The Goods

BMO Capital Markets
We're here to help.™

A monthly commodity watch | November 2018

Natural Gas Fuels October Gain

Record lumber slump stabilizes, but crude oil collapse points to hefty November decline

The **BMO Capital Markets Commodity Price Index** rose 0.2% in October amid broad support, outside of a record slump in lumber prices. Still, persistent trade-war pressures, continued greenback strength and mounting global growth concerns have dimmed near-term prospects. We are anticipating a significant pullback in November as collapsing crude prices are expected to drive the index to its largest monthly decline in more than three years.

The **Oil & Gas Index** rose 1.1% in October, driven by a sharp rise in natural gas prices as the early start to winter, in the face of low inventories, jolted the market. Despite a further surge in gas prices, the energy index has dropped sharply in November, as crude oil is estimated to have fallen by close to 20% on a monthly average basis and by 33% from its peak in early October (see the Commodity Focus on page 2).

The **Metals & Minerals Index** rose 1.5%, snapping a streak of five straight monthly declines. Aluminum was particularly volatile, as refining capacity uncertainties led to a short-lived surge before prices slid to a 15-month low by mid-November as imminent supply concerns faded. Zinc and copper were largely stable in the month, while the nickel market remains under pressure, with prices down more than 30% since June despite a steady decline in global inventories. Meantime, gold continues to receive safe-haven support amid a revival of equity market volatility.

The **Forest Products Index** plunged 21.6% in October, saddled by a wipe-out of historic proportions in the lumber market. Spruce-Pine-Fir prices plummeted to an intra-month low of US$298/mbf, a 55% decline from their summer highs – capping the most brutal short-term dollar value and percentage price erosion on record. However, lumber prices have demonstrated a modest recovery in November, hinting that a floor has been reached. Meantime, Oriented Strand Board prices have consolidated around US$245/mft^2, with the market seeming to have found a balance amid increased supply and cooler prospects for homebuilding.

The **Agriculture Index** edged up 1.1% in October as all components posted gains during the month. In the livestock space, hog prices staged a 5.8% advance as the U.S. Department of Agriculture trimmed its outlook for slaughter in 2018; cattle prices saw a more modest 1.4% gain. Wheat prices increased 1.5% in October and have risen 24% year-to-date due to a global rotation of acreage toward other crops and challenging growing conditions in key producing regions this year. Canola prices eked out a 0.2% gain but remain near two-year lows due to this year's large soybean harvest.

Aaron Goertzen (Agriculture)
416-359-8229
aaron.goertzen@bmo.com

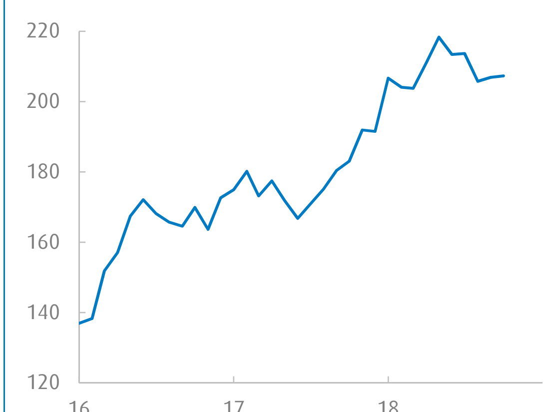
Carl Campus (Metals & Minerals, Editor)
416-359-6792
carl.campus@bmo.com

Alexandros Koustas (Forest Products)
416-359-4624
alexandros.koustas@bmo.com

Earl Sweet (Oil & Gas)
416-359-4407
earl.sweet@bmo.com

BMO CAPITAL MARKETS COMMODITY PRICE INDEX
(2003 = 100)

All Commodities Index



	Oct. Level (2003=100)	% Change from Mth. Ago	Yr. Ago
All Commodities	207.3	0.2	13.2
Oil & Gas	205.8	1.1	36.1
Metals & Minerals	248.1	1.5	-4.2
Forest Products	116.3	-21.6	-29.3
Agriculture	147.8	1.1	6.2

Commodity Focus: Crude Oil

Sudden supply surplus

Earl Sweet • earl.sweet@bmo.com • 416-359-4407

Oil's swift reversal in recent weeks reflects shifting expectations of global demand and supply growth while OPEC and its partners struggle, with some difficulty, to fine-tune production in order to avoid excessive price swings. Less than two months ago, when West Texas Intermediate (WTI) had shot up to US$76/barrel (*Chart 1*) and Brent to US$86, market commentary centred on the risk of prices spiking to $100 or higher. At the time, OPEC+ production was running notably below quota due to falling output in Venezuela, Mexico, and Iran and there were concerns that production in the latter would plunge by more than 1.0 million barrels per day (mmb/d) once U.S. sanctions on the country fully took hold in early November. Meanwhile, U.S. commercial inventories of crude oil had fallen sharply to below their five-year average after having exceeded it by as much as 38% in mid-2016 (*Chart 2*). Speculative activity also contributed to the earlier rise in crude prices as the market focused on inventory normalization in the United States and overseas, the slimming buffer of global excess productive capacity (mostly located in Saudi Arabia), and the impending sanctions on Iran.

That positivity on oil ended abruptly in early October when it became clear that Saudi Arabia and Russia had agreed to raise oil production by up to 500,000 barrels/day from September levels in order to offset anticipated declines from Iran and to avoid a further destabilizing upward surge in pricing. Market bearishness was also fuelled by surprisingly large increases in U.S. production of shale oil in November (*Chart 3*) and significant inventory builds, the latter augmented by seasonal retooling and reduced throughput at refineries. The negativity associated with these developments accelerated the unwinding of long speculative positions, adding further downward pressure on pricing. Between October 3rd and November 27th, WTI plunged $25 to the vicinity of $51 and it will **likely remain under pressure as the market ponders the next move by OPEC+ at its December 6th meeting in Vienna**. Given the importance of oil to their overall economies and fiscal revenues, neither Russia nor Saudi Arabia, nor other members of OPEC+, would want to see a further reduction in prices. Ahead of the meeting, Saudi Arabia has indicated it could reduce output by as much as 0.5 mmb/d in December and Russia has already begun to make small production cuts.

The decision that OPEC+ makes in December will be influenced by its expectation of the global oil market balance over the next

CHART 1: WEST TEXAS INTERMEDIATE AND NET LONG POSITION ON THE NYMEX

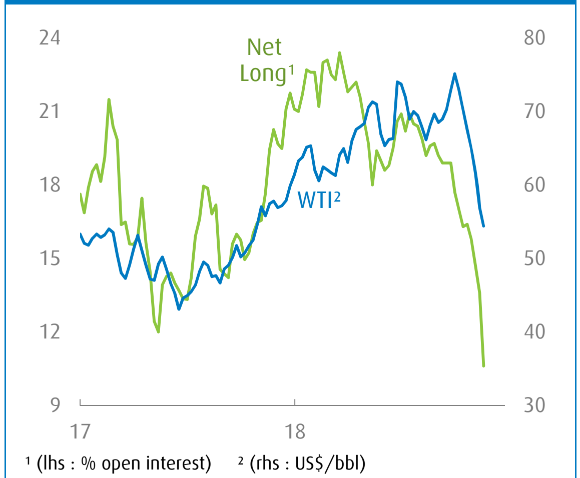


CHART 2 :CRUDE OIL STOCKS
United States (% deviation from 5-yr avg.)

CHART 3: CRUDE OIL PRODUCTION
United States (million barrels per day)

year. **Global oil demand is projected to continue to grow at a healthy pace in 2019, by approximately 1.4 mmb/d.** However, downside risks to the global economy and oil demand are prominent, given the potential for an escalating trade war between the United States and China, and rising interest rates. On the supply side, the International Energy Agency (IEA) estimates that non-OPEC oil production has grown 2.4 mmb/d in 2018, mostly in the United States, Russia, and Canada, and **expects it to rise a further 1.9 mmb/d in 2019**. Thus, without an output cut by OPEC+, global inventories would once again swing from a roughly balanced position currently to a significant glut, which would likely cause WTI to fall below $50.

Notwithstanding admonishments from Donald Trump to keep supply high and prices low, we expect that OPEC+ will cut production sufficiently to keep the market balanced in 2019. Even if WTI remains near its current level through the end of this year, it will average $65.25 in 2018. With Saudi Arabia's fiscal break-even price for oil in 2019 estimated by the IMF at US$73 (average of WTI, Brent, and Dubai) and the kingdom embroiled in costly regional conflicts, it is likely that it, supported by some other members of OPEC+, will cut production enough to raise prices moderately from current levels. We also anticipate that once stockpiles built up prior to the imposition of Iran sanctions dwindle, the full impact of the sanctions will be felt in the market. **Thus, we project WTI to rise from its current level to an average of US$62/barrel in 2019.** This is down from our previous outlook in July ($65) due to escalating risks to the global economy and a greater extent of waivers on Iran sanctions granted by the United States.

In Canada, producers will continue to be heavily challenged by a very wide discount from global oil prices until transportation capacity out of Alberta is increased. As oil production in Alberta continues to grow, the seemingly interminable delays to projects targeting expanded pipeline capacity to the United States (Keystone XL) and to the Pacific coast (Trans Mountain) have caused local supplies to accumulate. In turn, this has caused the discount on Western Canadian Select, a benchmark for heavy oil, to blow out to a record-high US$44.40/barrel in October (*Chart 4*). The discount as a per cent of WTI has soared to almost 70% in November (*Chart 5*), far above its 2008-2018 average of 24%. Getting back to a 'normal' discount will require new pipelines to carry Alberta crude oil to the United States or overseas markets. **While the WCS discount will remain elevated in 2019, it is likely to narrow moderately as rail transport is augmented** (*Chart 6*) and Enbridge's project to replace its aging Line 3 pipeline—from Alberta through Saskatchewan, Manitoba, and into the United States—becomes fully operational late in the year.

CHART 4: WTI AND WCS
(US$/bbl)

CHART 5: WCS DISCOUNT FROM WTI
(percent)

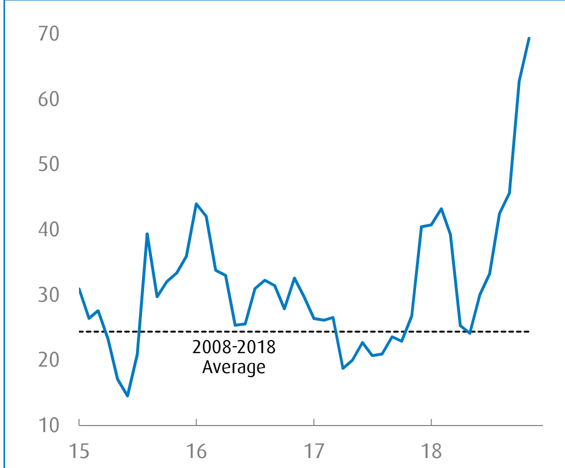
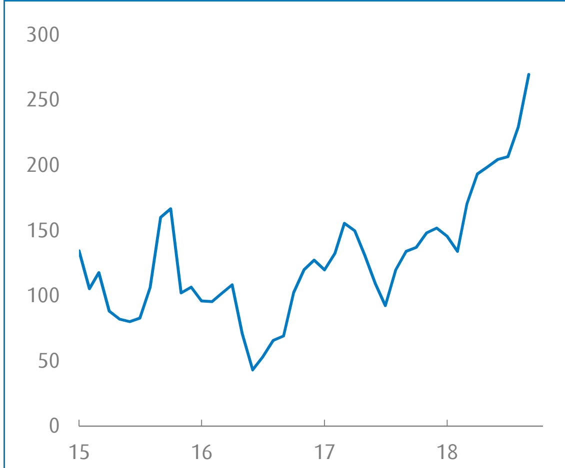


CHART 6: RAIL SHIPMENTS OF CRUDE OIL
Canada (thousand barrels per day)



Energy and Materials

		Crude Oil (WTI)	Natural Gas (Henry Hub)	Natural Gas (Alta. Empress)	Lumber
		US$/bbl	US$/mmbtu	US$/mmbtu	US$/mbf
	2005	56.46	8.81	7.51	347
	2006	66.10	6.74	5.92	290
	2007	72.36	6.98	6.32	245
	2008	99.57	8.86	8.09	215
	2009	61.69	3.95	3.46	177
	2010	79.43	4.39	3.59	255
	2011	95.08	4.00	3.28	255
	2012	94.20	2.75	2.19	299
	2013	97.93	3.73	2.98	356
	2014	93.26	4.39	4.56	349
	2015	48.69	2.63	2.33	277
	2016	43.21	2.52	1.68	305
	2017	50.91	2.99	2.01	401
	y-t-d 2018	66.53	3.06	2.11	497
2017	November	56.66	3.01	2.34	484
	December	57.93	2.82	2.45	457
2018	January	63.66	3.88	2.84	493
	February	62.21	2.67	1.77	523
	March	62.76	2.69	1.81	524
	April	66.26	2.80	1.83	552
	May	69.99	2.80	1.79	634
	June	67.33	2.97	1.86	609
	July	70.97	2.83	2.01	564
	August	67.99	2.96	2.27	468
	September	70.20	3.00	2.21	414
	October	70.76	3.28	2.65	323
	m-t-d November	57.67	4.03	2.69	335
Forecast	2018 Avg.	**65.25** ↓	**3.15** ↑	**2.29** ↑	**482** ↑
	2019 Avg.	**62.00** ↓	**3.20** ↑	**2.50** ↑	**348** ↑

Commodity price forecasts are by BMO Capital Markets Economics and are independent of those used by BMO Capital Markets Equity Research.
↑ and ↓ indicate annual forecast changes from last month.

Base and Precious Metals

		Copper	Aluminum	Zinc	Nickel	Gold	Silver
		US$/lb				US$/oz	
	2005	1.67	0.86	0.63	6.69	445	7.31
	2006	3.05	1.17	1.48	11.00	605	11.58
	2007	3.23	1.20	1.47	16.89	697	13.40
	2008	3.15	1.17	0.85	9.57	872	15.01
	2009	2.34	0.75	0.75	6.64	973	14.67
	2010	3.42	0.99	0.98	9.89	1225	20.16
	2011	4.00	1.09	0.99	10.38	1570	35.11
	2012	3.61	0.92	0.88	7.96	1668	31.15
	2013	3.32	0.84	0.87	6.81	1411	23.83
	2014	3.11	0.85	0.98	7.65	1266	19.08
	2015	2.50	0.75	0.88	5.37	1160	15.70
	2016	2.21	0.73	0.95	4.35	1248	17.10
	2017	2.80	0.89	1.31	4.72	1258	17.06
	y-t-d 2018	2.98	0.96	1.34	6.05	1271	15.80
2017	November	3.10	0.95	1.47	5.44	1283	17.02
	December	3.08	0.94	1.45	5.17	1266	16.16
2018	January	3.21	1.00	1.56	5.84	1333	17.19
	February	3.18	0.99	1.61	6.16	1334	16.65
	March	3.08	0.94	1.49	6.08	1326	16.47
	April	3.10	1.02	1.45	6.32	1334	16.60
	May	3.09	1.04	1.39	6.51	1304	16.45
	June	3.15	1.02	1.40	6.85	1282	16.51
	July	2.83	0.95	1.21	6.25	1238	15.71
	August	2.74	0.93	1.14	6.09	1202	15.00
	September	2.73	0.92	1.10	5.68	1199	14.27
	October	2.82	0.92	1.21	5.59	1215	14.58
	m-t-d November	2.81	0.88	1.18	5.13	1221	14.38
Forecast	2018 Avg.	**2.96** ↑	**0.96** ↓	**1.33** ↓	**6.00** ↓	**1270** ↓	**15.75** ↓
	2019 Avg.	**3.15**	**1.00**	**1.32** ↓	**5.80** ↓	**1285** ↓	**17.00** ↓

Commodity price forecasts are by BMO Capital Markets Economics and are independent of those used by BMO Capital Markets Equity Research.
↑ and ↓ indicate annual forecast changes from last month.

Agriculture

		Wheat	Canola		Cattle		Hogs
		US$/bushel	US$/tonne		US$/cwt		
	2005	3.19	224		87.34		68.58
	2006	4.02	257		86.23		64.08
	2007	6.38	378		93.92		65.56
	2008	7.98	527		93.60		66.05
	2009	5.30	371		83.85		58.11
	2010	5.81	429		94.95		75.60
	2011	7.10	566		114.54		90.34
	2012	7.50	601		122.65		84.93
	2013	6.84	545		126.40		89.33
	2014	5.88	400		151.50		105.83
	2015	5.08	371		146.49		69.40
	2016	4.36	366		118.61		65.60
	2017	4.36	393		117.90		69.87
	y-t-d 2018	4.94	392		113.94		65.89
2017	November	4.22	403		121.21		63.23
	December	4.11	390		118.46		66.83
2018	January	4.32	395		121.53		72.26
	February	4.56	403		127.54		71.99
	March	4.75	402		120.05		64.16
	April	4.75	416		117.21		61.01
	May	5.17	414		104.96		71.13
	June	5.01	398		107.63		80.01
	July	5.07	379		107.13		72.90
	August	5.38	384		108.63		54.74
	September	5.04	378		111.77		57.80
	October	5.11	378		113.36		61.13
	m-t-d November	5.06	361		115.92		57.51
Forecast	2018 Avg.	**4.95**	**390**	↓	**114.25**	↑	**65.00**
	2019 Avg.	**5.20**	**400**	↓	**118.00**		**68.00**

Commodity price forecasts are by BMO Capital Markets Economics and are independent of those used by BMO Capital Markets Equity Research.
↑ and ↓ indicate annual forecast changes from last month.

Commodity Indices and Forecasts[2]

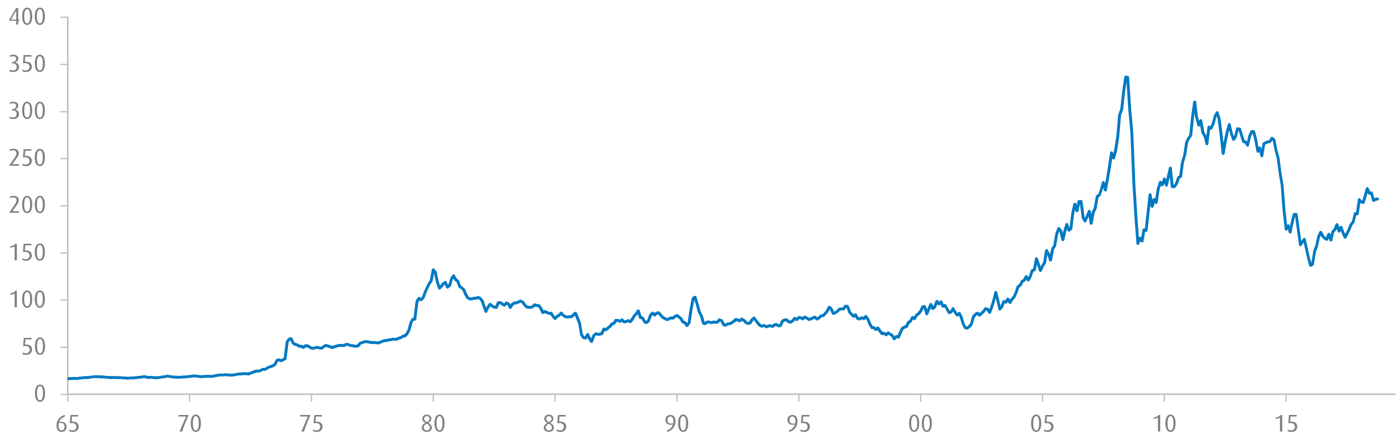
US$-terms : 2003 = 100		All Commodities	Oil & Gas	Metals & Minerals	Forest Products	Agricultural Products	All Commodities C$-terms
Annual							
	2009	196.3	182.0	267.1	64.3	145.2	159.1
	2010	234.6	232.7	291.1	92.0	163.4	172.5
	2011	283.7	275.6	364.8	90.1	205.3	200.3
	2012	279.7	270.2	353.8	108.4	216.9	199.5
	2013	271.7	283.0	304.1	128.6	200.1	199.6
	2014	252.1	271.4	270.5	121.3	170.0	198.4
	2015	170.9	142.5	244.8	98.3	151.3	155.5
	2016	160.7	126.9	241.1	110.3	135.9	151.8
	2017	178.1	149.6	249.4	144.8	139.8	165.0
Forecast	2018	**205.1**	**190.1**	**257.9**	**170.4**	**147.3**	**188.8**
	2019	**200.0**	**181.1**	**266.0**	**122.1**	**153.1**	**181.7**
Quarterly							
2017	Q1	176.1	152.2	242.7	124.9	138.0	166.2
	Q2	172.0	142.3	243.6	139.4	139.2	165.3
	Q3	175.5	141.8	252.6	149.3	143.8	157.1
	Q4	188.8	161.9	258.8	165.5	138.0	171.2
2018	Q1	204.9	183.3	268.2	180.9	144.2	184.6
	Q2	214.3	196.7	266.9	210.7	150.1	197.2
	Q3	208.8	202.1	247.9	170.9	148.3	194.9
Forecast	Q4	**192.5**	**178.3**	**248.7**	**119.2**	**146.6**	**178.6**
2019	Q1	**192.7**	**170.7**	**262.2**	**118.1**	**150.2**	**177.6**
	Q2	**200.8**	**182.6**	**264.1**	**124.9**	**156.8**	**183.3**
Monthly							
2017	Oct	183.0	151.2	258.8	164.5	139.1	164.3
	Nov	191.9	165.7	260.5	172.2	139.2	174.9
	Dec	191.5	168.8	257.2	159.7	135.6	174.5
2018	Jan	206.7	187.3	270.2	171.7	140.2	183.6
	Feb	204.1	180.5	269.5	184.6	145.5	182.5
	Mar	203.8	182.0	264.9	186.3	146.8	187.8
	Apr	211.0	192.1	268.5	195.0	148.2	191.7
	May	218.3	202.6	266.4	222.2	153.0	200.3
	Jun	213.4	195.5	265.6	214.9	149.2	199.6
	Jul	213.7	205.4	252.6	198.8	147.1	200.4
	Aug	205.8	197.3	246.7	165.6	151.6	191.6
	Sep	206.9	203.6	244.4	148.3	146.2	192.7
	Oct	207.3	205.8	248.1	116.3	147.8	192.2

Commodity price indices and forecasts are by BMO Capital Markets Economics.
Forecasts are independent of those used by BMO Capital Markets Equity Research.

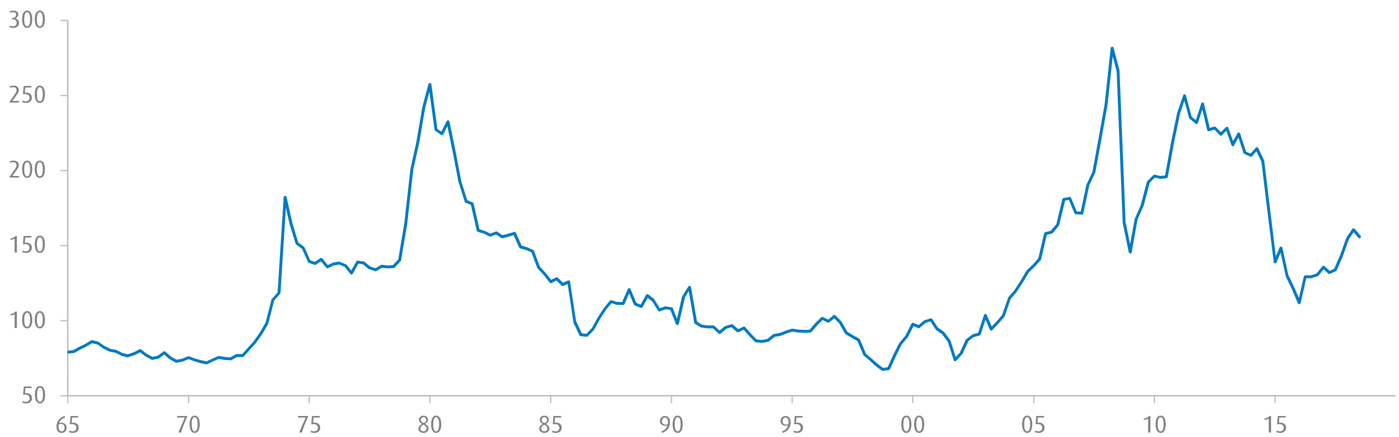
[2] Due to data availability issues, the following series have been removed from the Forest Products and All Commodities Indices: newsprint, market pulp, supercalendered paper.

Historical Charts: All-Commodity Index

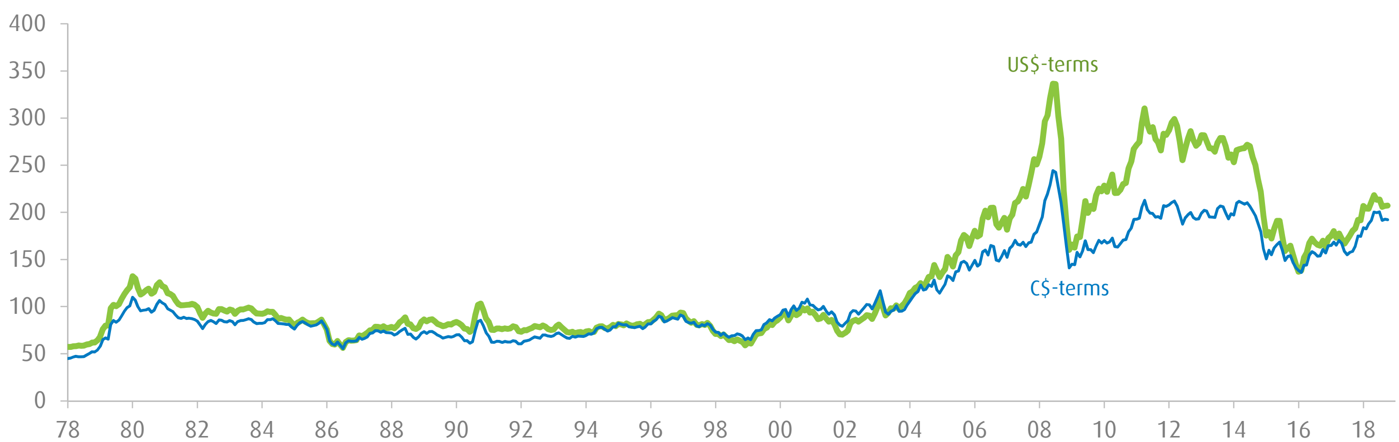
Nominal US$-Terms (2003 = 100)



Real US$-Terms (2003 = 100)



Nominal (2003 = 100)



Technical Note

The BMO Capital Markets Commodity Price Index is a fixed-weight, export-based index that encompasses the price movement of 16 commodities key to Canadian exports. Weights are each commodity's average share of the total value of exports of the 16 commodities during the period 2012-16. Similarly, weights of sub-index components reflect the relative importance of commodities within their respective product group.

The all-commodities index and sub-indices consist of the following:

Percent	Weight in All-Commodities Index	Weight in Sub-Index		Weight in All-Commodities Index	Weight in Sub-Index
Metals & Minerals	**29.8**	**100.0**	**Forest Products**	**6.5**	**100.0**
Gold	10.6	35.4	Lumber	5.5	84.1
Silver	1.4	4.6	OSB	1.0	15.9
Aluminum	6.4	21.4			
Copper	2.3	7.8	**Agricultural Products**	**9.1**	**100.0**
Nickel	3.2	10.8	Wheat	4.5	49.5
Zinc	0.9	3.0	Canola	3.3	36.6
Uranium	1.3	4.4	Hogs	0.3	3.0
Potash	3.8	12.6	Beef Cattle	1.0	10.9
Oil and Gas	**54.6**	**100.0**	**All Commodities**	**100.0**	
Crude Oil	47.6	87.2			
Canadian Natural Gas	7.0	12.8			

Unless otherwise specified, all indices reported in this publication correspond to prices in U.S. dollars.