

Steep Crude Decline Delivers Late-Year Hit

Economic and geopolitical uncertainties linger into year-end

The **BMO Capital Markets Commodity Price Index** plunged 10.0% in November, marking the largest monthly dip in nearly four years. While the weakness was relatively broad-based, the main driver was the dive in crude oil prices, which tumbled nearly 20% m/m before renewed weakness knocked WTI below US\$47/bbl by mid-December. Weaker economic data out of China and a rising U.S. dollar weighed on base metal prices, though a 90-day U.S./China truce (agreed upon in early December) temporarily cooled simmering trade tensions.

The **Oil & Gas Index** plummeted 17.8% in November, as an outsized decline in crude oil more than offset a rally in natural gas. WTI peaked at \$76.40/bbl on October 3rd and has subsequently sunk to \$46.25 (December 18th) as the market eyes excess supply and is not convinced that OPEC+ will follow through with its 1.2 million barrels per day cut in production in 2019. Meanwhile, U.S. natural gas benchmark Henry Hub rallied 24.9% in November on an early start to 'winter' in the face of below-normal inventories, reaching a peak of \$4.70 per million BTUs by the third week of the month before easing to \$3.80 recently.

The **Metals & Minerals Index** fell 0.8%, marking the sixth monthly decline in the last seven months. Nickel prices remained under pressure, though some progress on the U.S./China trade front and tighter global inventories provided support into December. Aluminum also underperformed, retreating to a new 15-month low as Russian sanctions were postponed once again. Meantime, gold has been buoyed by relentless equity market volatility and prospects for a more cautious Federal Reserve.

The **Forest Products Index** eked out a 2.2% gain in November as the lumber market stabilized from a record-breaking decline. Spruce-Pine-Fir prices clawed back \$14 to average \$337/mbf for the month, but the underlying trend remained soft, as evidenced by a sag in month-end pricing. Soggy weather conditions and cautious buying saw OSB prices drop \$37 to average \$242/msf, although most of the decline was due to base effects with weekly pricing trends showing only a modest dip.

The **Agriculture Index** declined 2.1% to a nine-month low in November. In the crop space, canola prices dropped an additional 4.6% due to the continued weight of soybeans on the broader oilseed complex. Although China resumed purchases of U.S. soybeans in December (at least temporarily), the upturn in sales has yet to make a meaningful dent in this year's large crop. In the livestock space, hog prices declined a roughly-seasonal 5.8% in November, but are down nearly 9% over the past year amid a continued ramp-up of North American supply.

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)

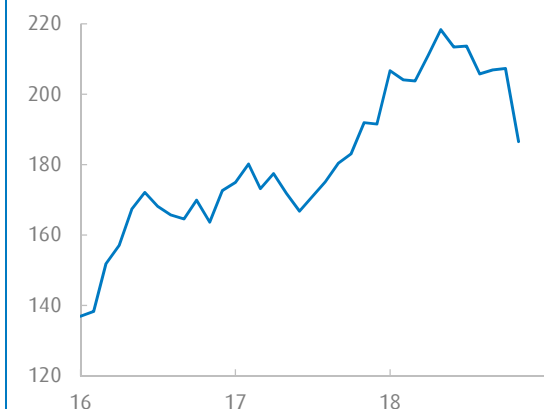
416-359-4407

earl.sweet@bmo.com



**BMO CAPITAL MARKETS
COMMODITY PRICE INDEX
(2003 = 100)**

All Commodities Index



	Nov. Level (2003=100)	% Change from Mth. Ago	% Change from Yr. Ago
All Commodities	186.5	-10.0	-2.8
Oil & Gas	169.2	-17.8	2.1
Metals & Minerals	246.0	-0.8	-5.6
Forest Products	118.9	2.2	-31.0
Agriculture	144.6	-2.1	3.9

Energy and Materials

		Crude Oil	Natural Gas		Lumber
		(WTI)	(Henry Hub)	(Alta. Empress)	
		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		65.80	3.14	2.28	491
2017	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
	November	57.00	4.09	2.73	337
	m-t-d December	52.10	4.41	3.43	324
Forecast	2018 Avg.	65.00 ↓	3.15	2.35 ↑	480 ↓
	2019 Avg.	59.00 ↓	3.20	2.50	345 ↓

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	2.97	0.96	1.33	5.99	1269	15.73
2017	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
	November	2.81	0.88	1.18	5.10	1221	14.36
	m-t-d December	2.80	0.88	1.21	4.94	1241	14.51
Forecast	2018 Avg.	2.96	0.96	1.33	5.95 ↓	1270	15.70 ↓
	2019 Avg.	3.15	1.00	1.32	5.70 ↓	1285	16.25 ↓

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 US\$/bushel	Canola US\$/tonne	Cattle	Hogs 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	4.95	390	114.16	65.35
2017	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
	November	5.05	361	116.04	57.61
	m-t-d December	5.17	363	118.29	55.32
Forecast	2018 Avg.	4.95	389 ↓	114.50 ↑	65.00
	2019 Avg.	5.30 ↑	400	120.00 ↑	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 Forecasts²

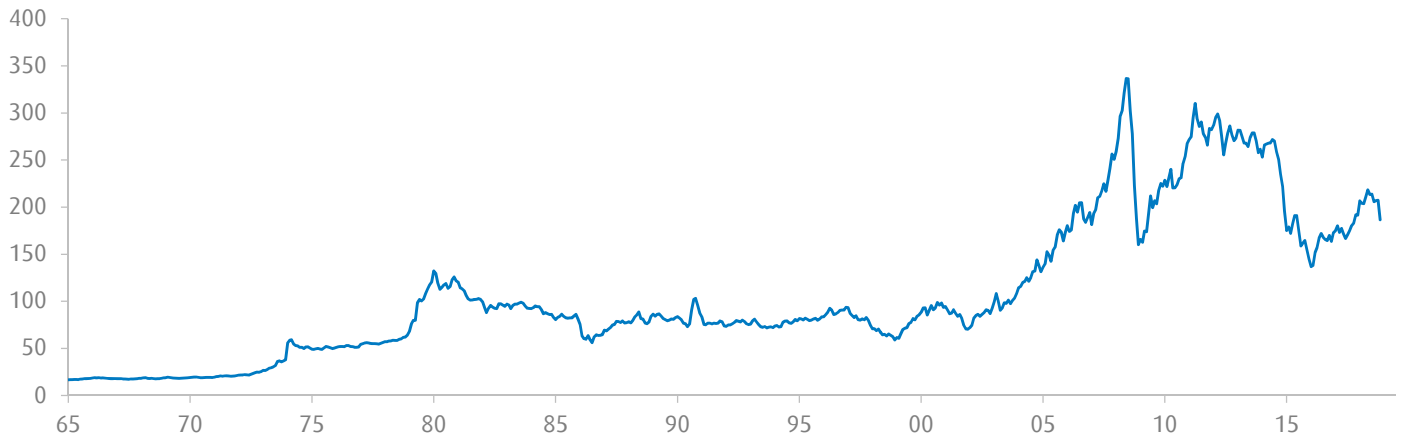
US\$-terms : 2003 = 100		All Commodities	Oil & Gas	Metals & Minerals	Forest Products	Agricultural Products	All Commodities C\$-terms
Annual							
	2009	196.3	182.0	267.1	64.3	145.2	159.1
	2010	234.6	232.7	291.1	92.0	163.4	172.5
	2011	283.7	275.6	364.8	90.1	205.3	200.3
	2012	279.7	270.2	353.8	108.4	216.9	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	204.6	189.4	257.7	169.7	147.3	188.9
	2019	195.2	172.7	265.1	121.0	154.9	187.2
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	190.6	175.5	248.0	116.4	146.5	178.9
2019	Q1	184.8	156.7	261.1	117.1	151.9	177.2
	Q2	195.6	172.3	265.0	124.4	158.6	188.1
Monthly							
2017	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
	Nov	186.5	169.2	246.0	118.9	144.6	175.7

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

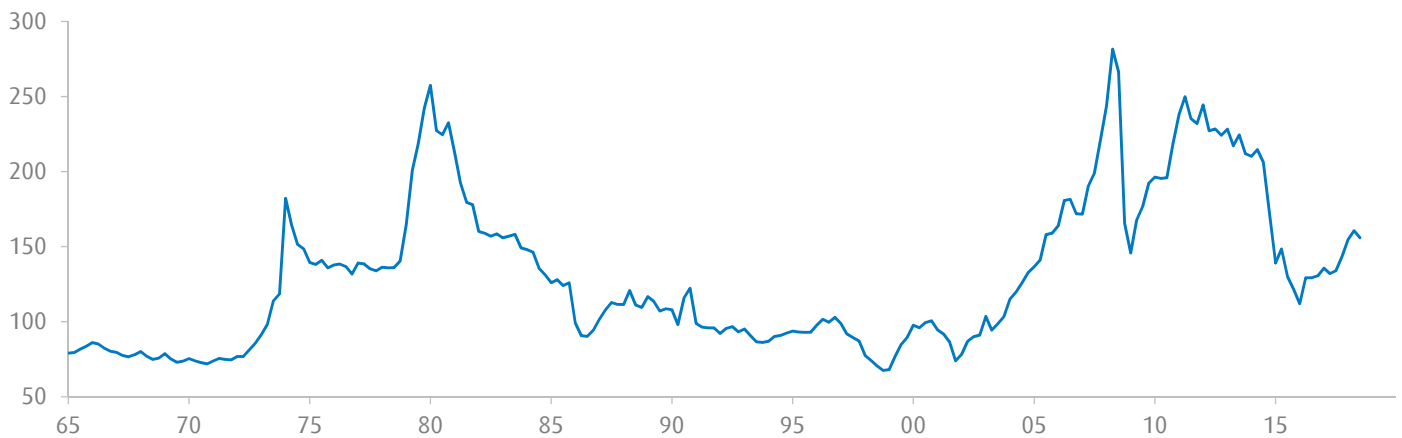
² Due to data availability issues, the following series have been removed from the Forest Products and All Commodities Indices: newsprint, market pulp, supercalendered paper.

Historical Charts: All-Commodity Index

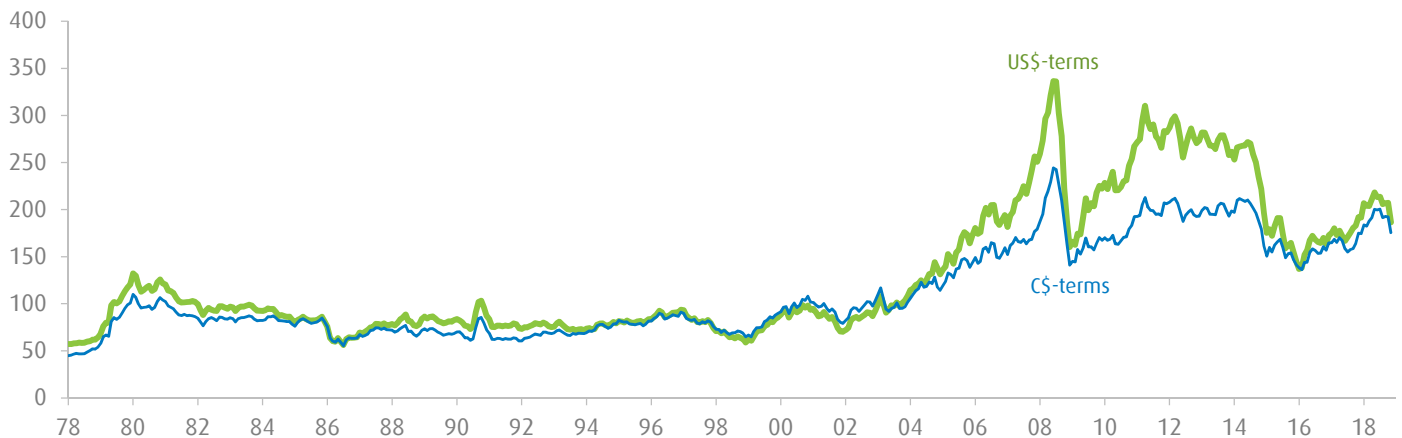
Nominal US\$-Terms (2003 = 100)



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.

General Disclosure

"BMO Capital Markets" is a trade name used by the BMO Financial Group for the wholesale banking businesses of Bank of Montreal and its subsidiaries BMO Nesbitt Burns Inc., BMO Capital Markets Limited in the U.K. and BMO Capital Markets Corp. in the U.S. BMO Nesbitt Burns Inc., BMO Capital Markets Limited and BMO Capital Markets Corp are affiliates. This document is issued and distributed in Hong Kong by Bank of Montreal ("BMO"). BMO is an authorized institution under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong) and a registered institution with the Securities and Futures Commission (CE No. AAK809) under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong). BMO does not represent that this document may be lawfully distributed, or that any financial products may be lawfully offered or dealt with, in compliance with any regulatory requirements in other jurisdictions, or pursuant to an exemption available thereunder. This document is directed only at entities or persons in jurisdictions or countries where access to and use of the information is not contrary to local laws or regulations. Their contents have not been reviewed by any regulatory authority. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavours to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This document is not to be construed as an offer to sell, a solicitation for or an offer to buy, any products or services referenced herein (including, without limitation, any commodities, securities or other financial instruments), nor shall such information be considered as investment advice or as a recommendation to enter into any transaction. Each investor should consider obtaining independent advice before making any financial decisions. This document is provided for general information only and does not take into account any investor's particular needs, financial status or investment objectives. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein.

Dissemination of Research

Our publications are disseminated via email and may also be available via our web site <http://economics.bmocapitalmarkets.com>. Please contact your BMO Financial Group Representative for more information.

Conflict Statement

A general description of how BMO Financial Group identifies and manages conflicts of interest is contained in our public facing policy for managing conflicts of interest in connection with investment research which is available at http://researchglobal.bmocapitalmarkets.com/Public/Conflict_Statement_Public.aspx.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

BMO Financial Group (NYSE, TSX: BMO) is an integrated financial services provider offering a range of retail banking, wealth management, and investment and corporate banking products. BMO serves Canadian retail clients through BMO Bank of Montreal and BMO Nesbitt Burns. In the United States, personal and commercial banking clients are served by BMO Harris Bank N.A., Member FDIC. Investment and corporate banking services are provided in Canada and the US through BMO Capital Markets. BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A., BMO Ireland Plc, and Bank of Montreal (China) Co. Ltd. and the institutional broker dealer businesses of BMO Capital Markets Corp. (Member SIPC), BMO Nesbitt Burns Securities Limited (Member SIPC) in the U.S., BMO Nesbitt Burns Inc. (Member Canadian Investor Protection Fund) in Canada, Europe and Asia, BMO Capital Markets Limited in Europe, Asia and Australia and BMO Advisors Private Limited in India.

"Nesbitt Burns" is a registered trademark of BMO Nesbitt Burns Corporation Limited, used under license. "BMO Capital Markets" is a trademark of Bank of Montreal, used under license. "BMO (M-Bar roundel symbol)" is a registered trademark of Bank of Montreal, used under license.

© Registered trademark of Bank of Montreal in the United States, Canada and elsewhere. ™ Trademark Bank of Montreal in the United States and Canada. © COPYRIGHT 2018 BMO CAPITAL MARKETS CORP.

A member of **BMO Financial Group**