November 29, 2018

To the Ramparts! Oil Market Buffeted by Wave of Unexpected Supply and Soured Sentiment

- **The outlook for oil prices has weakened on stronger-than-anticipated supply, primarily from surging US shale output and weaker Iranian sanctions enforcement.**
- **An acute shift in speculative sentiment amplified this negative price adjustment and dragged crude benchmarks lower than we believe fundamentally justified.**
- **We expect that OPEC will announce a output cut of between 1.0–1.5 MMbpd when the producer group meets in Vienna next week, prompting a rationalisation of overstretched bearish positioning and bringing WTI back into the low $60s through the end of the year.**
- **The pain of rapidly falling global oil prices has been amplified for Canadian producers by severe pipeline bottlenecks and extreme discounts borne by barrels of Canadian crude, but differentials are thankfully beginning to narrow and we expect the worst is behind us.**

Crude oil prices have fallen by almost a third off their early-October highs, pushed lower first by an equity market sell-off followed by upwardly revised supply estimates and a volatile reversal of speculative positioning in crude and product contracts. This confluence of bearish factors pushed oil benchmarks on their longest sustained slide in decades and WTI prices are currently sitting around $50/bbl with Brent trading just shy of $60/bbl, down from $76/bbl and $86/bbl in early October, respectively. We see this fallback as partially justified by fundamental developments—namely surging US shale growth estimates and weaker Iranian sanctions enforcement—but the extent of the sell-off has been magnified by an acute reversal of speculative sentiment (chart 1) that has taken benchmarks lower than we believe justified at present. We anticipate that OPEC will announce a supply cut of at least 1 MMbpd at its upcoming meeting on December 6th, which will address some of the oversupply concerns and is expected to prompt a normalization of the extreme bearishness in speculative positioning. **Nevertheless, the risk to our current oil price forecast ($72/bbl WTI in 2019) is now clearly to the downside.**

THERE AND BACK AGAIN: CRUDE'S NARRATIVE REVERSAL

In a market as complicated as oil, narratives play an outsized role in price formation as analysts and investors attempt to parse the firehose of oil-related news flow for some sense of current or future market conditions. **That narrative was at its most bullish in years up to the beginning of October**, with many market commentators talking about the possibility of Brent above $100/bbl at least briefly in 2019. Only two months ago consensus had the oil market on firm—even frothy—footing, as hawkish rhetoric out of the White House regarding its November deadline for Iranian sanctions was pressing the rest of OPEC into overdrive in an attempt fill the gap. US shale was expected to be the single-largest source of additional growth but that supply was to be moderated by infrastructure constraints, leaving the primary role of filling in for lost Iranian barrels to OPEC.

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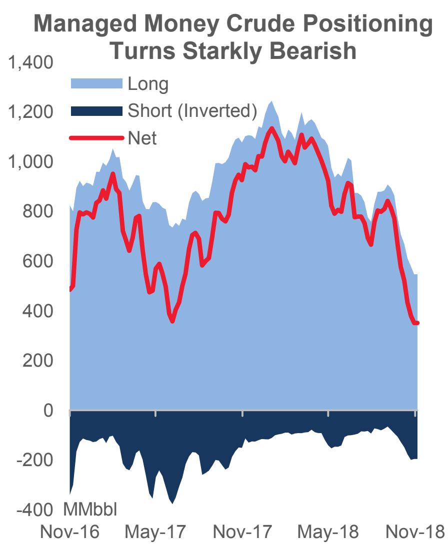
Chart 1



Note: Combined futures & options; WTI & Brent.
Source: Scotiabank Economics, Nymex, CFTC.

Scotiabank Commodity Price Index

October 2018	(% change) M/M	Y/Y	YTD
All Commodity*	**-5.9**	**-6.2**	**9.1**
Industrials	**-8.0**	**-7.5**	**10.7**
Oil & Gas	-22.4	-22.7	11.3
Metal & Minerals	4.8	2.7	3.8
Forest Products	-6.4	-0.6	22.2
Agriculture	**4.2**	**0.0**	**2.1**

January 2007 = 100	2018 Oct	Sep	YTD avg.
All Commodity	**104.5**	**111.1**	**118.0**
Industrials	**100.0**	**108.7**	**115.1**
Oil & Gas	65.8	84.8	91.1
Metal & Minerals	122.4	116.8	123.4
Forest Products	147.1	157.1	163.6
Agriculture	**129.5**	**124.3**	**133.7**

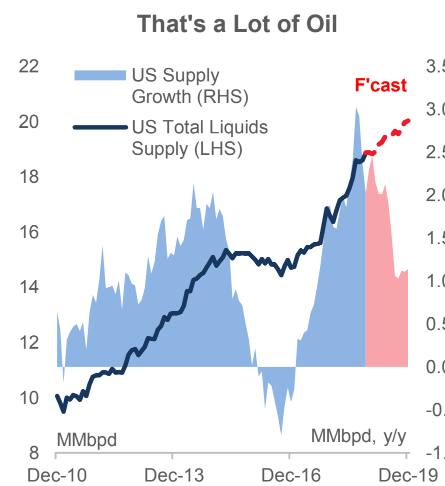
* Weights: Oil & Gas (39.9%), Metal & Minerals (30.1%), Forest Products (14.7%), Agriculture (15.3%); Full technical note on page 6.

This sprint to displace Iranian exports had Saudi and Russian supply hitting all-time highs and concerned voices began to point to dwindling spare capacity that looked set to fall to dangerously low levels next year. Add in Venezuela's precipitous production collapse, disappointing growth in Brazilian offshore, and pipeline bottlenecks in Western Canada and price risks looked firmly to the upside.

Fast-forward to today and the narrative had shifted dramatically, with much of the forecast changes coming down to developments in the United States—both in Texas and in Washington, DC. Oil-watching organizations are now forecasting stronger US growth as producers in the prolific Permian basin avoided the worst of the anticipated pipeline bottleneck through a combination of faster-than-expected pipeline starts ups and utilizing more oil-by-rail services until further pipelines arrive. Total US liquids supply is now estimated to have grown by roughly 3 MMbpd y/y in August (chart 2), roughly the same total volume of crude produced by OPEC members Kuwait or the UAE. This astronomical growth is expected to fall back to a still-impressive pace of 1 MMbpd through the end of next year, but markets are now expected to feel the weight of that additional US crude. Moving from Texas to DC, the other factor that has helped move crude prices lower has been the White House's reversal on the question of Iranian sanctions enforcement. Comments from US foreign policy and security officials were becoming increasingly hawkish as we approached the much-discussed "hard deadline" for countries to displace Iranian crude exports, though the deadline came and went and the US offered waivers for many countries to still import considerable volumes of Iranian oil. President Trump cited the desire to avoid oil prices hitting "$100 or $150 a barrel" as the primary rationale behind the White House's decision to issue waivers to importers of Iranian crude, exempting them from sanctions enforcement on a stated proportional volume of prior purchases. This left the market long crude as the production gains in Saudi Arabia and Russia—both of whom lifted supplies to fill in for expected Iranian losses—fed through to a market that no longer needed their barrels. The oil price forward curve has moved rapidly from backwardation (chart 3), where prompt delivery sells at a premium to future deliveries, to contango, where prompt crude sells at a discount. While the forward curve has a poor record of "forecasting" future oil prices, the structure of the curve is indicative of conditions today and the move to contango is a flashing sign that current spot markets are at least mildly oversupplied. Mix in some risk-off rotation from the mid-October equity market sell-off and you've got a perfect storm of bearish sentiment.

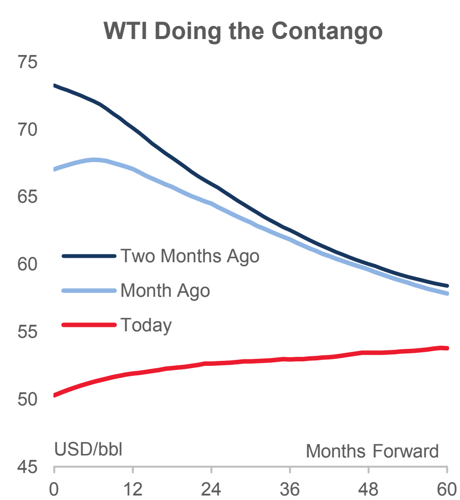
Fundamentals have clearly deteriorated on surging supply estimates, but a volatile and overdone swing in speculative sentiment took prices lower than justified. Net speculative positioning in major crude futures and options contracts have fallen by more than 50% from the beginning of October and speculative shorts have risen by 250% (chart 1). Such volatile swings don't typically have much staying power and a similarly quick normalization of positioning is expected to support crude contracts higher. **We forecast that an OPEC cut of 1.0–1.5 MMbpd, which we expect to be announced at its official meeting on December 6th, will serve as the primary catalyst for this normalization that will lift WTI into the low-$60s.** Nevertheless, given the market's current oversupply, the market is expected to be extremely responsive to policy announcements out of Vienna next week, with disappointing results likely to depress pricing even further in a rhyme of OPEC's late -2014 refusal to cut.

Chart 2



Sources: Scotiabank Economics, EIA.

Chart 3



Sources: Scotiabank Economics, Bloomberg.

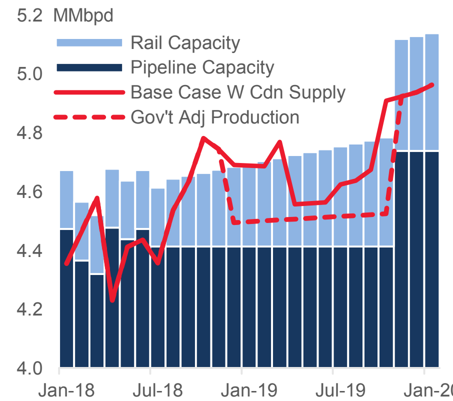
CANADIAN DISCOUNTS WIDE BUT THANKFULLY FALLING

Discounts borne by barrels of Western Canadian crude remain extraordinarily large. Canada's primary heavy crude benchmark, Western Canadian Select, is trading roughly $34/bbl under WTI, down from more than $50/bbl in October but relative to a more typical discount of $13/bbl when pipeline capacity is adequate. And while heavy discounts are receiving the lion's share of the column inches, the discount for light sweet Canadian crude, known as mixed sweet blend or MSW, also widened to almost than $40/bbl despite being a nearly equivalent grade of oil to WTI, though light crude discounts have fallen back to the mid-$20s as of writing.

Amid these sky-high discounts, there have been calls for the Alberta government to help address the discount situation by throttling back or "shutting in" provincial oil production (chart 4). In theory, such a policy could facilitate a narrowing of benchmark discounts by reducing competition for increasingly scarce pipeline and rail capacity until new takeaway infrastructure enters service in late-2019. The stakes are high and our recent report on the issue concludes that ongoing pipeline bottlenecks look set to cost Alberta's upstream industry C$15–39 billion in royalty-applicable earnings and the provincial government of C$1.5–4.1 billion in royalty revenue in 2019. **However, the bar for government intervention should be a high one and we conclude that the benefits of government-mandated supply curtailment are unlikely to outweigh the costs of such a policy if discounts narrow back as we forecast they will through 2019**. Output controls could be warranted, however, if discounts remain stubbornly wide around current levels through the opening months of 2019.

Chart 4

Invisible Hand Might Need Temporary Help from a Friend in Edmonton



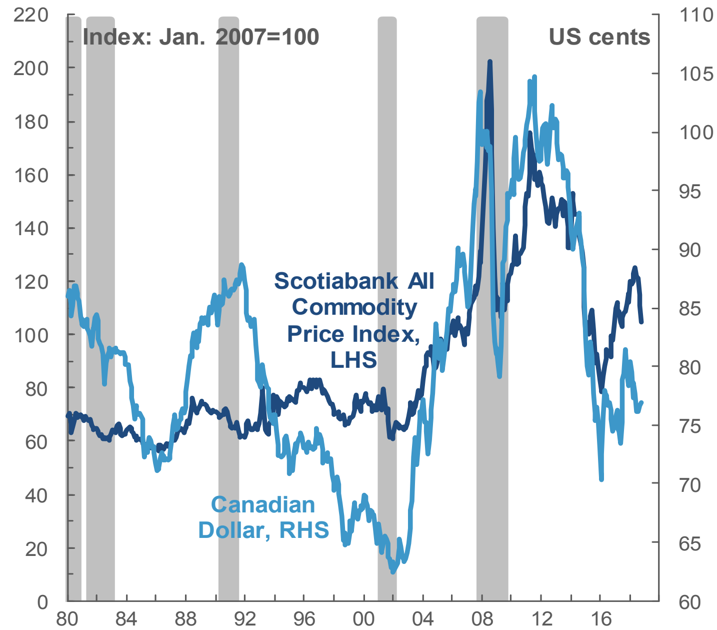
Sources: Scotiabank Economics, Scotiabank GBM, CAPP, AER.

Price Outlook			**2000–2016**					
Oil & Gas		Monthly Avg. Low	Period Avg.	Monthly Avg. High	**2017**	**2018ytd**	**2018F**	**2019F**
Crude Oils								
West Texas Intermediate	USD/bbl	19.40	62.70	134.02	50.85	66.40	68	72
North Sea Brent Blend	USD/bbl	19.06	65.53	134.56	54.75	72.99	74	80
WCS - WTI Discount*	USD/bbl	-42.50	-16.85	-5.50	-12.74	-27.14	-27	-24
Natural Gas								
Nymex Henry Hub	USD/MMBtu	1.81	4.94	13.46	3.02	2.98	2.93	2.93
Metals & Minerals								
Base Metals								
Copper	USD/lb	0.62	2.35	4.48	2.80	2.98	2.99	3.00
Nickel	USD/lb	2.19	7.26	23.67	4.72	6.05	6.15	6.50
Zinc	USD/lb	0.34	0.81	2.00	1.31	1.34	1.33	1.30
Aluminium	USD/lb	0.58	0.86	1.39	0.89	0.96	0.95	1.00
Bulk Commodities								
Iron Ore	USD/t	27	108	302	72	70	65	65
Metallurgical Coal	USD/t	39	127	330	188	207	205	175
Precious Metals								
Gold	USD/toz	261	869	1,772	1,257	1,271	1,262	1,300

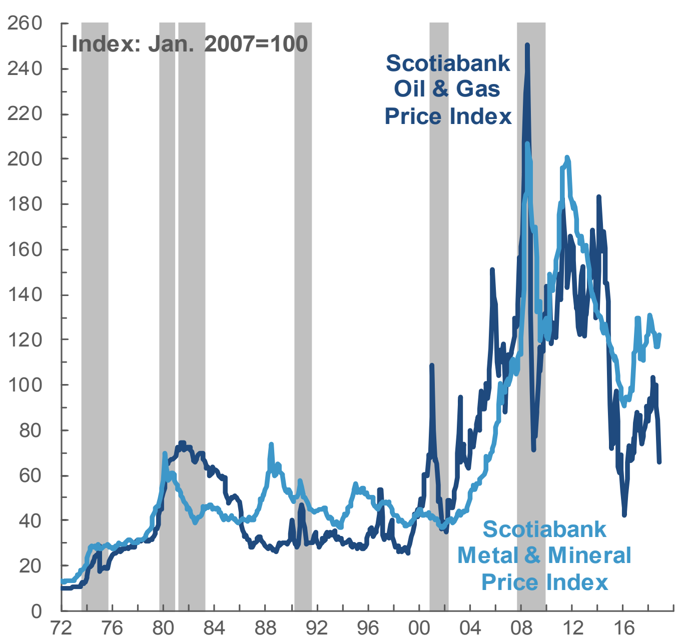
* 2008-16 average.

Scotiabank All Commodity Price Index

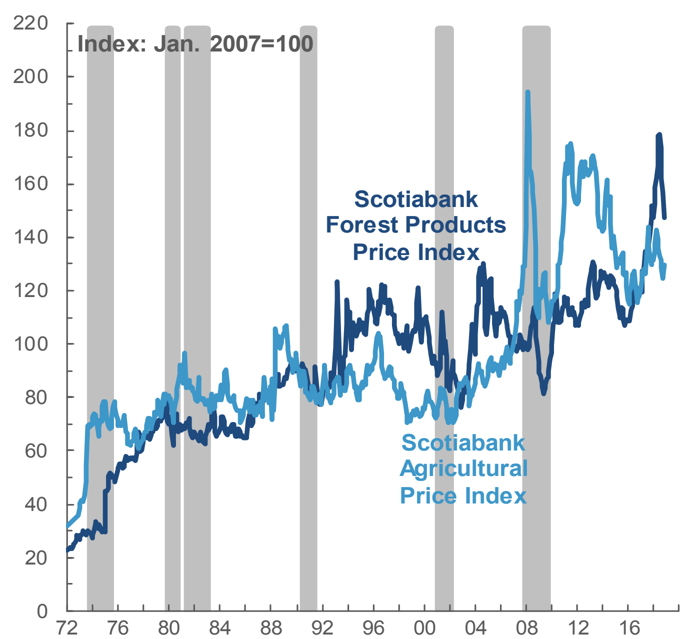
Canadian Dollar vs. Commodity Prices

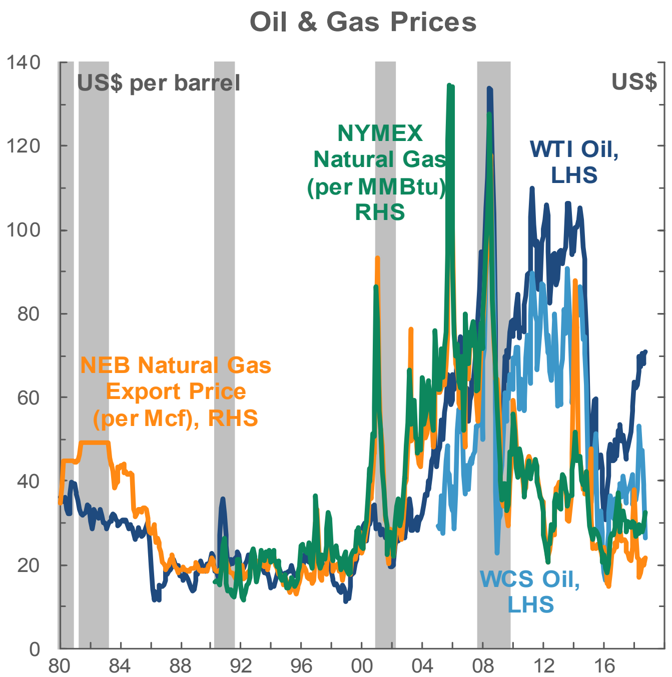


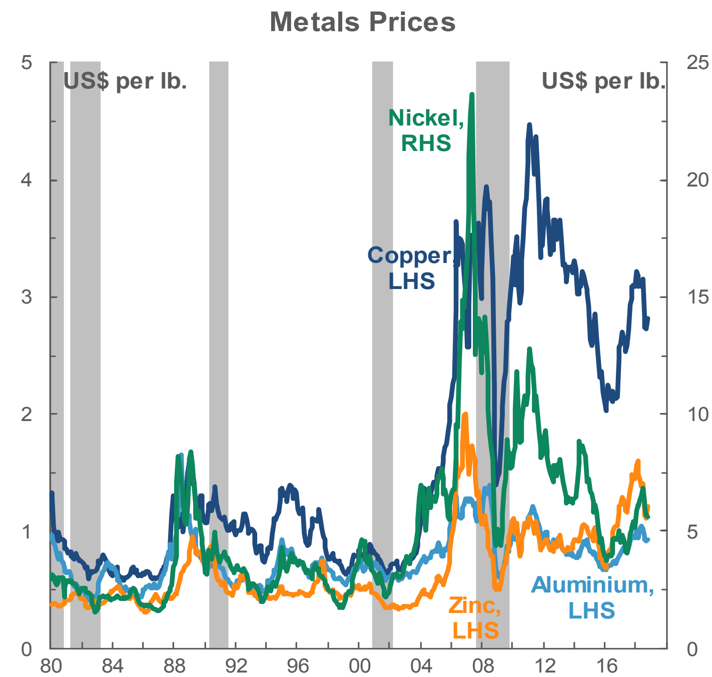
Scotiabank Oil & Gas and Metal & Mineral Indices

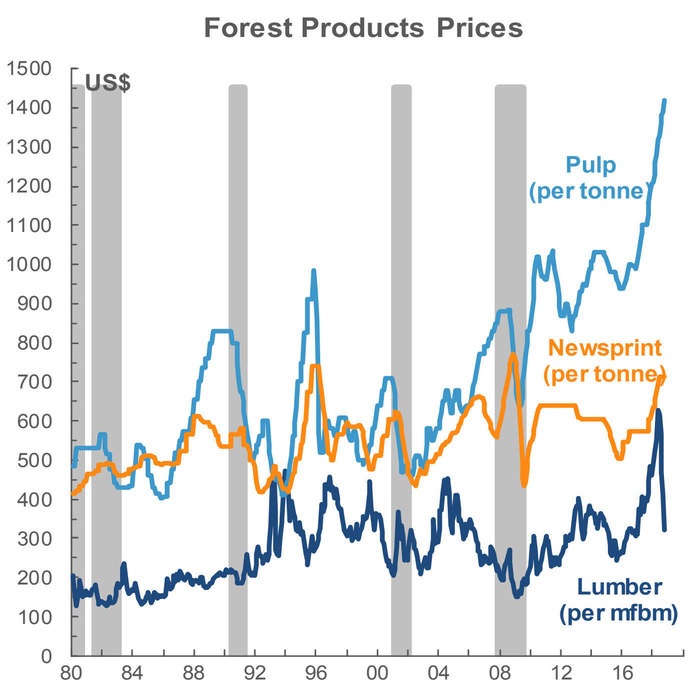


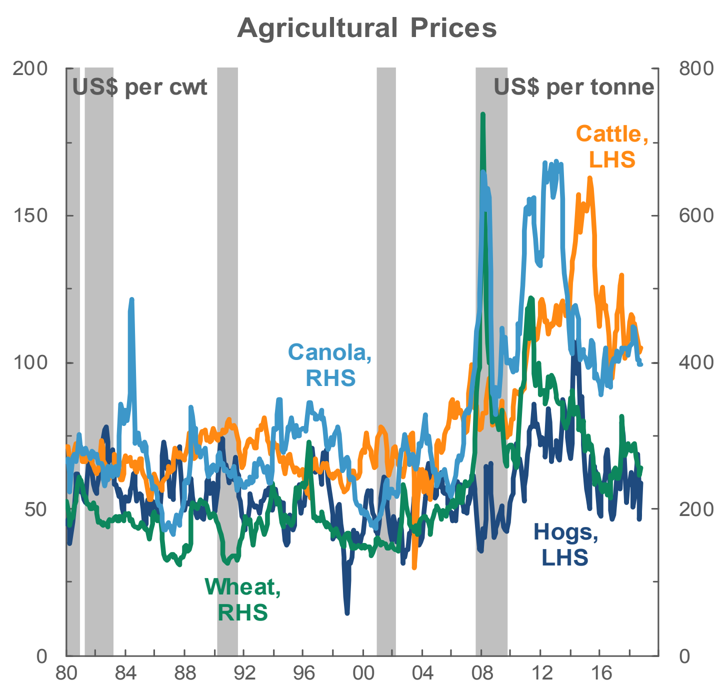
Scotiabank Forest Products & Agricultural Indices




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)
1500
1400
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 Bloomberg.

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) U_3O_8 near-by-futures from Bloomberg.

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**