Commodities Enter 2020 with Plenty of Caution

A Publication of BMO Capital Markets Economic Research • Douglas Porter, CFA, Chief Economist, BMO Financial Group

Economic signals improving; but trade, geopolitical woes could resurface

The **BMO Capital Markets Commodity Price Index** ended 2019 on an upswing, rising 2.2% in December. However, after a firm start to January, the commodity backdrop has abruptly shifted in recent days as the coronavirus outbreak has sent oil prices plummeting. Notwithstanding recent progress on various trade negotiations, geopolitical risks will linger in 2020, weighing on global industrial activity and commodity demand. Moreover, after a sharp pivot to easing in 2019, global central banks are more likely to stand pat on policy rates this year.

The **Oil & Gas Index** finished last year on a positive note, rallying 4.2% in December, as WTI climbed above US$60/bbl in response to OPEC+ deepening production cuts and the U.S./China Phase One trade agreement. The short-lived U.S./Iran conflict sent WTI above $65 in early January but it has since dropped below $55. In contrast, the U.S. natural gas benchmark Henry Hub has slumped, falling below the US$2.0/mmbtu level in response to a combination of warmer weather and stronger-than-expected production.

The **Metals & Minerals Index** slipped 0.2% in December, its fourth consecutive loss. Monthly average gold and silver prices showed an uncommon divergence, with gold ticking higher while silver dipped, though both spiked in January. On the base metals side, Phase One trade deal optimism hoisted copper prices higher, but this was countered by hefty declines in zinc and especially nickel.

The **Forest Products Index** rose 1.2% in December as milder-than-expected weather conditions provided a spark to U.S. home building, while lingering trade uncertainties kept buyers cautious during the thinly traded holiday period. Average SPF prices increased 1.6% to a ten-month high whereas OSB slipped 2.5%, though both lumber and panel board prices continued to trade in relatively tight ranges through late-January.

The **Agriculture Index** increased 3.4% to a 16-month high in December, reflecting a broad-based advance across components. Benchmark crop prices generally remain low by historical norms and are expected to increase only gradually, given elevated stockpiles and weak global feed demand due to the outbreak of African swine fever (ASF) in China. In the livestock segment, North American hog prices should trend higher as China fills the gap left by ASF by increasing U.S. purchases.

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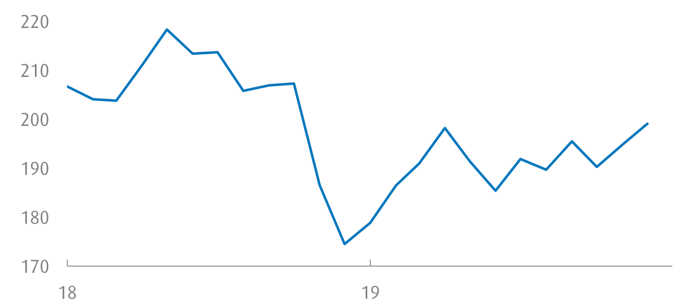
BMO Capital Markets Commodity Price Index

(2003 = 100)
All Commodities Index



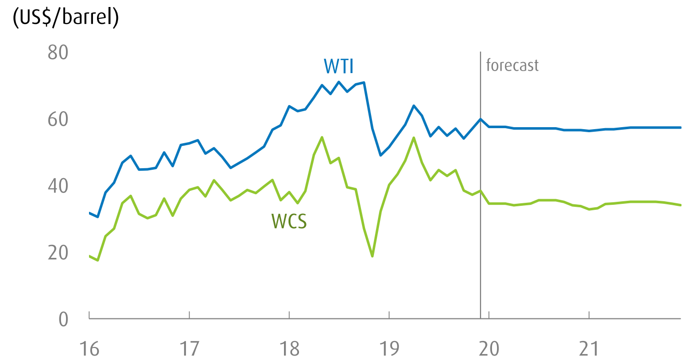
Source: BMO Economics

	Dec. Level (2003=100)	% Change from Mth. Ago	Yr. Ago
All Commodities	199.1	2.2	14.1
Oil & Gas	172.7	4.2	17.9
Metals & Minerals	276.6	-0.2	11.5
Forest Products	134.4	1.2	20.3
Agriculture	149.9	3.4	2.3

Source: BMO Economics

Energy: The price of benchmark **West Texas Intermediate** (WTI) crude oil is unlikely to be much different from last year with our full-year average projections standing at US$57/bbl for both 2020 and 2021. In our view, OPEC+ will likely need to continue restraining supply given the relatively subdued global economic outlook and risks associated with rising non-OPEC+ production (for instance, in the U.S., Norway and Brazil). Equally important, Saudi Arabia, the world's key swing producer, appears highly committed to ensuring prices do not fall given its weak fiscal situation.

Chart 1
Crude Oil Prices



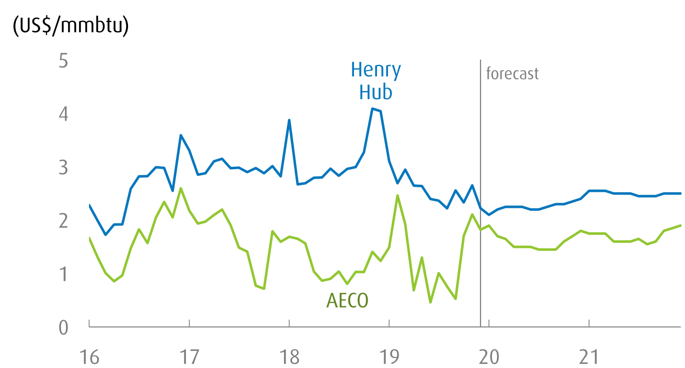
Sources: BMO Economics, Haver Analytics

Although OPEC+ did not announce longer-term production targets (i.e., past the end of March) when they met in early December, they will have little choice but to do so at their next meeting scheduled in early March. The only question revolves around the magnitude, which, in our view, is likely to be fairly similar to the current reduction (2.1 mbbl/d including an additional 0.4 mbbl/d of voluntary cuts by Saudi Arabia). The International Energy Agency's latest forecasts show that non-OPEC crude oil production will remain robust, growing by 2.1 mbbl/d in 2020. This should easily outpace the growth in world oil demand, which is estimated at 1.2 mbbl/d.

As for the price of Western Canada Select (WCS) crude, its discount to WTI has widened to just over US$23/bbl (from just over $15 a few months earlier) due to a sharp build-up in inventories in Alberta towards the end of 2019 and, more recently, a cold weather snap, which has slowed pipeline and rail transportation. Though the weather will eventually improve and crude oil stocks should gradually dissipate, the WCS discount is unlikely to narrow significantly. We forecast it to remain in a range of $15-22, which is considered to be the typical cost of transporting crude-by-rail from Alberta to U.S. refineries. From a longer-term perspective, we would not expect the WCS discount to narrow significantly until major new pipelines are built, which would increase export capacity and markedly lower transportation costs to global export markets. In the meantime, we expect the Alberta government to continue curtailing provincial crude production for the rest of 2020.

We have revised down our **Henry Hub** natural gas forecast to an annual average of US$2.25/mmbtu for 2020 and $2.50 for 2021. Beyond the impact of presently warmer-than-normal temperatures, the predominant reason for the revision is the likelihood that U.S. natural gas production will outpace consumption in the near term. The U.S. Energy Information Administration is projecting that dry natural gas production will remain at record volumes (growing 2.9% in 2020) due to higher associated gas production from oil-directed rigs, improved drilling efficiency and greater pipeline capacity. Meanwhile, U.S. natural gas consumption is forecast to remain steady, rising 1.7% in 2020. Although the U.S. has become a net exporter of natural gas (since 2018), external demand is unlikely to provide a boost to prices as the global LNG market is struggling with excess

Chart 2
Natural Gas Prices



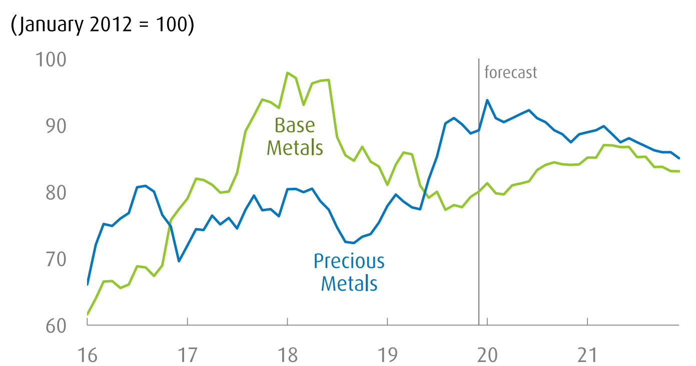
Sources: BMO Economics, Haver Analytics

supply. This will likely suppress the immediate benefits received from the U.S./China Phase One trade deal.

On the flipside, Canada's natural gas market is experiencing a mini-revival. The price of Alberta Energy Company (**AECO**) – Western Canada's natural gas benchmark – has been hovering around US$1.90/mmbtu since early October, after averaging a paltry $0.53 in September. The rally was initially driven by actions taken by the Canadian Energy Regulator (CER) to improve natural gas producers' access to storage facilities through the TC Energy pipeline and the onset of winter. However, the more critical driver has been the decision by Western Canadian producers to rein in drilling/production in response to several months of depressed prices. According to the CER, Western Canada natural gas production fell 1.6% in 2019, following an average increase of 3% the prior three years. Furthermore, it appears that natural gas output will remained subdued in 2020 based on company projections. However, the upside for AECO is fairly limited given that Canada's main natural gas export market – the U.S. – is likely to remain awash with supply. As a result, we are forecasting AECO to average US$1.60/mmbtu in 2020 and $1.70 in 2021, compared to $1.35 in 2019.

Metals: Precious metals had a strong year in 2019 thanks to the shift in global monetary policy and heightened geopolitical and trade risks. The average gold price charged ahead 9.7%, its largest annual increase since 2011, while silver trailed with a more modest 3.1% gain. Gold's performance was notable in that it coincided with renewed strength in the U.S. dollar and equity markets, factors which typically dampen investor demand for the yellow metal. Portfolio allocation was a major catalyst last year amid weak economic growth and declining global bond yields, with gold ETF holdings surging by 16% from June to November. In addition, central banks have been on a gold buying spree as they seek to de-dollarize their reserves, helping to compensate for the decline in consumer demand for bars and coins and jewelry.

Chart 3
Metal Prices



Sources: BMO Economics, Haver Analytics

While global monetary conditions will remain accommodative in 2020, supporting ongoing asset allocation in favour of precious metals, further easing may be limited now that the industrial cycle appears to be turning. And, following the signing of the U.S./China Phase One deal and the USMCA and the tariff truce between the U.S. and France, trade tensions have been taken off the boil (for now). Thus, assuming no material escalation in Middle East hostilities, **gold** is unlikely to see much upside from current levels, averaging US$1500/oz in 2020 (up from $1393 in 2019). As global growth strengthens in 2021, supporting a modest rise in bond yields, we expect gold to pull back to around $1450. Given expectations of increased demand for solar panels and electromagnetic shielding in 5G infrastructure, there is potential for **silver** to outperform gold over the coming years. We forecast the average silver price to rise from $16.20/oz in 2019 to $18.00 in 2020 before easing to $17.50 in 2021. Accordingly, after reaching a 27-year high in 2019, the gold-to-silver ratio should begin to trend lower over the next couple years.

Conversely, base metals had a tough year in 2019, battered by the global growth slowdown and ever-present trade friction. Given its outsized importance as both the largest and marginal consumer of most base metals, softer industrial activity in China weighed heavily, though a resilient real estate sector provided some offset. The macro outlook for base metals over the next two years is improved, albeit muted, as recent indicators point to a nascent recovery in global manufacturing and trade. With little room to lower interest rates, some governments are pursuing large-scale fiscal stimulus to reinvigorate growth, including funding for renewable energy projects. Meanwhile, authorities in China were set to rely on the metals-intensive construction sector to continue fueling the economy, supported by minor tweaks to monetary and fiscal policy, but must now contend with the human and economic toll of the Wuhan coronavirus outbreak. At the same time, trade-related risks will persist, weighing on sentiment in metals markets. Persistent underperformance in key emerging markets outside China (e.g., India, Brazil, Mexico, South Africa) is another downside risk, as growth in global commodity demand increasingly depends on these economies.

While market-specific factors are mixed, on balance we anticipate higher average base metals prices in 2020-21, though – with the exception of nickel – below 2018 levels. **Aluminum** prices continued to grind lower through most of last year, finally reaching a bottom in October. Downward price pressure in spite of a market deficit is in part due to cost deflation in the industry as larger, cleaner and more efficient smelters come online (namely, in China), replacing higher-cost capacity. This trend will continue to weigh over the forecast horizon, even as the fight against single-use plastics boosts demand for aluminum packaging. Still, we expect aluminum to stage a modest rebound from US$0.81/lb on average in 2019 to $0.83 in 2020 and $0.87 in 2021.

Copper prices were volatile in 2019, tracking the ups and downs in the U.S./China trade saga more closely than other metals. Although the copper market is currently in deficit and inventories have declined, demand was decidedly weak last year, reducing the expected trajectory of the deficit. The copper needs associated with electric vehicles and renewable energy (versus internal combustion engines and fossil fuels) are considerable and warrant a positive long-term view on the red metal, but a flare-up in the trade war or prolonged industrial weakness could undermine prices in the short term. After dropping to an average of US$2.72/lb in 2019, look for copper to rise to $2.85 in 2020, followed by a smaller increase to $2.90 in 2021.

Indonesia's announcement that it was fast-tracking the export ban on **nickel** ore last summer led to a surge in prices due to expectations of a tighter market for the raw material given sustained strong demand. Indeed, nickel was the only base metal to register a gain in 2019 as a whole. With the ban now in effect – two years early – nickel prices will remain supported, albeit down from earlier levels, by still-solid stainless steel production in China and uncertainty over the impact of the ban on ore availability (although China's own ore inventories are healthy). Over the medium term, Chinese demand for nickel for steel production will inevitably slow, but this will gradually be offset by accelerating electric vehicle battery demand. Nickel prices are projected to average US$6.70/lb in 2020 (up from $6.31 in 2019) and $7.10 in 2021.

In the two years since it touched a decade-plus high in early 2018, **zinc's** fortunes have sharply reversed, stymied by negative demand growth. The pricing environment is set to remain subdued over the forecast horizon as mine supply expands faster than consumption, allowing concentrate stocks to be further replenished. However, refined metal stocks are forecast to recover only gradually and there is a risk that tougher environmental standards in China will lead to more smelter suspensions/shutdowns, which would counteract continued softness on the demand side. After averaging $1.16/lb in 2019, we expect zinc to fall to $1.00 in 2020 before picking up to $1.05 in 2021.

Forest Products: Coming off a volatile couple of years, the lumber market experienced relatively stable conditions in 2019 as producers reined in excess capacity, while North American housing markets found a more solid footing. Still, price trends in lumber and panel board markets were uneven throughout 2019 as economic sentiment and expectations of future demand were whipsawed by U.S/China trade tensions. While the recent signing of the Phase One trade deal should remove some level of uncertainty in global trade markets, business sentiment has also been somewhat restrained by the drawn out process of USMCA ratification, which has lingered into 2020, and the still unresolved softwood lumber dispute.

Chart 4
Spruce-Pine-Fir Prices

Sources: BMO Economics, Haver Analytics

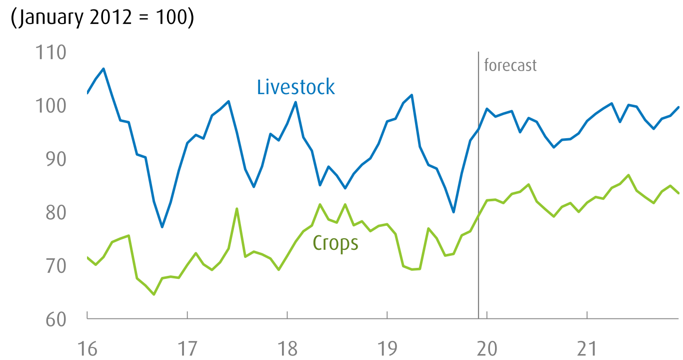
Geopolitics aside, improved supply imbalances have put the outlook for housing back in the driver's seat for near-term price trends in lumber and panel board markets. In that respect, the Fed's monetary policy reversal in 2019 and subsequent interest rate cuts have supported improved housing affordability (via lower mortgage rates), and alongside persistent labour market strength, have underpinned recent strength in housing starts and first-time buyer participation. As a result, U.S. homebuilder sentiment, as measured by the NAHB's Housing Market Index, rose to a two-decade high in December 2019 before stepping back modestly to start 2020. Still, with broader economic activity expected to slow over the forecast period, we expect U.S. housing starts to rise to just 1.35 million units in 2020—well below the prior cycle's high of 2.07 million units. Furthermore, homebuilding will remain challenged by high building material costs, scarcity of lots and labour shortages. The shrinking share of single-family homes (which use three times the lumber compared to multi-unit dwellings) and smaller build sizes have also offset some of the positive lumber demand associated with improved starts. Meantime, the outlook for U.S. existing home sales appears relatively subdued over the forecast period, weighing on lumber demand given its correlation to other major end-uses such as renovations and home furnishings.

From a supply perspective, major curtailments and shutdowns reduced North American lumber production by more than 3 bbf in 2019 (with the majority taking place in the B.C. interior). While reduced capacity and leaner inventories have provided support early in 2020 ahead of the summer building season, cyclically weak demand is expected to weigh on prices through the rest of the year. Of course, tighter inventories also imply less flexibility to adapt to demand surges, so further housing market outperformance presents some upside risk to prices in the near-term. Nonetheless, in our base case we expect **Spruce-Pine-Fir** prices to average US$360/mbf in 2020, matching the 2019 average, albeit with a softening trend throughout the year. While SPF prices are expected to remain relatively stable in 2021, the lower starting point will drive average prices down to $355 for the year.

In the **oriented strand board** (OSB) market, prices dipped to multi-year lows by mid-2019 as prior mill restarts led to a build-up of excess inventories. As a result, producers announced 2.5 bsf of capacity reductions in the second half of the year to help wind down market imbalances. While this improved dynamic will provide some support in 2020, the muted outlook for North American housing starts growth should limit any significant near-term upside in OSB prices, especially given OSB's heavy reliance on home construction. As such, we expect North Central OSB to average US $220/msf in 2020, sticking close to current levels, before rising modestly to $225 in 2021.

Agriculture: Wheat prices remain low by historical norms, but trended higher during the final four months of 2019 and approached a four-year best around the turn of 2020. Recent gains have been driven primarily from the supply side, with U.S. winter wheat acreage now at its lowest level in more than a century and challenging growing conditions curtailing yields in parts of the Black Sea region and Australia (where wheat production has fallen by more than 50% over the past few years). The firmer market is taking some near-term pressure off struggling producers, but the global wheat market is likely to remain broadly oversupplied in 2020, which is expected to cap prices near current levels. Indeed, global wheat production is expected to reach a new high during the current marketing year, due to generally solid yields outside the stressed regions and a particularly strong crop in Europe. As a result, global stockpiles are expected to remain near recent highs relative to consumption. The demand environment has also deteriorated somewhat, given the more gradual pace of global economic growth and more moderate food consumption growth in the United States. Ongoing enhancements in genetics and technology will also continue to push yields and supply higher over the longer term. Overall, wheat prices are expected to increase from an average of US$4.94/bushel in 2019 to $5.50 in 2020 and 2021, roughly in line with current levels.

Chart 5
Agricultural Prices



Sources: BMO Economics, Haver Analytics

Canola prices plumbed decade-lows in mid-2019 and recovered only modestly during the second half of the year. Like most crops, canola has been struggling under the weight of global oversupply, primarily due to years of strong soybean production, which has weighed broadly on oilseed prices. North American oilseed prices have also been undermined by trade hostilities between the U.S. and China, which typically purchases around one-third of the U.S. soybean crop. As a result of the trade war, North American soybean stockpiles are far above recent norms relative to consumption, despite significantly lower acreage and a difficult growing season in the U.S. last year. Although it is encouraging that China has agreed to purchase an additional $32 billion in U.S. agricultural products over the next two years as part of the Phase One trade deal, the market response has been skeptical. Soybean prices actually edged lower after the details of the agreement were released in mid-January and are little-changed since the possibility of a mini-deal arose in October. One concern is that with African swine fever (ASF) still ravaging China’s hog herd, the country has a reduced need for feed products like oilseeds. For the same reason, China is also unlikely to loosen its restrictions on purchases of canola from Canada any time soon. Overall, canola prices are expected to improve relatively gradually from today’s low levels. After averaging US$344/tonne in 2019, canola prices are expected to advance to $375 in 2020, roughly in line with current levels. Pricing should improve somewhat further to $400 in 2021 under the assumption that U.S./China trade relations remain on track and that China is able to begin rebuilding its hog herd.

Hog prices demonstrated substantial volatility in 2019 as the market was buffeted by various supply and demand shocks. From a global perspective, the most consequential development has been the spread of ASF in China, which is estimated to have resulted in the destruction of 40% or more of the country’s world-leading hog herd—a loss more than twice the size of the entire U.S. herd. Unfortunately, the trade war between the U.S. and China has prevented Asia's pork shortage from providing much of a lift to North American hog prices. And, while the Phase One agreement represents a step in the right direction, the hog market has reacted with caution, perhaps indicating some wariness as to whether China will be able to follow through on its hefty commitments. Benchmark hog prices have also been grappling with rapidly increasing U.S. supply, with the headcount of the domestic hog herd up 19% since 2013. Although per-capita pork consumption in the U.S. has also been rising, the industry will almost certainly need an external outlet for surplus production if it is to avoid a drop in pricing. The near-term path for hog prices will therefore depend mainly on whether excess supply in the U.S. begins to make its way to pork-deprived China. Under the assumption that China does meaningfully ramp up its purchases of U.S. pork, benchmark hog prices are expected to increase from an average of US$70/cwt in 2019 to $75 in 2020 and $80 in 2021, despite the growing U.S. herd. However, there is a risk that North American supply could become excessive once China restocks its domestic herd.

Cattle prices dropped sharply during the first nine months of 2019, even after adjusting for typical seasonal weakness, before rebounding to end the year roughly where they started. The worst of the mid-year pressure occurred after a fire temporarily disabled a massive meatpacking plant in Kansas, which typically processes nearly 5% of U.S. cattle. With the plant back online, cattle supply and demand are now fairly balanced. Compared to the hog space, cattle herd expansion has been relatively cautious in recent years, with the U.S. herd headcount only 7% above its recent low in 2013. On the demand front, rising per-capita beef consumption has helped absorb the increase in domestic production. Overall, the North American beef industry appears to be in a state of stasis, at least for the time being, with supply and demand growth relatively well balanced and producer margins close to longer-run norms. Overall, prices are expected to increase roughly in line with inflation in the near term, rising from an average of US$116/cwt in 2019 to $120 in 2020 and $122 in 2021.

Energy, Materials and Agriculture

		Crude Oil (US$/bbl)	Natural Gas Henry Hub (US$/mmbtu)	Natural Gas AECO (US$/mmbtu)	Lumber (US$/mbf)	Wheat (US$/bushel)	Canola (US$/tonne)	Cattle (US$/cwt)	Hogs (US$/cwt)
	2007	72.36	6.98	6.02	245	6.38	378	93.92	65.56
	2008	99.57	8.86	7.78	215	7.98	527	93.60	66.05
	2009	61.69	3.95	3.51	177	5.30	371	83.85	58.11
	2010	79.43	4.39	3.89	255	5.81	429	94.95	75.60
	2011	95.08	4.00	3.67	255	7.10	566	114.54	90.34
	2012	94.20	2.75	2.39	299	7.50	601	122.65	84.93
	2013	97.93	3.73	3.08	356	6.84	545	126.40	89.33
	2014	93.26	4.39	4.08	349	5.88	400	151.50	105.83
	2015	48.69	2.63	2.12	277	5.08	371	146.49	69.40
	2016	43.21	2.52	1.64	305	4.36	366	118.61	65.60
	2017	50.91	2.99	1.67	401	4.36	393	117.90	69.87
	2018	64.84	3.17	1.19	480	4.95	389	114.64	65.26
	2019	56.99	2.57	1.36	360	4.94	344	115.84	69.92
	y-t-d 2020	59.03	2.04	1.78	394	5.65	363	126.21	68.00
2019	Jan	51.45	3.11	1.49	347	5.17	362	125.31	60.78
	Feb	54.96	2.69	2.46	401	4.99	361	127.44	55.71
	Mar	58.14	2.95	1.93	369	4.53	342	128.22	68.57
	Apr	63.86	2.65	0.69	326	4.51	337	126.27	83.66
	May	60.85	2.64	1.30	312	4.58	328	111.32	86.39
	Jun	54.65	2.40	0.46	360	5.25	341	108.57	78.25
	Jul	57.44	2.37	1.01	356	5.06	341	107.55	78.22
	Aug	54.82	2.22	0.76	340	4.75	339	104.56	69.98
	Sep	56.96	2.56	0.53	373	4.79	338	99.66	63.58
	Oct	53.98	2.33	1.71	367	5.08	346	109.98	64.88
	Nov	56.95	2.65	2.11	384	5.16	346	119.49	62.92
	Dec	59.81	2.22	1.82	390	5.42	350	121.72	66.08
2020	m-t-d Jan	59.03	2.04	1.80	394	5.65	363	126.21	68.00
Forecast	2020 avg.	57.00	2.25 ↓	1.60 ↓	360 ↑	5.50	375 ↑	120.00	75.00
	2021 avg.	57.00	2.50	1.70	355 ↑	5.50	400	122.00	80.00

Commodity price forecasts are by BMO 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)	
	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
	2018	2.96	0.96	1.33	5.95	1270	15.71
	2019	2.72	0.81	1.16	6.31	1393	16.20
	y-t-d 2020	2.79	0.81	1.08	6.27	1555	18.00
2019	Jan	2.69	0.84	1.16	5.19	1292	15.61
	Feb	2.85	0.84	1.23	5.74	1320	15.81
	Mar	2.93	0.85	1.29	5.92	1302	15.32
	Apr	2.92	0.84	1.33	5.81	1288	15.03
	May	2.73	0.81	1.25	5.44	1283	14.62
	Jun	2.66	0.80	1.18	5.43	1358	14.99
	Jul	2.69	0.81	1.11	6.10	1415	15.75
	Aug	2.59	0.79	1.03	7.11	1497	17.15
	Sep	2.61	0.79	1.05	8.01	1510	18.18
	Oct	2.60	0.78	1.11	7.76	1495	17.66
	Nov	2.66	0.80	1.10	6.89	1472	17.18
	Dec	2.75	0.80	1.03	6.26	1480	17.10
2020	m-t-d Jan	2.79	0.81	1.08	6.27	1555	18.00
Forecast	2020 avg.	2.85 ↓	0.83 ↓	1.00 ↓	6.70 ↓	1500	18.00
	2021 avg.	2.90	0.87	1.05	7.10	1450	17.50

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

↑ *and* ↓ *indicate annual forecast changes from last month*

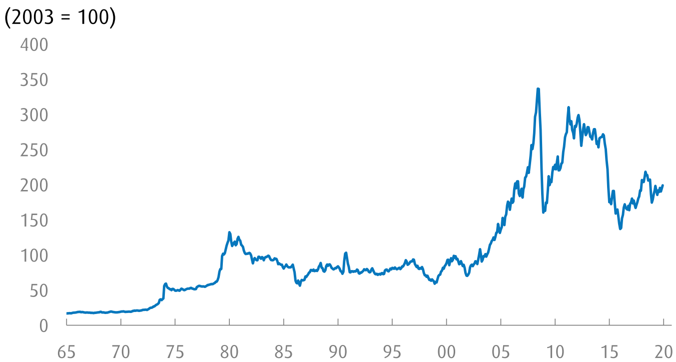
Commodity Indices and Forecasts (US$-terms : 2003 = 100)

			All Commodities	Oil & Gas	Metals & Minerals	Forest Products	Agricultural Products	All Commodities (C$-terms)
		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
		2018	204.3	189.0	257.5	169.5	147.2	188.8
		2019	191.0	165.6	267.4	124.4	141.3	180.9
Forecast		**2020**	**197.0**	**164.9**	**284.5**	**125.0**	**154.7**	**183.9**
		2021	**198.0**	**165.5**	**285.9**	**123.5**	**158.8**	**183.0**
	2018	Q2	214.2	196.7	266.8	210.7	150.1	197.2
		Q3	208.8	202.1	247.8	170.9	148.3	194.9
		Q4	189.4	173.8	247.3	115.6	146.3	178.4
	2019	Q1	185.4	160.4	256.6	128.3	143.2	176.0
		Q2	191.7	173.4	258.3	114.5	138.3	182.9
		Q3	192.3	163.5	276.8	123.5	137.9	181.2
		Q4	194.7	165.0	278.0	131.3	145.7	183.5
Forecast	**2020**	**Q1**	**197.6**	**166.1**	**282.6**	**131.8**	**155.1**	**185.3**
		Q2	**197.4**	**164.9**	**284.7**	**124.6**	**158.8**	**184.6**
		Q3	**197.1**	**164.9**	**286.4**	**121.7**	**152.4**	**183.7**
	2018	Dec	174.5	146.5	248.0	111.7	146.5	167.4
	2019	Jan	178.9	151.3	251.5	120.3	147.9	170.4
		Feb	186.5	160.2	257.9	137.3	145.2	175.9
		Mar	190.9	169.7	260.4	127.2	136.6	181.8
		Apr	198.2	185.0	260.1	112.5	136.0	189.2
		May	191.4	176.6	254.3	108.1	134.0	183.8
		Jun	185.4	158.7	260.4	122.8	144.8	175.8
		Jul	191.9	166.4	268.9	123.1	142.0	179.3
		Aug	189.7	158.7	278.3	118.4	136.2	179.6
		Sep	195.5	165.5	283.3	128.8	135.5	184.7
		Oct	190.3	156.6	280.4	126.9	142.4	179.4
		Nov	194.8	165.7	277.0	132.7	144.9	183.8
		Dec	199.1	172.7	276.6	134.4	149.9	187.3

Commodity price indices and forecasts are by BMO Capital Markets Economics

Forecasts are independent of those used by BMO Capital Markets Equity Research

All-Commodity Index — Nominal US$-Terms



Source: BMO Economics

All-Commodity Index — Real US$-Terms

Source: BMO Economics

All-Commodity Index — Nominal

Source: BMO Economics

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

Source: BMO Economics

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

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