OPEC+ Holds Steady In Vienna, Extends Oil Supply Agreement Through End-2018

- **OPEC+ agreed to a 9-month extension of its production agreement that was set to expire in March 2018, withholding roughly 1.8 Mbpd of oil supply through the end of next year. The extension was largely expected by market participants, and we anticipate a mild pullback in crude prices through the first quarter of 2018 as speculative positioning normalizes and the market enters a period of seasonal winter weakness. Oil prices are expected to resume their upward trajectory thereafter as OPEC+ supply restraint and robust demand growth keep the market in deficit despite anticipated growth in US shale production.**

- **The spread between WTI (North American) and Brent (global seaborne) oil prices has widened due to insufficient pipeline capacity between Cushing, OK and the US Gulf Coast. Rapidly growing US shale production and steadily rising Canadian shipments have overwhelmed takeaway capacity to the coast, pushing up transportation costs. We expect the WTI-Brent spread to normalize through the first half of 2018 as more pipeline capacity comes online.**

- **Base metals continue to outperform bulk commodities like iron ore on supportive global growth and a favourable fundamental outlook, though copper appears to have gotten ahead of itself and prices are expected to moderate into 2018 before resuming their upward path.**

Scotiabank's Commodity Price Index advanced 2.1% m/m in October to its highest level since February on the back of solid industrial commodity gains that more than made up for the mild decline in the prices of agricultural commodities.

OIL & GAS: OPEC+ MAINTAINS POLICY COURSE, EXTENDS CUTS THROUGH END-2018

Oil prices reached their highest level of the year ahead of the OPEC+[1] meeting on November 30, with WTI prices trading just below $60/bbl. In what turned out to be a relatively unsurprising meeting of major oil producers in Vienna, **OPEC+ announced that the group intends to hold firm on the policy course it embarked upon last November in an effort to support the flagging oil market, extending the 1.8 MMbpd oil production curbs that were set to expire in March 2018 through the end of 2018** as the ultimate supply response of US shale producers is tested by an oil price in the mid-$50s. Despite the positive news out of Vienna, **we believe that prices are a bit ahead of where they should be at this stage in the market's rebalancing process and that WTI should ease slightly through December** to the low $50s as speculative positioning normalizes and we enter a period of seasonal weakness in the first

[1] OPEC+ refers to the larger informal group of OPEC and non-OPEC producers that agreed to collectively reduce oil production by 1.8 Mbpd in a November supply deal. Output cuts were relative to October 2016 levels, with OPEC contributing 1.2 Mbpd and 10 non-OPEC countries including Russia, Kazakhstan, and Mexico agreeing to hold back the remaining 0.6 Mbpd.

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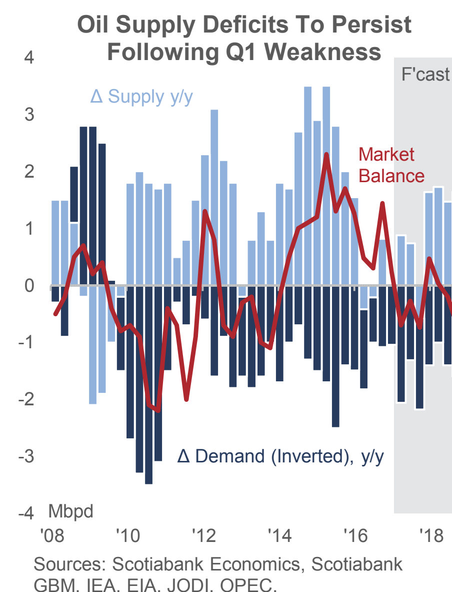
Chart 1



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

Table 1

Scotiabank Commodity Price Index

October 2017	(% change)		
	M/M	Y/Y	YTD
All Commodity*	**2.1**	**11.4**	**21.3**
Industrials	**3.0**	**12.0**	**24.8**
Oil & Gas	4.3	10.0	32.6
Metal & Minerals	0.8	7.8	23.8
Forest Products	4.7	23.4	15.0
Agriculture	**-1.7**	**8.6**	**8.2**

January 2007 = 100	2017		
	Oct	Sep	YTD avg.
All Commodity	**111.0**	**108.7**	**108.2**
Industrials	**107.6**	**104.5**	**104.0**
Oil & Gas	84.5	81.0	81.8
Metal & Minerals	118.5	117.6	119.0
Forest Products	148.0	141.4	133.9
Agriculture	**129.5**	**131.8**	**131.0**

* Weights: Oil & Gas (39.9%), Metal & Minerals (30.1%), Forest Products (14.7%), Agriculture (15.3%); Full technical note on page 7.

quarter of 2018. **We expect crude prices to resume their upward trajectory thereafter** as OPEC+'s production restraint and robust global demand growth keep market in overall deficit for the year, despite significant anticipated supply gains from US shale producers (chart 1).

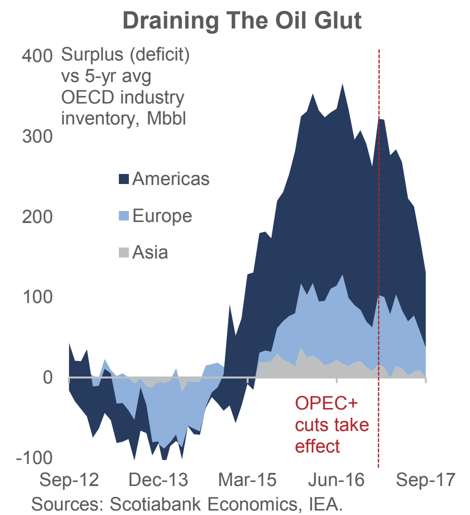
The policy of supply constraint advanced by OPEC+ since November 2016 has been largely successful, putting the market into modest deficit and reducing the inventory overhang by ~60% between January and September, as measured by OECD commercial inventories relative to their 5-year average (chart 2). Even before reaching OPEC+'s "balanced market" target of 5-year average inventory levels, prices have rallied 35% over the past 4 months to around $58/bbl (WTI) and futures have become increasingly backwardated, signaling tightness in spot markets. **A 9-month extension of the OPEC+ production agreement was generally expected by the market**, though there had been consternation from some members ahead of the meeting who feared that recent price strength would embolden US shale drilling. Those concerned voices appear to have been overruled for now, though various officials indicated that $65/bbl would be too high and that they believed that OPEC+ should take action to prevent such high sustained prices. **Members agreed to a mid-year review of the extension based on prevailing market conditions at the OPEC meeting scheduled for 21 June 2018**, but this was likely going to occur unofficially even if it wasn't explicitly stated—in a sign of early optimism, the advertised theme for that meeting in June is "Petroleum—Cooperation for a Sustainable Future." **The OPEC+ deal has thus far seen surprisingly high levels of compliance, both from OPEC members as well as associated non-OPEC producers at 98% and 67% year-to-date, respectively** (chart 3).

Russia's agreement was essential to a successful extension of the deal within the larger OPEC+ group and there was some concern that Moscow would want to allow domestic production to rise due to recently higher prices and apparent disagreement between business and political leadership. Russian energy executives reportedly opposed an extension of the deal given low domestic production costs, a project start-up timetable that will need to be adjusted if supply restraint is maintained, and concern that higher oil prices would spur significant US supply gains. However, it appears that Moscow is at least for now building on political inroads made earlier this year between OPEC producers (particularly Saudi Arabia) and Russia, which has historically been distrusted in Riyadh due to prior unreliability in collective oil agreements.

Within OPEC, the other point of interest was the treatment of Libya and Nigeria, which were exempt from the original November production deal due to domestic militancy challenges and adversely impacted oil production levels. **Libya and Nigeria—which saw production rise 500 kbpd from November 2016 to 2.6 Mbpd as of October 2017—agreed to limit production to not exceed highs reached in 2017** (roughly 2.8 Mbpd combined). Saudi Energy Minister Al-Falih said at the post-meeting press conference that he doesn't expect any production "surprises" from Libya or Nigeria in 2018 after extensive consultations with the two producers. We anticipate continued volatility in Libyan and Nigerian production, but believe that the potential for further sustained supply gains is limited.

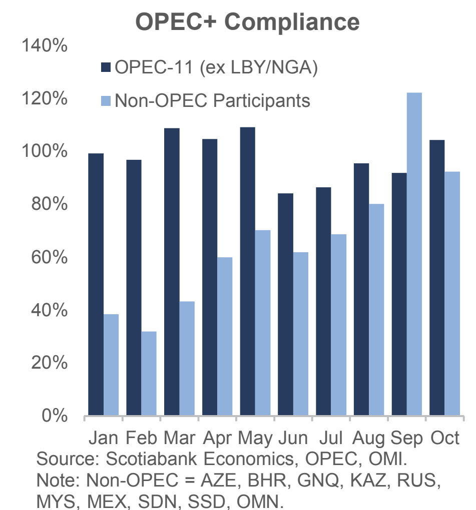
The widening spread between WTI and Brent is playing to OPEC+'s advantage, depriving the US shale patch of the higher prices currently enjoyed by

Chart 2



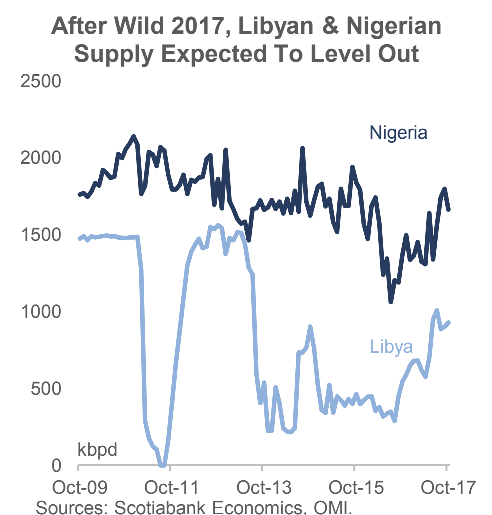
Sources: Scotiabank Economics, IEA.

Chart 3



Source: Scotiabank Economics, OPEC, OMI.
Note: Non-OPEC = AZE, BHR, GNQ, KAZ, RUS, MYS, MEX, SDN, SSD, OMN.

Chart 4



Sources: Scotiabank Economics, OMI.

producers outside North America. While Brent prices reached highs near $65/bbl in November, insufficient US pipeline capacity has magnified inland WTI's discount to the global seaborne Brent benchmark—WTI has been trading $6–7/bbl lower than Brent since early September compared to the $2–3/bbl discount realized over the previous year. Rapidly growing US shale production and steadily rising Canadian shipments have overwhelmed the capacity and thus increased the cost of transporting crude to the Gulf Coast for refining or export. WTI prices fell relative to seaborne Brent prices to compensate for that higher cost of transport, with the tighter spread between Louisiana Light Sweet (a seaborne benchmark similar in quality to WTI but priced at the Gulf Coast) and Brent illustrating that Brent's recent premium is largely thanks to bottlenecks en route to the US coast (chart 5).

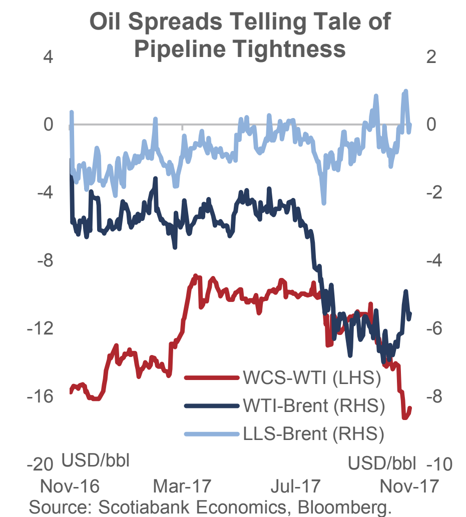
Western Canadian Select (WCS), the primary Canadian heavy crude export blend, has also seen discounts to WTI widening as Canadian exports run up against limited takeaway capacity (also chart 5). The tentative approval of the Keystone XL pipeline expansion by Nebraska regulators is a positive step toward alleviating this bottleneck for Canadian crude. An outage of the legacy Keystone pipeline following a spill in mid-November temporarily tightened WTI fundamentals as crude backed up in Canada and further weakened WCS pricing, though the pipeline has since been repaired and spreads are normalizing to pre-outage levels.

METALS & MINERALS: BASE OUTPERFORM BULKS, COPPER TO MODERATE

Base metals continue to experience heady gains on the back of bullish sentiment and a favourable fundamental outlook while bulk commodities like iron ore have retreated from earlier highs and have settled into a steady lower range. We expect this trend to continue through 2018–19, though some recent price gains are likely to moderate before moving higher. Copper prices appear overvalued in the near term despite our bullish longer-term view, while zinc, nickel, and iron ore prices are in line with expected 2018 averages. Aluminium's outlook is cloudier given sensitivity to differing levels of environmental policy enforcement in China, but we are maintaining our current outlook until eventual supply chain impacts are better understood.

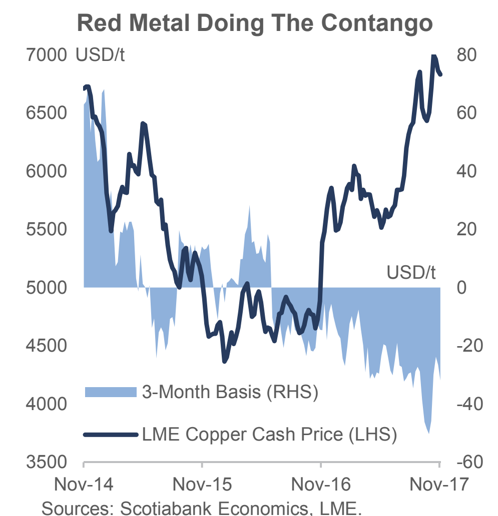
Copper prices appear overvalued at current levels of around $3.10/lb (forecast to average $2.85/lb in 2018), with few of the tell-tale signs of a truly tight market despite a nearly 30% gain since June. **Copper's recent strength has been thanks largely to supportive sentiment** as money managers and hedge funds continue to bet on copper's connection to the accelerating global economy, pushing up prices as these financial players buy into the futures market. While the firmer global economic outlook is certainly good news for copper, we don't believe that current market conditions justify $3+/lb levels quite yet. In a tight market, these rising prices would be accompanied by increasing backwardation in futures markets, with prices for today being pushed up to a premium over future shipments as consumers scramble for available metal; however, the opposite is occurring in copper contracts, which are in increasing contango (chart 6), a market state typically associated with oversupply. Copper inventory levels on the major metals exchanges are down this year but remain high relative to typical levels witnessed over the past 2–3 years. We see a roughly balanced copper market that could tilt into mild surplus in 2018 as the final mines sanctioned in the higher price environment begin operations and Chinese demand eases in line with its slowing real estate and infrastructure

Chart 5



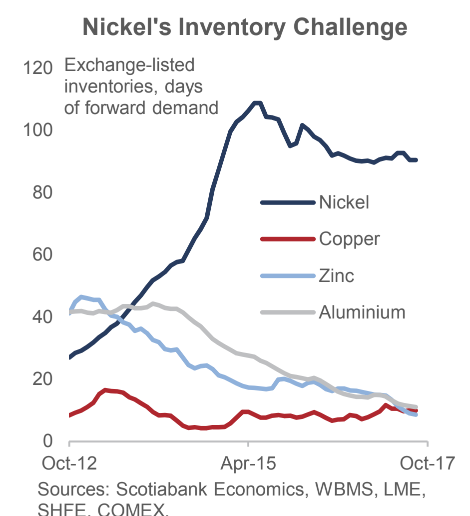
Source: Scotiabank Economics, Bloomberg.

Chart 6



Sources: Scotiabank Economics, LME.

Chart 7

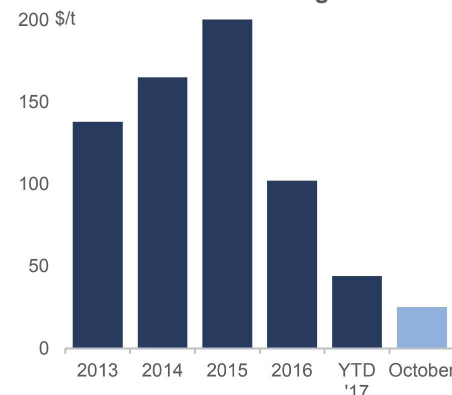


Sources: Scotiabank Economics, WBMS, LME, SHFE, COMEX.

investment. **While we expect to see copper prices fall back to average $2.85/lb in 2018, risks are currently tilted to the upside**. Chile and Peru will see large portions of their production at risk of potential stoppage as labour agreements come up for renegotiation next year. There is also the potential for a negative surprise in the ongoing Grasberg negotiations in Indonesia, which could further tighten the current or longer-term supply outlook.

Zinc and nickel prices have also maintained their upward trek as supply deficits continue to eat away at inventories. While both are suffering deficits, however, zinc is far more advanced in its cycle than nickel, with major metals exchanges holding inventories sufficient to cover only 9 days of zinc demand and almost 90 days of nickel demand (chart 7). The shortage of zinc concentrate—the precursor material that is smelted and refined into metal—has become even more extreme and benchmark treatment charges fell to only $25/t in October (chart 8) from more than $200 in 2015. (Treatment charges are inversely related to the availability of concentrate.) This concentrate tightness has finally worked its way into the metal market, emptying inventories and pushing zinc futures into dramatic backwardation as consumers attempt to secure near-term supplies. We anticipate further gains for zinc as markets remain tight over the next two years, with prices expected to peak and average $1.60/lb in 2019. Nickel's outlook is a bit more mixed as high inventories have insulated the market from the growing supply deficit, though we see gradual gains through the forecast horizon.

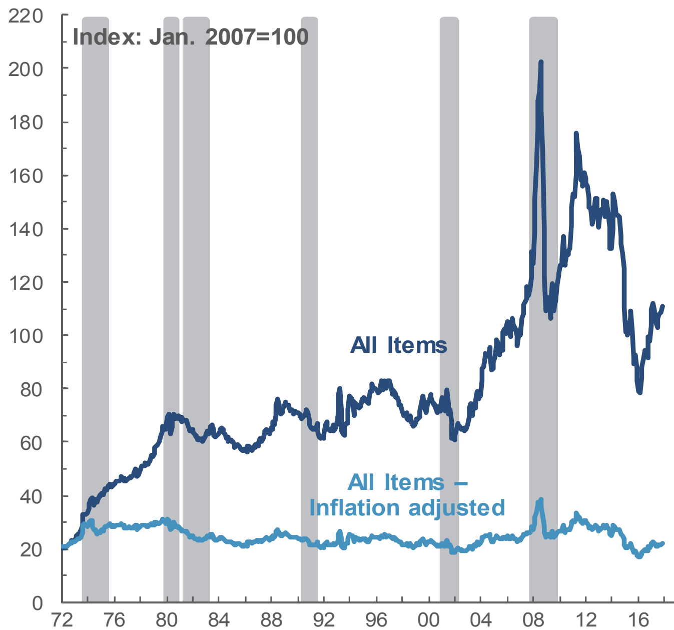
Chart 8



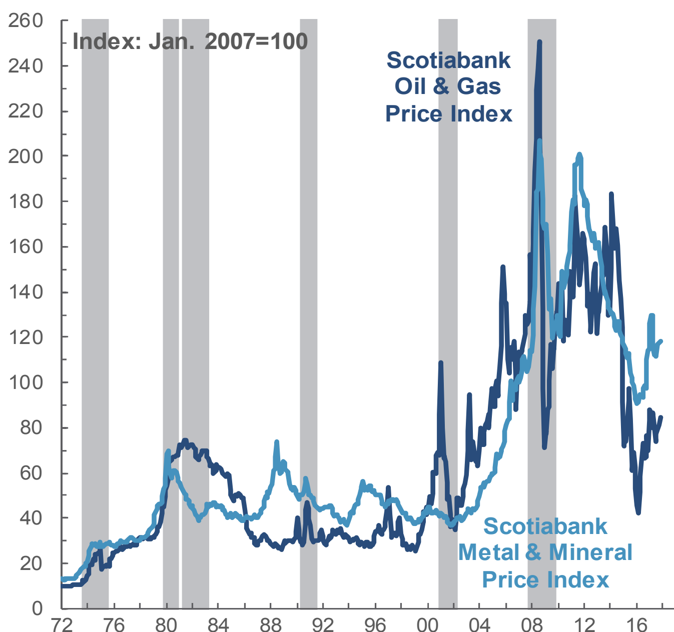
Sources: Scotiabank Economics, Wood Mackenzie.

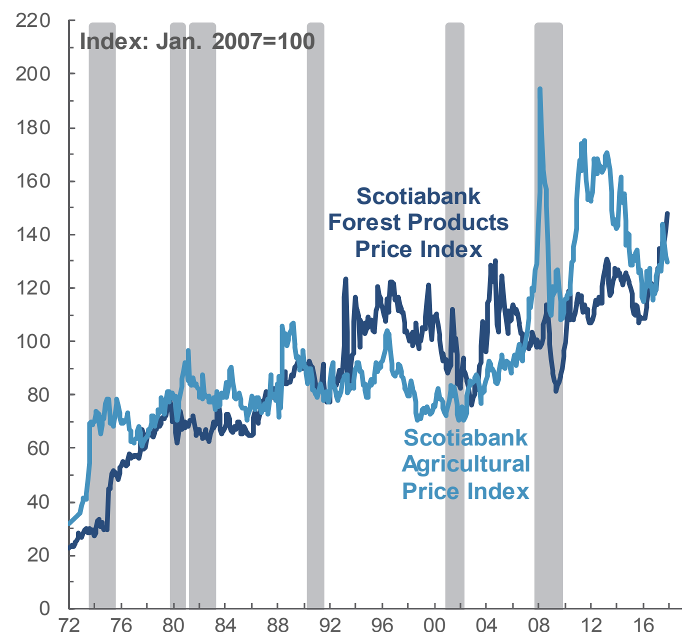
The outlook for aluminium is increasingly clouded by the uncertain impacts of Beijing's Blue Sky environmental policies on the Chinese smelting industry and associated supply chain. The Chinese government is attempting to alleviate some of the smog endemic to heavily populated eastern cities by scaling back the activity of energy and emissions intensive industries, like aluminium smelting. As production in the affect region falls, prices are rising to compensate higher-cost sources of supply—the extent of these price gains will depend on 1) the degree of Blue Sky policy enforcement and the extent of lost output; 2) the impact of Blue Sky policies on the prices of key aluminium feedstock like alumina and carbon anode; and 3) the prices required by smelters outside of China to ramp up production again.

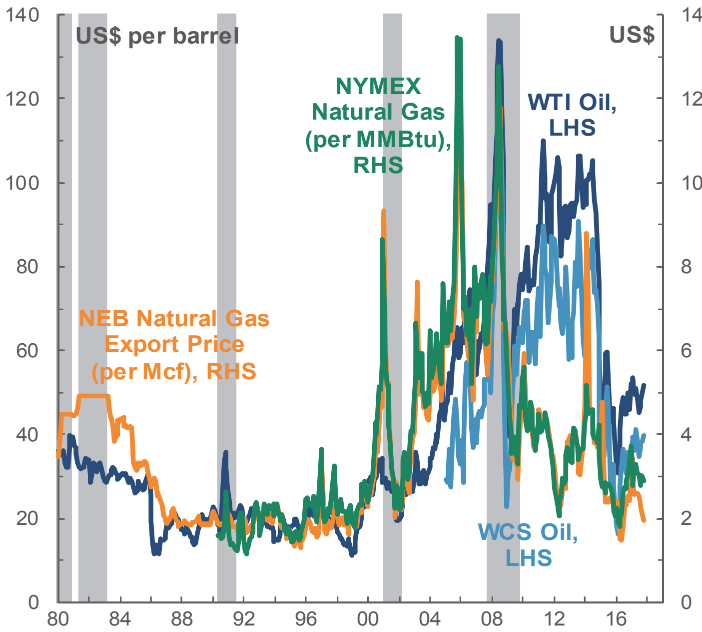
Price Outlook			2000–2016		2017YTD	2017F	2018F	2019F
Oil & Gas		Monthly Avg. Low	Period Avg.	Monthly Avg. High				
Crude Oils								
West Texas Intermediate	USD/bbl	19.40	62.70	134.02	50.18	50	52	56
North Sea Brent Blend	USD/bbl	19.06	65.53	134.56	53.88	53	56	60
Natural Gas								
Nymex Henry Hub	USD/MMBtu	1.81	4.94	13.46	3.04	3.06	2.85	3.00
Metals & Minerals								
Base Metals								
Copper	USD/lb	0.62	2.35	4.48	2.77	2.73	2.85	3.00
Nickel	USD/lb	2.19	7.26	23.67	4.68	4.65	5.00	5.50
Zinc	USD/lb	0.34	0.81	2.00	1.30	1.29	1.50	1.60
Aluminium	USD/lb	0.58	0.86	1.39	0.89	0.88	0.90	0.90
Bulk Commodities								
Iron Ore	USD/t	27	108	302	71	70	60	60
Metallurgical Coal	USD/t	39	127	330	183	206	150	130
Precious Metals								
Gold	USD/toz	261	869	1,772	1,257	1,265	1,300	1,300

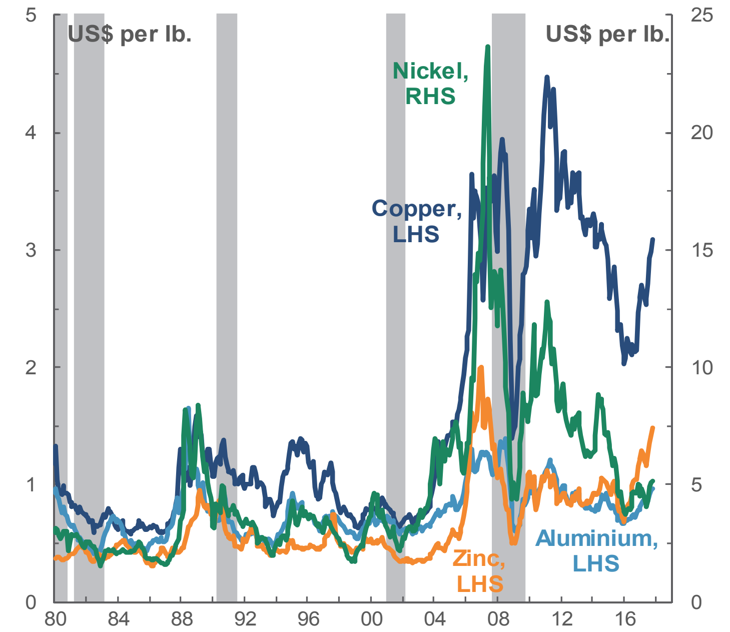

Scotiabank All Commodity Price Index
Index: Jan. 2007=100
All Items
All Items – Inflation adjusted
220
200
180
160
140
120
100
80
60
40
20
0
72 76 80 84 88 92 96 00 04 08 12 16

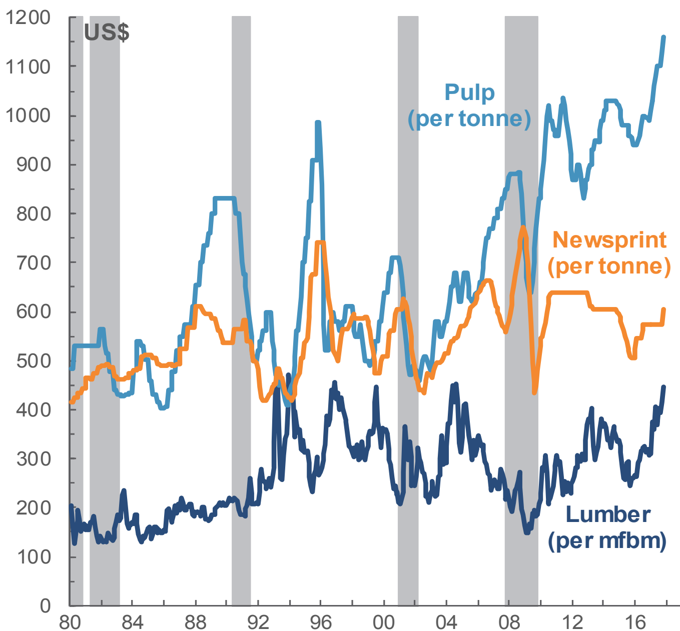
Canadian Dollar vs. Commodity Prices
Index: Jan. 2007=100
US cents
Scotiabank All Commodity Price Index, LHS
Canadian Dollar, RHS
220
200
180
160
140
120
100
80
60
40
20
0
110
105
100
95
90
85
80
75
70
65
60
80 84 88 92 96 00 04 08 12 16

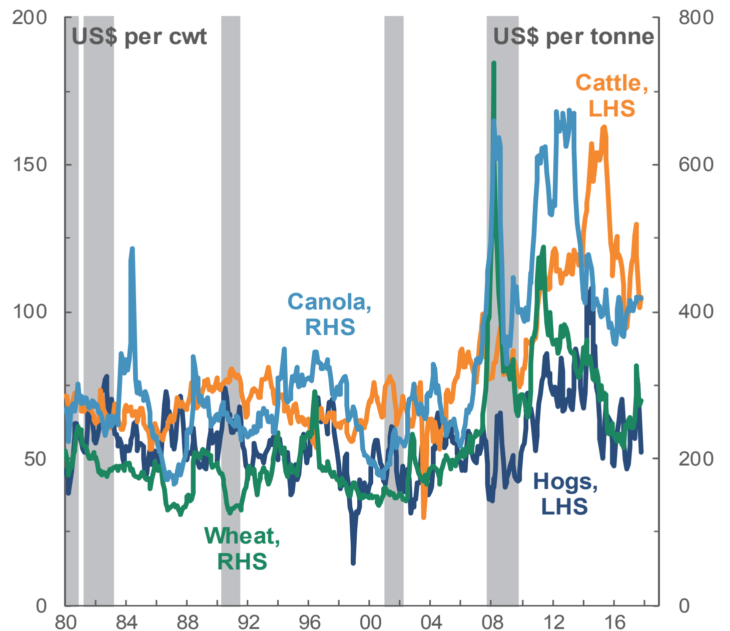

Scotiabank Oil & Gas and Metal & Mineral Indices
Index: Jan. 2007=100
Scotiabank Oil & Gas Price Index
Scotiabank Metal & Mineral Price Index
260
240
220
200
180
160
140
120
100
80
60
40
20
0
72 76 80 84 88 92 96 00 04 08 12 16


Scotiabank Forest Products & Agricultural Indices
Index: Jan. 2007=100
Scotiabank Forest Products Price Index
Scotiabank Agricultural Price Index
220
200
180
160
140
120
100
80
60
40
20
0
72 76 80 84 88 92 96 00 04 08 12 16


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)
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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