Energy & Base Metals Shine on Strong Global Demand, Slowing Supply

The Scotiabank Commodity Price Index (SCPI) retreated by 3.5% m/m in December, depressed by the marked 9.8% m/m fall in the Oil & Gas sub-index; while global oil prices fared well through the end of 2017, the SCPI tracks the prices received by Canadian commodity exporters and the value of Canadian crude decoupled from regional benchmarks after November due to acute pipeline constraints (more on this below).

****Content reproduced from our recently released quarterly *Scotiabank's Global Outlook*, which outlines the rationale for our commodities outlook (p. 47–50). Every quarter this publication will take a pause from index tracking and update readers on key changes to our forecasts. Commodity sub-index values can be found in Table 1.**

Commodity markets rang in the New Year on their front foot and virtually all industrial materials are maintaining upward momentum after cementing strong gains made over the latter half of 2017. On the supply side of the ledger, production growth is slowing as the pipeline of projects sanctioned amidst the high prices of the mid-2010s empties over the forecast horizon. But as with most coordinated rallies in the prices of raw commodities, this latest move higher was driven by demand considerations as markets anticipate booming demand for energy and metals on the back of the first synchronized global economic acceleration since the Global Financial Crisis.

The synchronized global growth narrative has supported the continued run-up in equity markets and other risk assets like commodities. And while we maintain a broadly constructive outlook on the commodities complex going forward, there are signs that recent price gains have been larger and have arrived sooner than fundamentals alone justify. This is particularly true for "Dr. Copper"—so named for the historical relationship between the metal's price and the global business cycle—where speculative commodity bets on macro growth are likely to be concentrated, with spill-over effects for the rest of the industrial metals complex. The narrative has also spilled over to the energy sector where strong demand expectations are making oil balances feel even tighter, complementing OPEC+'s supply restraint and helping lift net speculative positioning to fresh all-time highs of more than a billion paper barrels between WTI and Brent.

We anticipate tighter supply conditions for most industrial commodities in 2018 and prices will be helped higher by a depreciating dollar as well as a litany of geopolitical risks. However, we believe that the commodities complex will see some of its recent gains moderate on seasonal first-quarter demand weakness and a needed rationalization of speculative positioning before resuming a fundamentally-justified upward trajectory thereafter (chart 1).

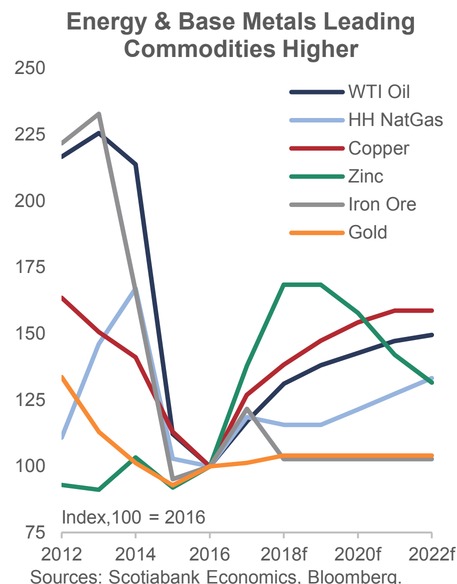
ENERGY: OIL MARKET FEELING THE SUPPLY PINCH

Oil markets ended 2017 with all the tell-tale signs of tight fundamentals and prices currently sit at three-year highs (WTI >$63/bbl). An accelerating global economy

CONTACTS

Rory Johnston
416.862.3908
Scotiabank Economics
rory.johnston@scotiabank.com

Chart 1



Sources: Scotiabank Economics, Bloomberg.

Table 1

Scotiabank Commodity Price Index

December 2017	(% change)		
	M/M	Y/Y	YTD
All Commodity*	**-3.5**	**7.5**	**19.8**
Industrials	**-4.0**	**7.1**	**22.6**
Oil & Gas	-9.8	-1.8	28.8
Metal & Minerals	1.0	7.3	20.7
Forest Products	-2.7	23.2	16.8
Agriculture	**-1.3**	**9.5**	**8.7**

	January 2007 = 100		
	2017		
	Dec	Nov	YTD avg.
All Commodity	**111.4**	**115.5**	**109.1**
Industrials	**107.8**	**112.3**	**105.1**
Oil & Gas	81.7	90.6	82.5
Metal & Minerals	123.2	121.9	119.7
Forest Products	147.4	151.6	136.5
Agriculture	**131.2**	**132.9**	**131.2**

* Weights: Oil & Gas (39.9%), Metal & Minerals (30.1%), Forest Products (14.7%), Agriculture (15.3%); Full technical note on page 8.

has kept upward pressure on already-robust demand growth, OPEC+ has managed to improve upon historic levels of production cut compliance, non-OPEC oil wells outside North America are experiencing anemic growth if they're not declining outright, and the US shale patch remains the only material source of global supply gains. While we anticipate a mild seasonal surplus in the first quarter of 2018 that could derail crude's current rally, market balances are expected to remain in deficit through most of the forecast horizon (chart 2). **Tighter market conditions have prompted us to upgrade our oil price outlook, with WTI now forecast to average $57/bbl in 2018 and $60/bbl in 2019** (up from $52/bbl and $56/bbl last quarter). On top of all the standard variables, 2018 also looks primed for geopolitical intrigue: from the largest Iranian protests since 2009 to the Venezuelan state's rapid decline into chaos, it is likely that crude prices will continue to benefit from a few dollars' worth of risk premia over the coming year.

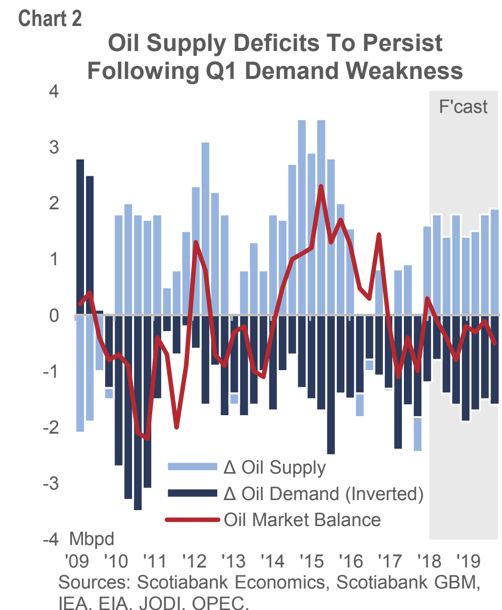
Much of the market drama is evolving on the supply side of the ledger, but the steadiest driver of the recent crude price revival has been consistently robust demand growth. Liquids consumption rose by an estimated 1.6 MMbpd in 2017 and we expect this pace to persist into 2018–19 on the back of an accelerating global macro environment. Risks to our demand outlook also appear tilted to the upside given that recent growth has been achieved almost entirely without the assistance of India, the largest growth contributor in 2016 (chart 3); a rebound in Indian consumption growth would likely be worth another 0.1–0.2 MMbpd in demand gains per year, which could help offset some of the upside risk to our US supply growth profile.

Against the backdrop of strong and steady demand growth, supply gains have been muted and volatile, up barely 0.5 MMbpd y/y in 2017 relative to consumption rising by 1.6 MMbpd. While global liquids production gains accelerated to 0.7–0.8 MMbpd by the end of the year, this growth was almost entirely a function of a rebounding US shale patch and steady Canadian oil sands expansion, which offset broadly declining non-OPEC+ output outside of North America (chart 4). We anticipate more of the same in 2018, with OPEC+ maintaining its policy of supply restraint, Canadian projects ramping up slowly, and almost the entire burden of global supply growth falling on the volatile and still uncertain US shale patch.

We expect US liquids supply to rise by roughly 1 MMbpd in 2018, but forecasts range widely between 0.8–1.2 MMbpd given continued uncertainty about the sustainability of the shale production model at prevailing price levels. On the upside, current WTI prices above $60/bbl, if maintained, would be a decisive boost for US producers after most firms spent 2017 communicating fit-for-fifty corporate strategies. On the downside, however, WTI's discount to Brent remains wide (chart 5) due to pipeline bottlenecks between Cushing and the US Gulf Coast (USGC)—depriving US producers of even higher global prices—and we are seeing early signs that productivity gains are waning as producers venture out from the sweetest spots on which many firms concentrated during the depths of the downturn. While we expect the current Cushing-USGC pipeline issue to be resolved in 1H2018, sustained growth of 1+ MMbpd will inevitably overwhelm infrastructure assets once again and WTI-Brent discounts are expected to remain structurally higher at $4–5/bbl going forward.

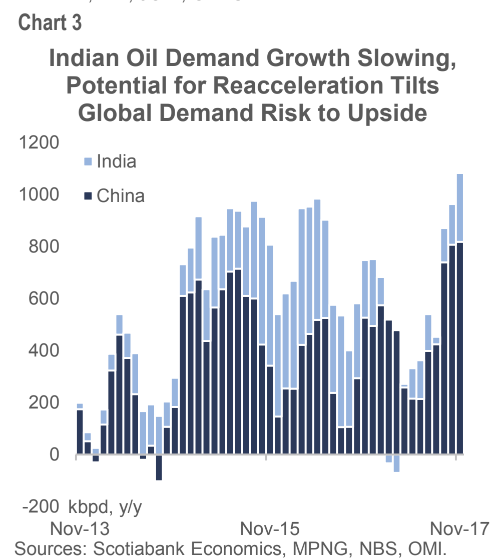
Infrastructure bottlenecks are also a long-running theme in the Canadian oil sector and are responsible for the recent blowout in the spread between WTI and WCS (Canada's primary heavy oil export benchmark) to $27/bbl from the roughly $11–12/

Chart 2



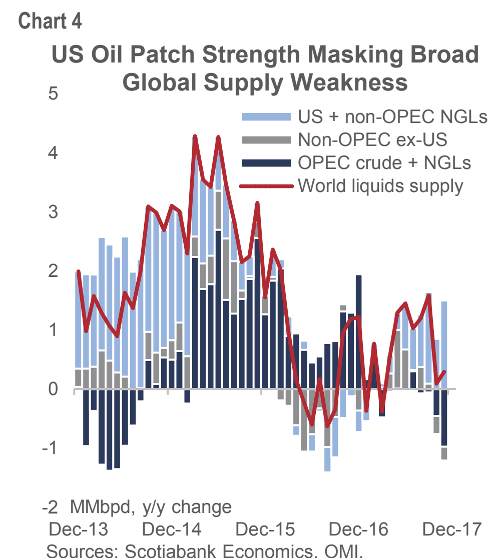
Sources: Scotiabank Economics, Scotiabank GBM, IEA, EIA, JODI, OPEC.

Chart 3



Sources: Scotiabank Economics, MPNG, NBS, OMI.

Chart 4



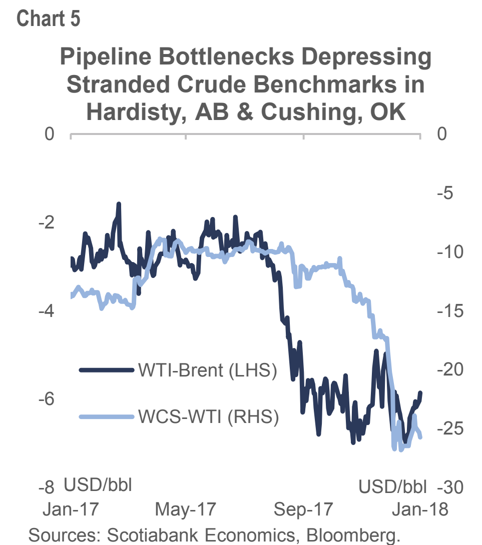
Sources: Scotiabank Economics, OMI.

bbl it averaged prior November (also chart 5). While a rising WCS discount was an anticipated development over the next two years, the November spill and subsequent two-week outage of the Keystone pipeline accelerated this dynamic. The WCS-WTI differential was forecast to widen in 2018–19 as production growth—buttressed by the ramp-up of the Fort Hills and Horizon oil sands projects—outstripped pipeline capacity and pushed barrels onto higher-priced rail to get to end markets. Even if rail wasn't able to absorb all of the additional supply, in-province storage stood in the wings as a final pressure valve that could hold those barrels until new pipelines entered service. Now, however, much of that inventory cushion has been prematurely filled by barrels that would have otherwise headed south on the Keystone pipeline during the two-week outage. We believe that discounts will fall from currently inflated levels of $25/bbl to nearer $18/bbl as crude-by-rail offtake agreements are signed given favourable economics, but will likely persist at this higher level until Line 3 enters service in 2H2019.

OPEC+ entered the year on a high note as November production data confirmed the best compliance levels yet for the production deal that took effect in January (chart 6). The compliance burden was also far more broadly shared between the major groups within the agreement, which reduces the likelihood that the deal will fall apart on accusations of freeriding. Make no mistake, our base case forecast and the continued health of the global oil market remains largely dependent on a continuation of OPEC+'s production discipline over the next 12 months, but historic compliance levels and affirming statements from the producer group have been a source of comfort for the market. OPEC+ will continue to monitor OECD commercial inventories (relative to their 5-year average level) as the key metric with which to gauge the state of the market's rebalancing and we expect a gradual return of withheld barrels by early 2019. We are likely to see initial exit communication come out of the scheduled June meeting, and the timing will likely be most dependent on the performance of US shale producers over the coming months. There is also the issue of Libya and Nigeria, which were exempt from the OPEC+ deal due to ongoing production challenges related to domestic militancy. These countries were a bearish footnote to last year's outlook given that production gains would erode some of the effect of the larger OPEC+ commitments. Today, Libya and Nigeria are another source of price optimism going into 2018: after lifting collective output by nearly 1.5 MMbpd since the summer of 2016, both producers are approaching output capacity and have assured their OPEC allies that they will not exceed last year's peak production level. Indeed, given recent production volatility and limited upside potential, Libya and Nigeria have a better chance of further tightening oil markets given the potential for renewed infrastructure attacks and output losses.

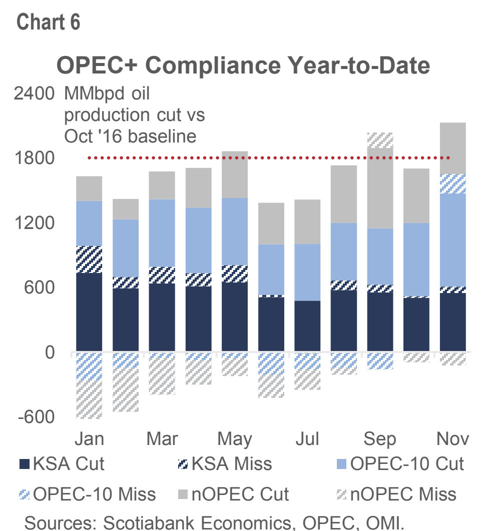
Global inventories are confirming the ongoing tightness present in supply and demand estimates. OECD commercial petroleum inventories are gradually drawing back toward their 5-year average level and US tank farms in 2017 recorded the largest annual withdraw in total petroleum stocks since the turn of the millennium. The futures market is also telegraphing spot market tightness to complement the visible inventory withdrawals. Calendar spreads have been in deep contango—a market structure where prompt prices are cheaper than contracts for future delivery, which signals surplus supplies and incentivizes inventory-building—since prices first began collapsing in late 2014, but spreads reversed course and moved decisively into backwardation in the closing quarter of 2017. Prompt WTI cargoes are currently commanding a $3/bbl premium (5%) compared to deliveries for next year as consumers scramble to secure supplies (chart 7).

Chart 5



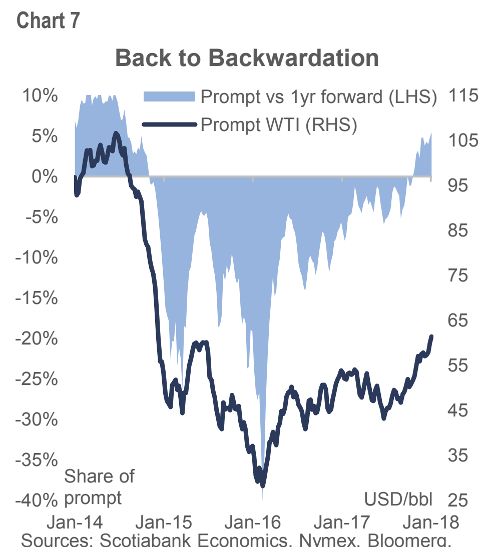
Sources: Scotiabank Economics, Bloomberg.

Chart 6



Sources: Scotiabank Economics, OPEC, OMI.

Chart 7



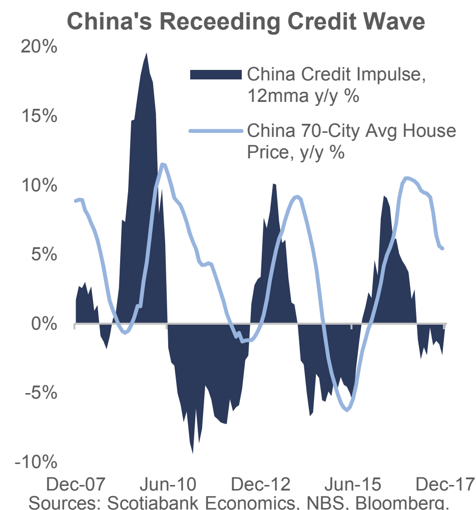
Sources: Scotiabank Economics, Nymex, Bloomberg.

METALS & MINERALS: TIGHTER BALANCES WITH ADDED MACRO SUPPORT

Metals market sentiment is closely related to the perceived health of the industrial sector and prices have rallied alongside global growth expectations. Base metals, in particular, have seen considerable gains since last summer, 20–40%, depending on the metal. Meanwhile, bulk commodities like iron ore that underpin the steel industry have seen more muted performance, down from last summer.

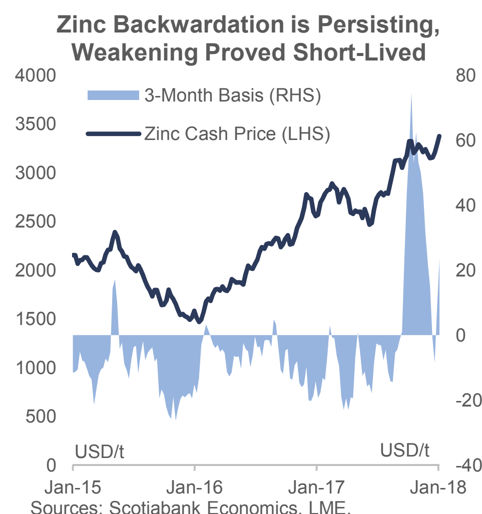
Some of the dislocation between industrial metals is due to the fact that while global growth appears to be synchronized across countries, the same cannot be said for growth across industries. Specifically, while manufacturing activity is roaring back to life in both advanced and developing economies, China's real estate and infrastructure investment outlook is slowing as Chinese authorities withdraw stimulus from the economy (chart 8). Manufacturing growth, particularly in advanced markets, is good news for base metals demand as the output of home appliances and consumer electronics rises, but slower Chinese construction activity will weigh on steel-related commodities and may temper gains in commodities like copper that are heavily leveraged against building wiring as well as electrical transmission distribution infrastructure. In addition to the broad manufacturing support enjoyed by the base metals complex, the feverish sentiment building around electric vehicles has further boosted the prospects of battery-linked metals like nickel and cobalt as well as copper given its ubiquity in all things electric.

Chart 8



Sources: Scotiabank Economics, NBS, Bloomberg.

Chart 9



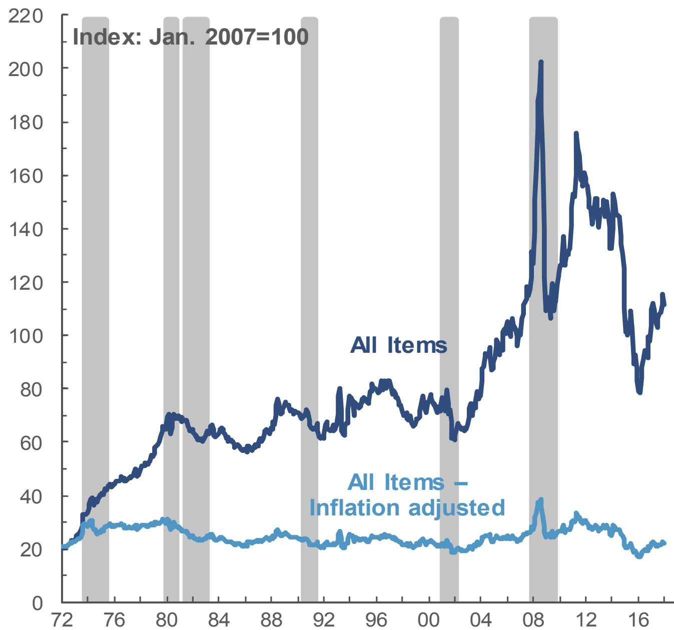
Sources: Scotiabank Economics, LME.

Within the metals complex, zinc maintains the strongest fundamentals and prices remain near their highest level in more than a decade. The arrival of acute fourth-quarter backwardation was the clearest signal yet of zinc's tightening physical market; a temporary move back toward contango in late-December proved short-lived and was likely more due to uneven positioning along the forward curve than a real loosening of spot market conditions (chart 9). Glencore has begun restarting some of the zinc mine capacity idled by the company in 2015 amid weak prices, though operations are expected to resume in a staggered manner and ramp-ups will be gradual, as previously alluded to by management statements. **We have lifted our zinc forecasts to $1.60/lb through 2018–19**, though prices are likely to jump far above those annual average levels when tightness becomes most acute later this year.

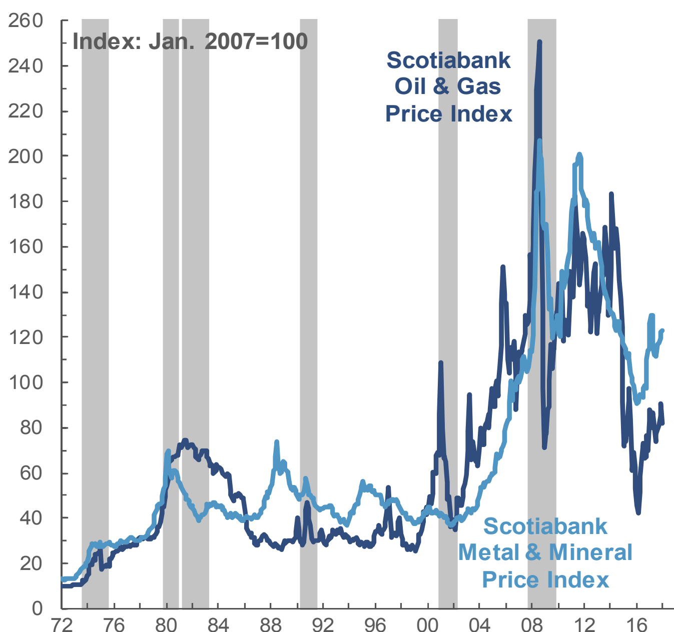
While still earlier in its rebalancing cycle than zinc, copper is the metal with the most improved fundamental outlook since our last quarterly outlook. **We now expect the red metal to average $3.05/lb in 2018 before gaining to $3.25/lb in 2019 as physical balances tighten, with near-term industry labour negotiations tipping risks to the upside**. Labour contracts underpinning more than one-fifth of global copper mine capacity in Chile and Peru are due to expire and will need to be renegotiated. This is the largest proportional supply-side labour renegotiation in almost a decade, and covers many large projects including Escondida (the world's largest copper project, 6% of global mine supply), Antamina, and Cerro Verde (~2% each). While most of these renegotiations will result in no production losses, it increases the odds that supply disruptions will be higher than average through 2018.

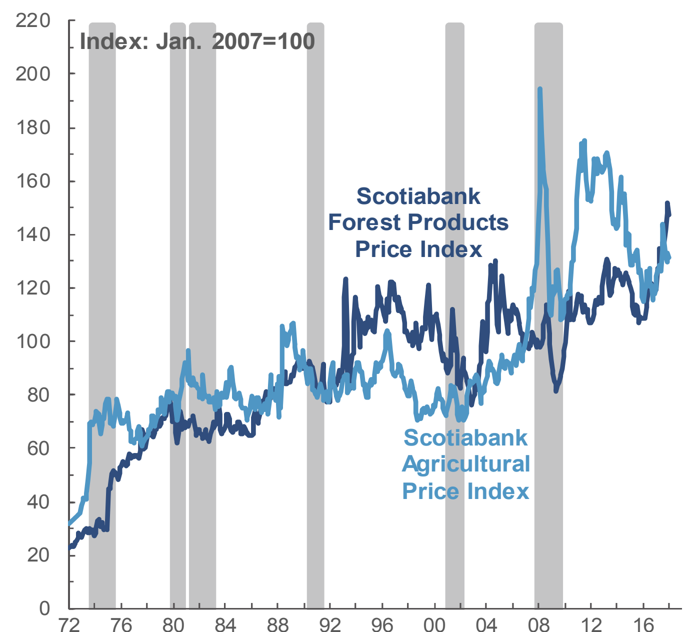
Our gold forecast remains unchanged at $1300/oz through 2018–19, caught between the headwinds of rising global interest rates and the tailwinds of a secularly depreciating US dollar.

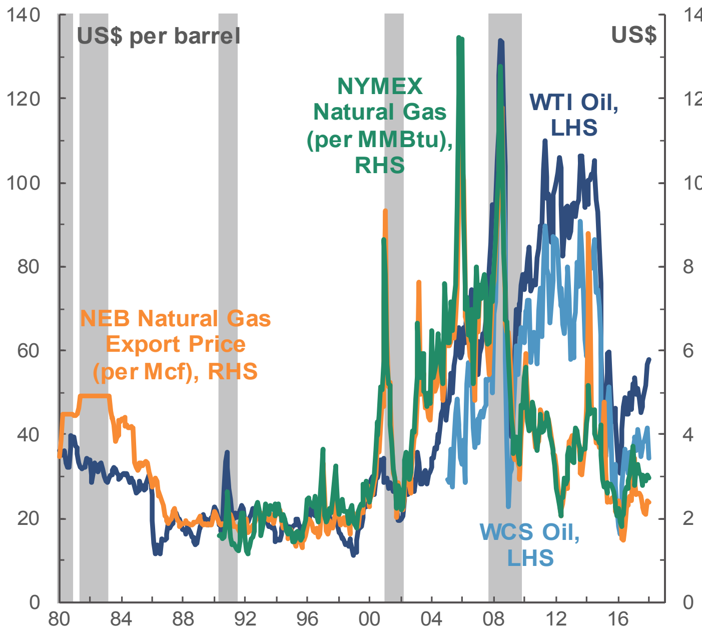
Price Outlook		2000–2016						
Oil & Gas		Monthly Avg. Low	Period Avg.	Monthly Avg. High	2018YTD	2017	2018F	2019F
Crude Oils								
West Texas Intermediate	USD/bbl	19.40	62.70	134.02	62.69	50.85	57	60
North Sea Brent Blend	USD/bbl	19.06	65.53	134.56	68.66	54.75	62	65
Natural Gas								
Nymex Henry Hub	USD/MMBtu	1.81	4.94	13.46	3.01	3.02	2.95	2.95
Metals & Minerals								
Base Metals								
Copper	USD/lb	0.62	2.35	4.48	3.23	2.80	3.05	3.25
Nickel	USD/lb	2.19	7.26	23.67	5.72	4.72	6.00	6.50
Zinc	USD/lb	0.34	0.81	2.00	1.54	1.31	1.60	1.60
Aluminium	USD/lb	0.58	0.86	1.39	1.00	0.89	0.95	1.00
Bulk Commodities								
Iron Ore	USD/t	27	108	302	77	72	60	60
Metallurgical Coal	USD/t	39	127	330	258	187	170	150
Precious Metals								
Gold	USD/toz	261	869	1,772	1,322	1,257	1,300	1,300

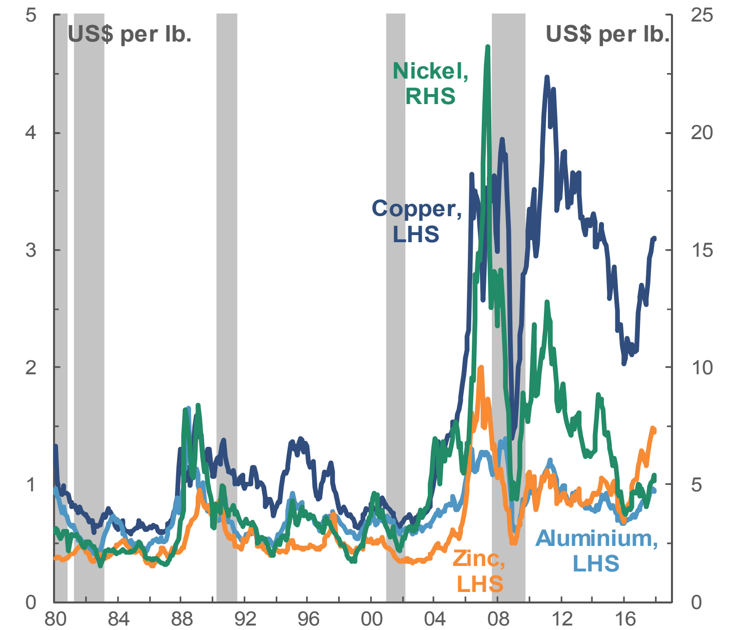

Scotiabank All Commodity Price Index
Index: Jan. 2007=100
All Items
All Items – Inflation adjusted

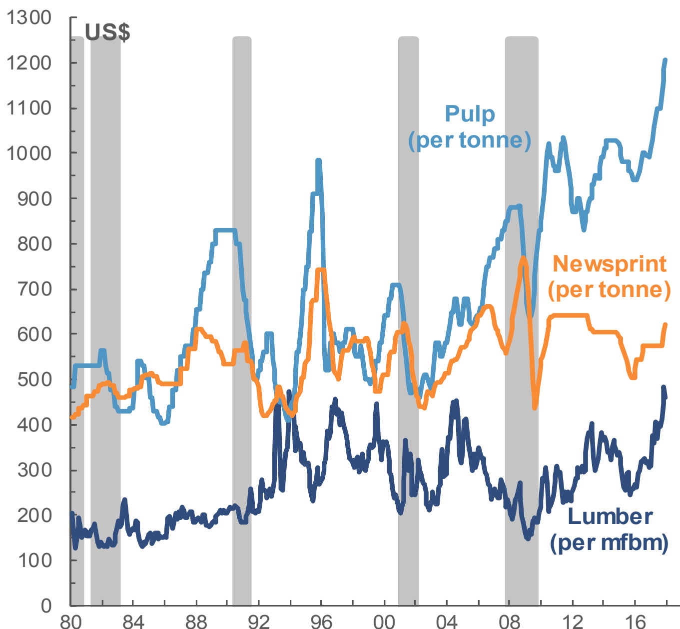
Canadian Dollar vs. Commodity Prices
Index: Jan. 2007=100
US cents
Scotiabank All Commodity Price Index, LHS
Canadian Dollar, RHS

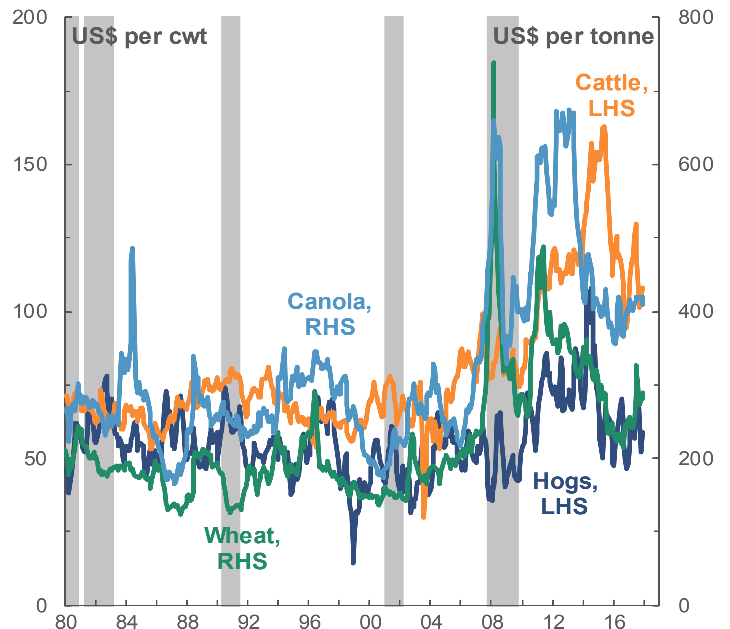

Scotiabank Oil & Gas and Metal & Mineral Indices
Index: Jan. 2007=100
Scotiabank Oil & Gas Price Index
Scotiabank Metal & Mineral Price Index


Scotiabank Forest Products & Agricultural Indices
Index: Jan. 2007=100
Scotiabank Forest Products Price Index
Scotiabank Agricultural Price Index


Oil & Gas Prices
US$ per barrel
US$
NYMEX Natural Gas (per MMBtu), RHS
WTI Oil, LHS
NEB Natural Gas Export Price (per Mcf), RHS
WCS Oil, LHS
140
120
100
80
60
40
20
0
14
12
10
8
6
4
2
0
80 84 88 92 96 00 04 08 12 16


Metals Prices
US$ per lb.
US$ per lb.
Nickel, RHS
Copper, LHS
Zinc, LHS
Aluminium, LHS
5
4
3
2
1
0
25
20
15
10
5
0
80 84 88 92 96 00 04 08 12 16


Forest Products Prices
US$
Pulp (per tonne)
Newsprint (per tonne)
Lumber (per mfbm)
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
80 84 88 92 96 00 04 08 12 16


Agricultural Prices
US$ per cwt
US$ per tonne
Cattle, LHS
Canola, RHS
Hogs, LHS
Wheat, RHS
200
150
100
50
0
800
600
400
200
0
80 84 88 92 96 00 04 08 12 16

Technical Note
Scotiabank Commodity Price Index — Principal Canadian Exports
January 2007 = 100

This Index has been designed to track the spot or transactions prices paid in U.S. dollars for key Canadian commodities and resource-based manufactured goods in export markets. The weight of each component is based upon its net export value in 2010. Prior to January 2007, the weight of each component was based on its export value in 1995-97, except for crude oil & refined petroleum products, uncoated freesheet paper and linerboard, where net exports were used. Canada imports a significant quantity of these products, and use of their export value alone would have overstated the importance in Canada's trade performance.

The following prices are included:

OIL & GAS

Crude Oil & Refined Petroleum Products (US$ per bbl) MSW light sweet crude oil at Edmonton (previously Edmonton Par crude) and Western Canadian Select heavy oil at Hardisty, Alberta; price differentials off WTI near-by futures from TMX/Shorcan Energy Brokers.

Natural Gas (US$ per mcf) Average export price quoted by the National Energy Board.

Natural Gas Liquids (NGLs – Propane, Butane, Ethane & Pentanes-Plus) (US$ per bbl), Propane at Edmonton & Sarnia.

METALS & MINERALS

Copper & Products (US$ per lb) LME official cash settlement price for grade A copper.

Zinc (US$ per lb) LME SHG cash settlement: prior to Sept 1990, U.S. producers' price for high-grade zinc delivered.

Lead (US$ per lb) LME official cash settlement price; prior to Jan. 1991, U.S. producers' price for common grade delivered.

Aluminium & Products (US$ per lb) since 1979, LME official cash settlement price.

Nickel (US$ per lb) since 1980, LME official cash settlement price.

Gold (US$ per oz) 'LBMA Gold Price PM' as of March 20, 2015.

Potash (US$ per tonne) Standard potassium chloride, spot price, FOB Vancouver.

Sulphur (US$ per tonne) Solid, spot price, FOB Vancouver.

Metallurgical Coal (US$ per tonne) Contract price for premium-grade hard coking coal, FOB Vancouver.

Iron Ore (US cents per dmtu) Spot price fines 62% Fe, CFR Qingdao, China; prior to Jan 2011, term-contract price for concentrates 66% Fe from Labrador/Quebec to Northern Europe (FOB Sept-Iles).

Uranium (US$ per lb) Spot price for U3O8.

Molybdenum (US$ per lb) since March 1992, MW dealer oxide.

Cobalt (US$ per lb) MW dealer price.

FOREST PRODUCTS

Lumber & Wood Products, Western Spruce-Pine-Fir 2x4 No.2 & Btr (US$ per mfbm) FOB mill.

Oriented Strandboard (US$ per thousand sq. ft.), U.S. North Central region, 7/16 inch.

Pulp, Bleached Northern Softwood Kraft (US$ per tonne) Transactions price, delivery USA.

Newsprint (US$ per tonne) Average transactions price, 48.8 gsm, delivery Eastern USA.

Groundwood Specialty Papers (US$ per ton) Supercalendered-A paper, 35 lb., delivery USA.

Linerboard (US$ per ton), delivery Eastern USA with zone discounts.

AGRICULTURE

Wheat & Flour (US$ per tonne), DNS No 1 14% protein Duluth, Minn; prior to April 2011 No.1 CWRS, 13.5% protein at St. Lawrence.

Barley (US$ per tonne), since Dec.1994, No.1 at Lethbridge, Alberta.

Canola & Oilseeds (US$ per tonne) No.1 Canada, in store Vancouver.

Cattle & Beef (US$ per cwt) Steers over 1,051 pounds at Toronto; from Jan 1993, Ontario average.

Hogs & Pork (US$ per cwt) 100 Index Hogs at Toronto; from Jan 1993, Ontario average.

Fish & Seafood (US$ per lb) West Coast silver coho salmon; Atlantic lobster prices; prior to 1986 cod fillets & blocks.

Scotiabank Commodity Price Index — Components And Weights

Index Components	Net Export Value In 2010 (millions of dollars)	Index Weight (per cent)
OIL & GAS INDEX	**46,537**	**39.90**
Crude Oil & Refined Products	33,231	28.49
Natural Gas & LNG	11,741	10.07
NGLs	1,565	1.34
METAL & MINERAL INDEX	**35,109**	**30.10**
Copper	3,160	2.71
Zinc	1,255	1.08
Lead	579	0.50
Aluminium	6,045	5.18
Nickel	4,246	3.64
Gold	4,678	4.01
Coal	4,757	4.08
Iron Ore	3,346	2.87
Potash	5,161	4.42
Sulphur	457	0.39
Uranium	891	0.76
Cobalt	288	0.25
Molybdenum	246	0.21
FOREST PRODUCTS INDEX	**17,081**	**14.66**
Lumber & Wood Products	4,673	4.01
OSB	812	0.70
Pulp	6,818	5.85
Newsprint	2,734	2.34
Groundwood Spec. Papers	1,971	1.69
Linerboard	87	0.07
AGRICULTURAL INDEX	**17,901**	**15.35**
Wheat & Flour	4,693	4.02
Barley & Feedgrains	1,088	0.93
Canola & Oilseeds	5,398	4.63
Cattle & Beef	1,640	1.41
Hogs & Pork	2,378	2.04
Fish & Seafood	2,704	2.32
TOTAL INDEX	**116,643**	**100.00**

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