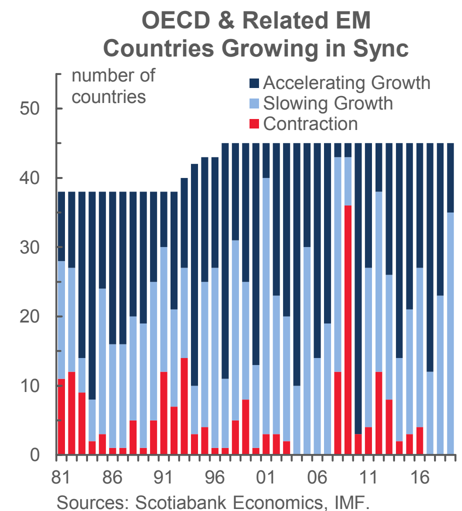
Industrial metals are benefiting from strong economic tailwinds as factories around the world demand more raw material inputs to satisfy booming global growth (chart 2). Within the broadly buoyant metals complex, base metals are expected to experience the strongest fundamental support as advanced manufacturing picks up (chart 3) and mine supply becomes increasingly tight following years of industry belt-tightening. Bulk commodities underpinning the world's steel industry are experiencing periodic bouts of strength but are expected to gradually move lower on the back of slowing Chinese construction activity and the need to rationalize higher-cost surplus supply. Finally, precious metals are expected to remain range-bound between the headwinds of rising global rates and the tailwinds of a weakening dollar, perceptions of rising geopolitical risk, and slowing equity market performance.

Metals prices have recently felt the whipsaw of global trade tensions. Sentiment toward industrial metals like copper benefitted greatly from the synchronized global growth narrative and prices moved steadily higher through 1Q18, but those same metals fell back together as fears began to grow that mounting rhetorical volleys between Washington and Beijing would bring that metals-intensive activity to a halt. Meanwhile, North American trade fears have eased, and it now appears clear that the US wants to remain in NAFTA as the Trump Administration looks willing to compromise on key demands in a rush to secure a revised NAFTA before the fall US midterm elections. President Trump's recent announcement that the United States is withdrawing from the Iran Nuclear Deal further highlights the volatile policy environment facing commodities. While the impacts are focused primarily in the energy sector, higher oil prices will inflate mining costs and have the potential to weigh on the global economic momentum currently benefitting the metals complex.

COPPER: TEMPORARY FALLBACK SETS STAGE FOR NEXT MOVE HIGHER

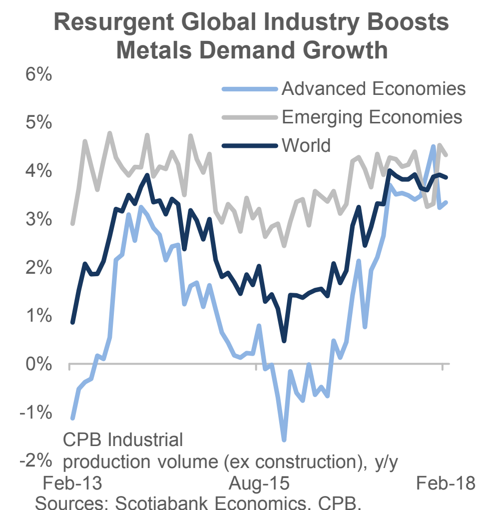
Copper prices have fallen back from their recent peak of $3.25/lb to around $3.10/lb, which we have long-viewed as a level better reflecting current market fundamentals. Copper markets are expected to register a supply deficit in 2018 for the first time since 2010, and while we believe that the market will require further years of deficits to burn through off-exchange inventories before prices rally further, **our outlook sees steady supply shortfalls in each of the next 5 years that grow larger as the mine supply pipeline continues to empty** (chart 4). Recently high prices have incentivized additional metal onto global exchanges and pushed inventories to their highest level since late-2013, spooking investors and sending net speculative positions to their lowest level since October 2016, when rising speculative interest first prompted copper to break higher. This rationalization of bullish sentiment was a necessary step before copper prices could move sustainably higher over the coming years. Copper demand growth is expected to remain robust over the coming decade, both due to near-term tailwinds associated with booming economic growth and the longer-term trend toward the copper-intensive electrification of the global economy. On the supply-side of copper's ledger, we are already beginning to see reports of emerging deficits in the copper concentrate market mirroring the initial stages of zinc's latest bull rally. **Copper prices are forecast to average $3.10/lb in 2018 and rise to $3.25 in 2019**.

Chart 2



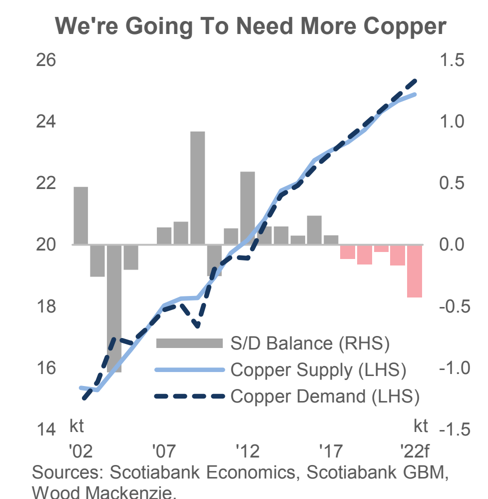
Sources: Scotiabank Economics, IMF.

Chart 3



Sources: Scotiabank Economics, CPB.

Chart 4



Sources: Scotiabank Economics, Scotiabank GBM, Wood Mackenzie.

ZINC: PRICES PRIMED FOR LAST PUSH BEFORE NEW MINES QUELL RALLY

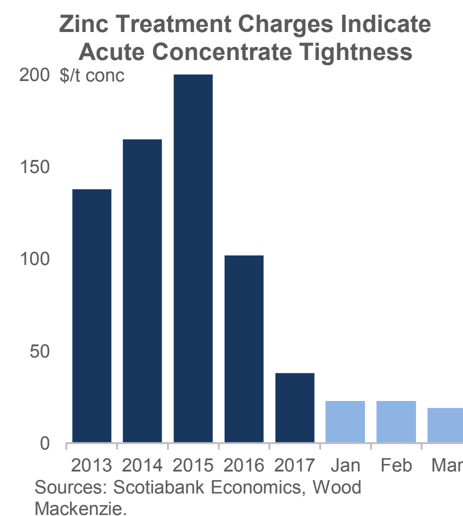
Zinc continues to enjoy the strongest fundamental support within the metals complex and prices currently stand at more than ten-year highs, with rock-bottom refinery treatment charges of $19/t as of March 2018 indicating continued and acute concentrate shortages (chart 5). The zinc market's tightness stems from a lack of new mines and the largest-ever annual reduction of global production capacity in 2016, which saw the closure of the large Century and Lisheen mines as well as the idling of much of Glencore's global zinc mines due to the weak price environment. This mine crunch sparked off the bull market that zinc current finds itself in: 1) fewer mines meant less concentrate for the market to refine into metal; 2) acute concentrate deficits depressed treatment charges as smelters fought for feedstock; 3) smelters were eventually forced to cut back metal production for lack of raw material, which 5) transmitted the concentrate shortage to the refined market; 6) metal shortages prompted price spikes, which are 7) incentivizing new mines onto the market and will eventually 8) tamp down the high prices currently enjoyed by zinc miners (chart 6). **We forecast zinc prices to average $1.60/lb in 2018–19, up from less than $0.70/lb in early-2016, before gradually falling back toward zinc's long-term incentive price of around $1.00/lb.**

We expect the current high price environment to prompt significant new zinc mine supply growth over the next half-decade, with major mines scheduled to open in each of the next few years. One thing that makes this zinc rally different than previous experience is the role of China, still the world's largest producer. In previous high-price episodes, Chinese mines were seen to be relatively elastic and able to ramp up output quickly to meet spot supply concerns. However, Beijing's ongoing environmental policy push has complicated this reaction as new rules make it more difficult for small-scale mines to operate. Indeed, the market share of small Chinese zinc mines (<10 ktpa) fell from 50% in 2015 to the low-40s in 2017 as larger, more efficient but less flexible operations displaced smaller mines that would typically adjust production to capture these higher prices. Given China's flexibility challenges, new zinc mine supply in this cycle is expected to be sourced primarily from non-Chinese jurisdictions, including Australia as well as many of Glencore's previously idled zinc mines around the world. Zinc concentrate tightness is expected to ease in the latter half of 2018, which will be confirmed by rising benchmark treatment charges. This new wave of concentrate supply is expected to strain the capacity of the global zinc smelter fleet, which is currently operating at around 85% of capacity; utilization will need to rise to nearer 95% in order to absorb anticipated concentrate supply growth. This points to the likely next step in the zinc market's rebalancing: the potential for a bottleneck in the zinc smelter sector following years of low treatment charges, which could prompt a second mini-rally in the early 2020s if additional smelter construction is delayed.

NICKEL: MUCH NEEDED SUPPLY DEFICITS REDUCING EXCESS STOCKS

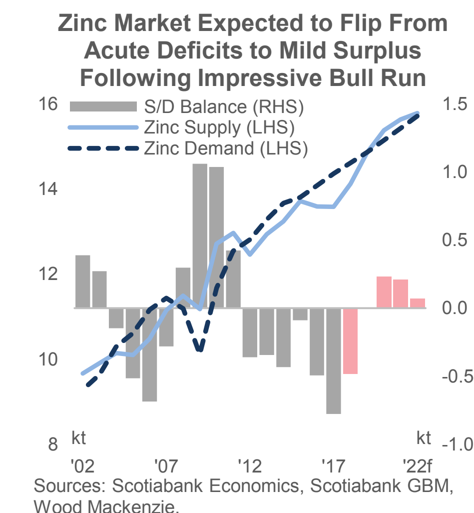
The nickel market is still trying to find its way after a decade of surplus (chart 7) pushed prices down from a peak of $25/lb in 2007 to $3.50/lb in early 2016, with prices currently trading around $6.25/lb. Nickel demand has outpaced supply since last year, but the market will require multi-year deficits to draw down the significant glut of excess metal that has been built up in the storage sheds of global exchanges. While supply shortages have reduced exchange-listed inventory levels by more than 30% since early 2016, stocks still represent more than 70 days of global nickel demand compared to sister base metals: aluminium at 13 days, copper at 11 days, and zinc at 7 days (chart 8). **Nickel prices are expected to gradually move higher over the next half decade as inventories normalize, averaging $6.00/lb in 2018 and $6.50/lb in 2019.**

Chart 5



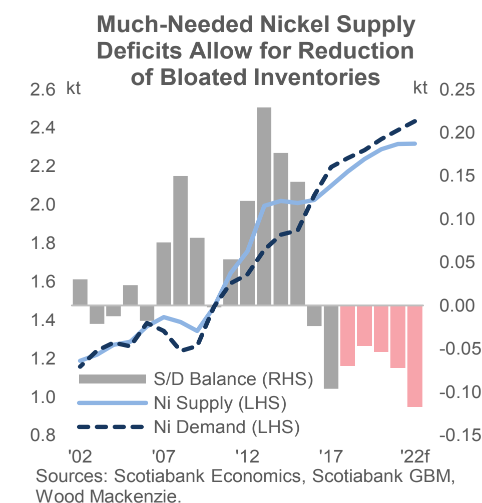
Sources: Scotiabank Economics, Wood Mackenzie.

Chart 6



Sources: Scotiabank Economics, Scotiabank GBM, Wood Mackenzie.

Chart 7



Sources: Scotiabank Economics, Scotiabank GBM, Wood Mackenzie.

Nickel prices are undeniably benefitting from a recent sentiment boost related to feverish EV forecasts, with many viewing nickel as one of the primary beneficiaries of the battery industry build out alongside other metals more commonly associated with the electric revolution like copper, cobalt, and lithium. However, while EV batteries could provide significant to future nickel demand, it is worth remembering that nickel demand over the next five years will remain governed primarily by the stainless-steel sector—stainless steel accounted for 69% of end-use nickel demand in 2018 vs only 3% for EV batteries. Overall nickel demand has been strong over the past year but we're beginning to see some early warning signs in China that could indicate softer demand conditions in the world's largest nickel consumer through the rest of the year. Stainless steel demand has been weaker than expected following the Chinese New Year and inventories are building up at domestic mills, which will likely lead to stainless run-cuts and reduce nickel demand from its primary end-use sector.

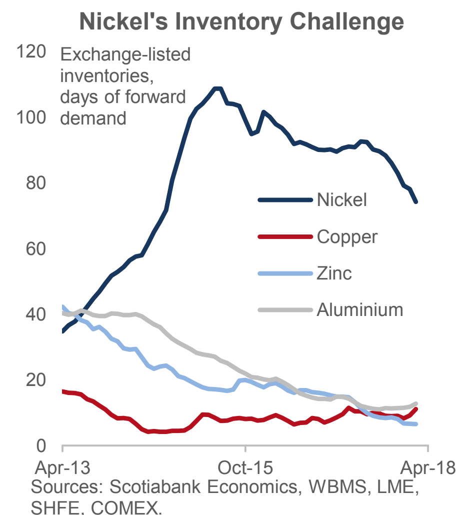
On the supply side of the ledger, nickel's near-term outlook is split between the slower-than-expected normalization of Philippine ore exports and the resumption of Indonesian shipments. In the Philippines, over half of the country's nickel mine capacity was shuttered over the past two years as part of an environmental audit by the former head of the Department of the Environment and Mining, Regina Lopez, who was a well-known environmental activist with a negative view of the country's mining industry. Lopez was succeeded by Roy Cimatu after the former failed to be confirmed by the legislature, and it was believed that the new head would ease restrictions and reverse the closures. However, after more than six months at the helm, Cimatu has disappointed the optimists and the timeline to open closed mines continues to draw out, which has kept regional ore supplies tight. While Philippine supply is tighter than expected, we continue to see more tonnage coming out of Indonesia. The country is exporting ever-more nickel ore after the unprocessed ore ban was lifted last year (chart 9), and the raw material is being accompanied by nickel pig iron (NPI) sourced from Indonesia's growing domestic processing industry. On top of realized supply trends, nickel prices have also been boosted on political risk concerns related to the recent sanctions against Russian oligarchs that have roiled the aluminium market (more below). The concern here is that the same sanctioned oligarch whose ownership in aluminium producer Rusal prompted supply concerns also owns a major stake in Norilsk Nickel, a major producer of nickel, copper, and cobalt as well as the world's largest supplier of palladium. While it is unlikely that sanctions would envelope Norilsk in similar supply-chain uncertainty, the volatile news flow surrounding sanctions-related fallout in other metals markets is expected to support nickel prices in the near term.

ALUMINIUM: SLEEPY METAL AWOKEN BY ABRUPT POLITICAL RISKS

It's been an exceptionally volatile year for the typically-sleepy aluminium market as expectations of global supply availability were jerked around by Chinese environmental run-cuts, US tariff policy, and US sanctions against Russian oligarchs. Despite numerous risks, we maintain our view that the aluminium market will remain mildly oversupplied through the next half-decade (chart 10), though prices will remain volatile until these uncertainties are resolved. **We expect benchmark LME aluminium prices to remain stable on a long-term basis around $1.00/lb**.

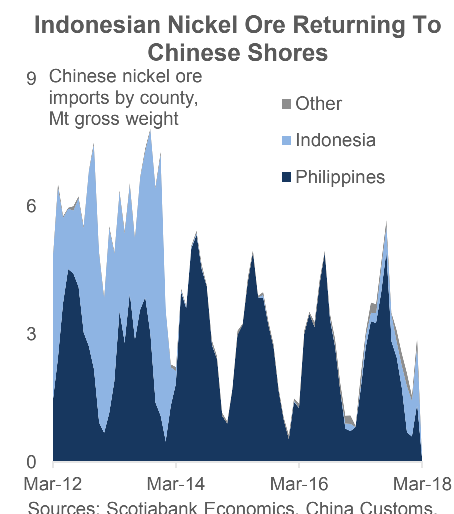
The aluminium market was long-thought to be 'broken', in that consensus expectations saw a continuation of ex-China supply deficits being satisfied by subsidized Chinese surplus, keeping prices low and relatively insensitive to price signals. That perceived Chinese surplus shrunk, however, following announcements related to Beijing's Blue Sky

Chart 8



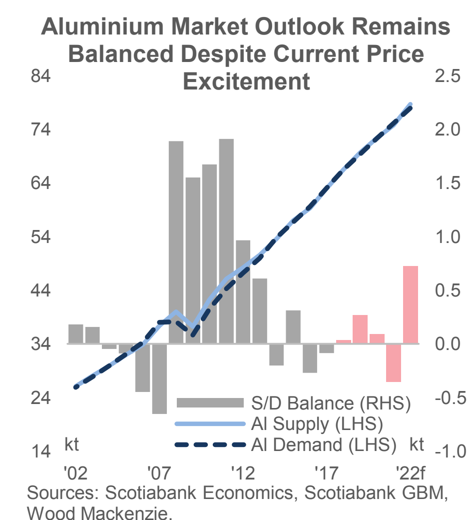
Sources: Scotiabank Economics, WBMS, LME, SHFE, COMEX.

Chart 9



Sources: Scotiabank Economics, China Customs.

Chart 10



Sources: Scotiabank Economics, Scotiabank GBM, Wood Mackenzie.

environmental policy push. These policies proposed wide-scale idling of Chinese aluminium smelting capacity in the densely populated eastern coastal regions through the winter months in an effort to combat local air pollution. Aluminium smelters are extremely power intensive, which in China means coal intensive, and the combined effects of the aluminium industry and winter heating demand pushed smog to intolerable levels. The market adapted to these supply constraints unevenly given a mixed record of environmental enforcement in China and uncertain production impacts. With winter now in the near-view mirror, production releases have indicated that enforcement was moderate—somewhere between the full enforcement that some feared and the skeptics' assumptions of little action (chart 11). The market moved through the period with only relatively minor disruption, but we expect future winter cuts to be more aggressive and thus supportive of global aluminium prices.

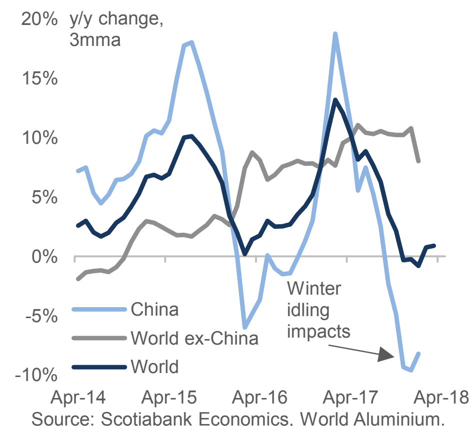
Following these structural shifts in the aluminium market, recent price volatility was prompted by changes to US trade policy and American sanctions against various Russian oligarchs. First came news that the United States would be imposing tariffs on steel (25%) and aluminium (10%), initially aimed at all countries but eventually carving out temporary exemptions for a number of allied nations (Canada, Australia, the EU, Argentina, Brazil, Mexico, South Korea). While global aluminium prices fell back with the rest of the base metals complex in March, markets responded to the tariff news by pushing up US Midwest premiums, which more than doubled from $0.08/lb (roughly 8% of the LME contract) in January to $0.21/lb (20% of LME) as of writing (chart 12). The US maintains a structural dependence on imported aluminium and the tariff burden is expected to largely fall on American aluminium consuming industries. Next came the announcement that the US Treasury would be imposing sanctions on a number of Russian oligarchs, one of whom (Oleg Deripaska) had strong connections to Rusal, the world's largest producer of both alumina and aluminium outside China, accounting for roughly 6% of both commodities' global supply (equivalent to the combined contribution of Iran and Venezuela to the global oil market). The back-and-forth concerning the possibility of Deripaska relinquishing his controlling stake in Rusal's parent company, and whether or not such a divestment would be sufficient for the US Treasury to loosen sanctions on Rusal, have pushed aluminium price volatility to 8-year highs. The situation remains in flux but news reports indicate that Deripaska and his associated companies are exploring ways to escape the current sanctions-related uncertainty.

STEEL COMPLEX: PRICES EASING AS CHINESE CONSTRUCTION SLOWS

Bulk commodities underpinning the world's steel industry are expected to feel the broad weight of slowing Chinese construction activity as credit stimulus is withdrawn and housing prices ease (chart 13). This trend was temporarily distorted by the effects of Beijing's Blue Sky environmental policies and supply-side reforms, which kept steel supply tight and shifted the domestic cost curve higher, supporting the margins of Chinese steel producers who have been happy to continue importing seaborne iron ore and coking coal (chart 14). Iron ore prices have eased to $65/t after their third mini-rally in the past 18 months, and we expect prices to remain around this level going forward. Given restrictions on steel mill throughput volume, we've seen premiums rising on higher quality material and the high price of benchmark 62% iron ore is masking the weaker market for lower quality (<60% iron) product. Environmental restrictions have been lifted with the conclusion of the Chinese heating season and domestic steel markets are expected to normalize through 2Q18, reducing the premiums currently benefitting benchmark

Chart 11

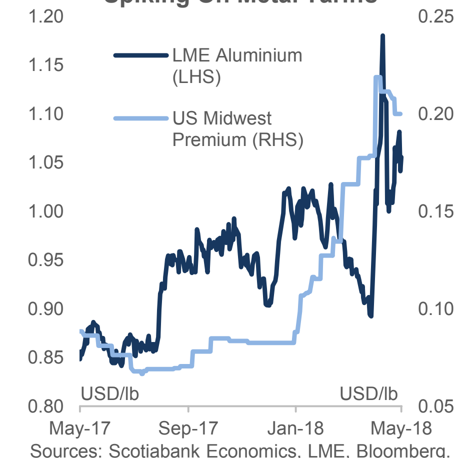
China's Blue Sky Policies Have Helped Clear Some of the Aluminium Market's Excess



Source: Scotiabank Economics, World Aluminium.

Chart 12

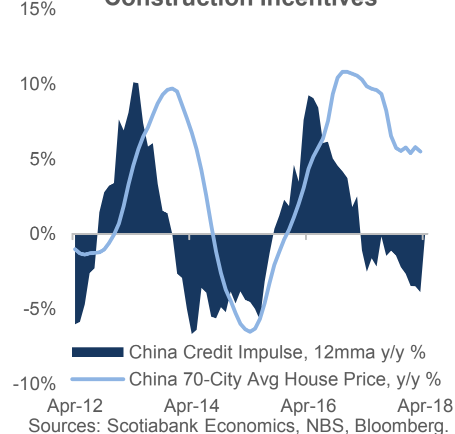
US Physical Aluminium Premia Spiking On Metal Tariffs



Sources: Scotiabank Economics, LME, Bloomberg.

Chart 13

China's Receding Credit Wave Slows Real Estate Gains, Weakens Construction Incentives



Sources: Scotiabank Economics, NBS, Bloomberg.

seaborne iron ore prices. **From an average of $71/t in 2017, we forecast that iron ore prices will ease slightly to $60/t through the 2018–19 forecast horizon**. Lower prices will be needed to maintain pressure on marginal (mostly Chinese) iron ore producers as demand wanes in line with a normalization of Chinese steel margins.

Meanwhile, **metallurgical coal prices currently sit around $175/t and are gradually falling back** from a rally that took prices above $260/t in 1Q18. Chinese mine supply issues should be gradually resolved as winter restrictions ease though 2Q18, but a wetter-than-usual spring in key coal-producing regions of Australia have kept early-year supply tight. **We anticipate that current supply tightness will abate as these issues are resolved but prices should remain relatively high at around $170/t through most of 2018 until additional supply from Australia, Mozambique, and the United States can satiate seaborne demand and bring prices back down to $150/t in 2019**. Prices are thereafter expected to gradually drift toward our long-term target of $130–140/t.

GOLD & SILVER: RANGE-BOUND BETWEEN RATES AND RISKS

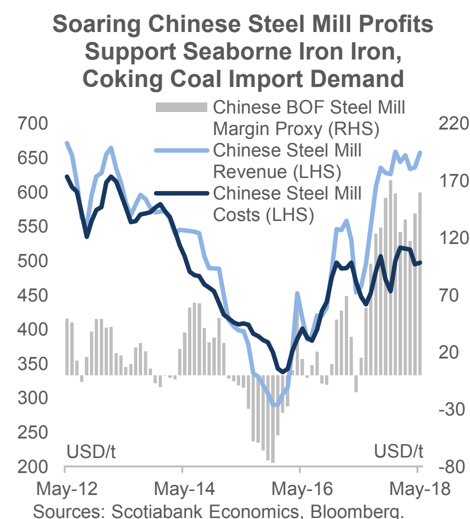
Gold prices have remained firm as a weakening US dollar, heightened geopolitical risk, and slowing equity market performance have offset the headwinds of rising global interest rates (chart 15). **We expect prices to remain range-bound and average $1,300/oz through the next half-decade**, with risks to that outlook largely dependent on the resolution of key geopolitical risk files (e.g. Iran nuclear program, North Korea denuclearization talks, etc.).

While a lot of things are working in bullion's favour, gold is most strongly and negatively correlated with real interest rates, which are rising in line with US monetary policy tightening. Investor demand for gold is inversely related to the rate of risk-free return given the higher opportunity cost of holding non-yielding bars and coins. We expect the US Federal Reserve to gradually hike benchmark interest rates to 2.5% by the end of 2019, posing steady headwinds for gold prices and ensuring that bullion needs to keep running faster just to stay still. Thankfully, there are three key impulses that are likely to help maintain gold's recent buoyancy.

First, and most broadly, we forecast that the US dollar will depreciate against major peer currencies—supporting dollar-denominated gold contracts—on the back of strong global growth prospects, rising US fiscal and current account imbalances, and a general investor shift away from USD exposure after bumping up against what we view as a long-run secular peak for the greenback. Second, headline risks continue to mount and investors are increasing gold exposure as a hedge against the still-low but seemingly rising tail risk of war—trade, nuclear, or otherwise. Finally, after an impressive two-year run beginning in early-2016, US markets fell back in January and have since traded sideways; previously strong and steady equity returns also increased the opportunity cost of holding—and thus decreased the demand for—gold, but that demand is returning as portfolios rebalance toward a more defensive stance.

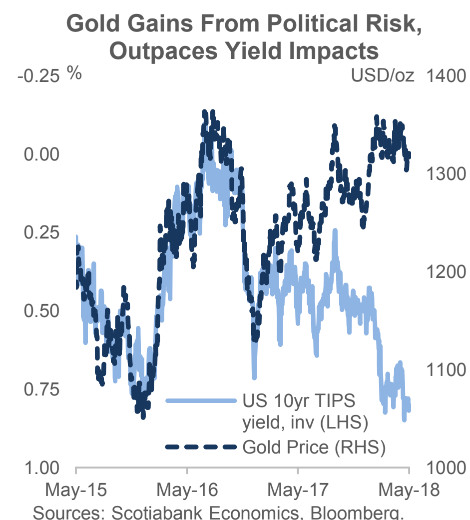
We expect silver prices to outperform range-bound bullion given robust industrial activity. The gold/silver ratio, currently sitting around 80, appears too high—and thus silver prices too weak—relative to benchmark copper contracts (chart 16), used here as a proxy for industrial metals demand. **We anticipate silver prices will rise to $19/oz in 2019** (a gold/silver ratio of around 68), reflecting the demand boost silver is expected receive relative to gold from the stronger economic climate.

Chart 14



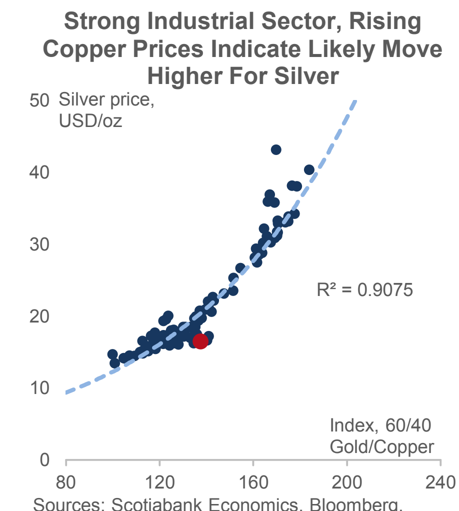
Sources: Scotiabank Economics, Bloomberg.

Chart 15



Sources: Scotiabank Economics, Bloomberg.

Chart 16



Sources: Scotiabank Economics, Bloomberg.

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