



MANUFACTURING UPDATE

MARCH/APRIL 2020

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Global Impact of Covid-19 on Manufacturing

While the service industry experiences the most immediate impacts of the COVID19 pandemic, everything from commodity prices, to supply chains to demand for manufactured goods have or will be affected. Many mines and manufacturing facilities have shuttered for health and safety reasons, or due to a downturn in demand.

- The impact of the coronavirus on the Chinese economy has had a ripple effect on demand for commodities around the world. Preliminary figures show that China's PMI fell to 35.7 in February, from 50 in January. The February PMI is the lowest in record. As China reopens its economy and manufacturing makes a return, March PMI rose to 52.0, ahead of initial projections for the month.
- As almost all other major economies have entered into some sort of slowdown, China's experience *may* give us some indication of length and impact of corona-related economic slowdowns, though predictions for a quick rebound in many of the world's economies remain grim.
- While many or most of the world's economies are in some degree of lockdown, which will have massive impacts on industrial production, there are some industries that will see increased demand and production as a result of the current situation. Specifically, medical manufacturing equipment, pharmaceutical manufacturing, some paper product manufacturing, cleaning supplies will all see increases in the short-term. Due to the disruption in international supply chains, we may see increased domestic production of certain products that are typically imported. Governments have or are considering enacting orders to force the production of needed goods, such as masks, ventilators and other personal protective equipment.
- We have seen numerous shutdowns in North America, some caused by slowing domestic or international demand, disrupted supply chains, for health and safety or as a result of government orders. Steel productions has been deemed essential by the U.S. government and Ontario's list of essential businesses includes mining and manufacturing, while they are not covered in Quebec.

Effects on Canadian Economy

The economic shock caused by the spread of COVID-19, and the measures taken to contain it, have been tremendous.

- In March alone, more than 1 million Canadians lost their jobs, most of them in the private sector and concentrated in the lower-wage service sector industries. In March, the unemployment rate shot up to 7.8%, from 5.6% in February- the largest one-month increase on record. In April, the Canadian labour market shed another 2 million jobs- a record month to month loss- resulting in a near doubling of the unemployment rate to 13%. GDP is estimated to have fallen by 4% in the 1st quarter and some estimates suggest it will fall by over 30% in the second quarter.
- Measures taken by State authorities, the federal government and the Bank of Canada in particular, have largely been focused on ensuring there is enough liquidity and credit in capital markets (decline in interest rates, repo market injections) to ensure lending continues, ensuring workers and households can continue to consume if they are unemployed (CERB and EI), and providing an incentive for firms to maintain the employment relationship with a significant direct wage subsidy of 75% (CEWS). In total so far, state authorities have pumped in more than \$817 billion dollars in order to prop up the economy as a result of Covid-19- \$145.6 billion of that was in direct support (CEWS, CERB, CEBA).

Canadian Manufacturing:

The decline in manufacturing as a result of COVID-19 has been no less devastating. While most of the data in the April Update contains data results from the end of March, the effects of COVID are already noticeable. The Canadian PMI Index declined from 51.8 in February to 46.1 in March. In April, the sector further contracted, the index dropping to 33 from 46.1. Both of these declines were unprecedented. In March, the sector lost nearly 40 thousand jobs, while the sector unemployment rate increased from 4.1% to 4.4%. In April, the unemployment rate jumped from 4.4% to 13.6%- representing a loss of 260,000 jobs in one month. While wage data for the sector remains strong (4.4%y-o-y), the unprecedented contraction and loss of unemployment will have a strong downward pressure on wages. Capacity utilization and weekly hours data which appears in this update are still pre-Covid results (February). Undoubtedly, these two measures can be expected to see substantial declines.

Commodity Prices:

The impact of the coronavirus has dominated the news on commodities and global economic activity.

Forestry

- After gains at the end of 2019 and into the beginning of 2020, lumber prices declined significantly in March and into April. Numerous operations have curtailed output as a result in reduced demand. The government of British Columbia will defer stumpage fees for three months in order to aid the industry and workers. Currently, there are about 45 sawmill closed indefinitely or permanently.

Steel

- As a result of the decrease in demand and halted production, steel prices dropped significantly in April and are currently about 15% lower than they were mid-March.
- China's economic slowdown started in January: initial forecasts show that steel demand will decrease in 2020, despite initial projections for growth of roughly 8% compared to 2019. Excess supply from steel mills in Russia and Turkey may have difficulty finding markets due to decreased demand. Initially, there were fears of flooding of North American and European markets, however the slowdown of manufacturing in those regions will likely spell even larger problems for domestic producers.
- The big three automakers and Honda announced indefinite shutdowns in North America, though some may shift to producing medical supplies amidst equipment shortages. The Rawsonville plant in Michigan began to manufacture ventilators at the end of April.
- In early May, the UAW came to an agreement with the big three automakers on a resumption of production.
- Since the crisis started, Arcelor Mittal has shut down three blast furnaces, in Hamilton, Cleveland and Indiana Harbor.
- In addition to the impact of the coronavirus, low oil prices have also had a major impact on demand for OCTG and energy tubulars, leading to significant layoffs at Tenaris.

Steel Input Prices:

Iron Ore

- Iron ore producers have been worried about production slowdowns in China and steel stockpiling and their effect on Chinese demand for iron ore. The impact of slowed production in the much of the world (outside of China) led to a drop in iron prices in April. As of the end of May, prices have started to rise again resulting from increased Chinese demands as its steel sector ramps up production. Vale and Rio Tinto were hit particularly hard by a combination of bad weather in Brazil and the impact of the coronavirus.
- IOC mines remain operational, however facilities located in Quebec (shipping facilities) have had activities reduced to a minimum, as government directive.

Metallurgical Coal

- Lower demand for metallurgical coal resulting from lockdowns and slowed steel production caused a large reduction in metallurgical coal prices in April. In particular, the lockdown in India and slowed demand in Japan caused prices to reach their lowest point since 2016.
- Prior to major economic shutdowns in Canada, Teck had already forecast a reduction of approximately 1 million tonnes of met coal sales in Q1. High inventory levels had already been predicted to lead to a reduction in production. Teck also predicts a drop in price in met coal to between \$160-\$165 per metric tonne, compared to the \$190 benchmark previous set by the company.

Scrap:

- Scrap prices remain rock bottom, with little place to go. So far, scrap imports to Southeast Asia have dropped significantly as a result of Chinese slowdowns. With some blast furnaces idled, demand for scrap is expected to increase once economies begin to restart. Some experts expect a major shift to EAFs in China in the coming years, in part as a result of the coronavirus pandemic.

Potash:

- Nutrien and Mosaic have both indicated that potash production will continue, albeit with enhanced health and safety measures. Potash producers have declared that they are an essential service based on the role of potash in the global food supply chain. Demand expectations remain high as China and North America enter the spring planting season.

Nickel& Copper

As with other commodity prices, both nickel and copper have declined considerably as a result of the COVID-19 induced economic slowdown.

- Nickel has declined from a monthly average of \$6.15 in January to \$5.33 in April, although May has seen a slight increase to \$5.36 as Chinese manufacturing has restarted. Nonetheless, upward price appreciation remains sluggish, as nickel LME inventories have also increased by 50kt since January.
- Vale downwardly revised their nickel production guidance for 2020 in late April by 20,000-25,000 tonnes on April 18th, which immediately placed an upward pressure on LME nickel price by 3%.
- As a result of the economic slowdown, on March 16th Vale also announced that Voisey's Bay would be placed on care and maintenance for a period of 4 weeks which has subsequently been extended for a period of up to three months.
- In other Vale news, Local 6500 in Sudbury, Ontario signed a 1 year extension with Vale which was ratified by the membership. The agreement would have expired on May 31st, 2020.
- Copper prices have also declined since January by 17% since January, although like nickel, it has also shown signs of appreciation in early May largely as a result of the Chinese manufacturing recovery.

Trade developments

As expected, there was a massive decrease in traded goods in March, as many of the world's economies shutdown, with overall exports declining 4.8% and imports decreasing by 5.8%.

Certain exports and imports were hit particular hard: motor vehicle parts, energy, industrial chemical, plastic and rubber products; electronic and electrical equipment all saw huge reductions in both exports and imports. With more extensive shutdowns and slowdowns in April, exports and imports are expected to drop even more significantly when next month's numbers are released.

Interestingly, exports of metal and non-metallic minerals increased by almost 8% in March, while imports dropped by close to 3%.

On the other end of the spectrum, potash exports were valued at \$536.1M in March, up 10.9% from the previous month.

The USMCA will officially come into force on July 1st, 2020. Some concern remains, particular among some on the implementation of auto rules of origin. In particular, auto industry representatives have been advocating for a delay in implementation of uniform regulations.

COMMODITY PRICES

	Unit	Currency	Latest	Previous Month Average	3 year average	Standard deviation***	3 year peak	% down from the peak
Iron Ore	Metric ton	USD	\$83.40	\$89.20	\$79.35	\$14.48	\$119.50 (July 2019)	30.2%
Steel – HRB	Metric ton	USD	\$543	\$621	\$748	\$134.98	\$1006 (July 2018)	-46%
Aluminum	Metric ton	USD	\$1437	\$1644	\$1931.46	\$187.29	\$2299 (May 2018)	-37.5%
Copper	Pound	USD	\$2.29	\$2.34	\$2.80	\$0.23	\$3.03(June 2018)	-24%
Nickel	Pound	USD	\$5.33	\$5.39	\$5.74	\$0.89	\$8.23 (September 2019)	-35%
Platinum	Ounce	USD	\$768.78	\$756.57	\$889.84	\$31.85	\$1,183.10 (August 2016)	-35%
Uranium	Pound	USD	\$33.25	\$27.35.	\$24.45	\$3.12	New Peak	Current
Gold	Ounce	USD	\$1,680.41	\$1,593.76	\$1,353.45	\$127.35	\$1,60.41 current	--
Potash (muriate of potash port of Vancouver FOB spot))	Metric Ton	USD	\$245	\$245	\$231.07	\$23.76	\$301 (Feb 2016)	-18.6%
WTI Crude Oil	Barrel	USD		\$50.56--			\$74.96	
Gasoline*	Litre	CAD	\$0.97	\$1.16	\$1.19	\$0.09	\$1.36 (May 18)	-21%
Met Coal** (HCC)	Metric Ton	USD	\$160 (March)	\$140	--	--	--	--
Lead	Metric Ton	USD	\$1651	\$1746.50	\$2118.19	\$241.94	2608 (Jan 2018)	-36.7%
Zinc	Metric Ton	USD	\$1894	\$1911	\$2118.94	\$241.94	3526 (Jan 2018)	-46.3%

*Regular unleaded gasoline; based on average monthly prices across all major metropolitan areas

*Met Coal tracking started April 2019 [note that the average price since 2008 is USD \$197/t]

***See notes for an explanation of the significance of the standard deviation.

STEEL PRICES* IN COMPARISON: APR2020

	US	China	Western Europe	World Export
Hot-rolled band	543	402	457	390
Cold-rolled coil	717	456	N/A	N/A
Standard Plate	758 702	435	N/A	N/A
Rebar	N/A 659	418	N/A	N/A

*Prices in U.S. Dollars

SOFTWOOD LUMBER PRICES

Dollars per thousand board feet	24-Apr-20	17-Apr-20	4-week average	52-weeks average	% Change from 52-week average
2x4 eastern spruce-pine-fir (Canadian dollars)	\$497	491	493	\$521	-4.6%
Composite (U.S. dollars)	\$353	\$349	\$352	\$366	-3.5%
2x4 western spruce-pine-fir (kiln dried) #2 and better (U.S. dollars)	\$336	\$316	\$318	\$376	-10.6%
2x4 western spruce-pine-fir (kiln dried) Utility #3 (U.S. dollars)	\$282	\$276	\$278	\$278	1.4%

Source: Natural Resources Canada

PANEL PRICES

U.S. Dollars per thousand board feet	24-Apr-20	17-Apr-10	4-week average	52-weeks average	% Change from 52-week average
Composite	\$350	\$349	\$360	\$353	-0.8%
15/32" 4-ply exterior (south)	\$343	\$335	\$344	\$364	-5.8%
9.5mm 4-ply exterior (west)	\$380	\$380	\$385	\$385	-1.3%

7/16" oriented strand board (north central)	\$330	\$345	\$356	\$289	14%
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Source: Natural Resources Canada

ADDITIONAL FORESTRY PRICE INFORMATION

SPF Prices – US\$/1000 bd ft

	Current Week 01-May-20	Previous Week 24-Apr-20	Y-T-D Average	2019 Average
SPF 2 X 4	\$336	\$356	\$426	\$372
SPF Stud	\$330	\$324	\$326	\$272
SPF 2 X 10	\$340	\$334	\$423	\$350
Cedar 2 X4	\$1425	\$1425	\$1418	\$1396

Source: British Columbia Ministry of Forests Lands, Natural Resource Operations and Rural Development.

	March 2020	February 2020	Y-T-D Average	2019 Average	2018 Average
Hemlock squares	\$815	\$830	\$825	\$891	\$965

Price indices*: British Columbia

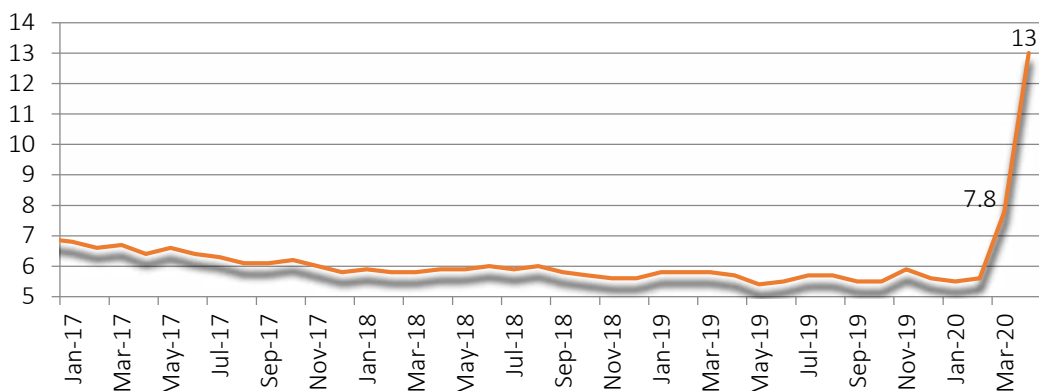
2010=100	March 2020	Previous Month	Compared to Previous Year
Western Red Cedar	184.5	No Change	-0.16%
Hemlock fir	225.7	2.7%	19.7%
Spruce, pine, fir	165.2	3.7%	6.2%
Douglas Fir and Western Larch	158.8	3.5%	2%

*See notes for explanation of price index

EMPLOYMENT INDICATORS

	Recent Month (April)	March	February	Change Feb-Apr (percentage point)	Change from one year ago (percentage point)	3 Year Peak
Unemployment rate	13.0%	7.8%	5.6%	+7.4	+7.3	Current
Employment Rate	52.1%	58.5%	61.8%	-9.7	-10.1	62.8 (June 2017)
Real Unemployment (see notes)	17.8%	11.7%	8.5%	+9.3	-9.6	Current
Participation Rate	59.8%	63.5%	65.5%	-5.7	-6.1	65.9 (April 2019)
FT/PT	84.5/15.5	83.2/16.8	81.3/18.6	3.2/-3.2	+4.5/-4.5	Current

National Unemployment Rate, 2017-Present



Between March and April 2020, the unemployment rate rose by the highest rate since records began, increasing by 5.2 percentage points. The current unemployment rate is the second highest on record, only slightly behind the December 1982 rate of 13.1%.

While the service sector was hit especially hard in March, the good-producing sector saw massive job loss in April, with steep declines in manufacturing (-14%) and construction (-21%). Compared to February, employment in manufacturing decreased by 302,000 (17.3%), with fabricated metals hit especially hard.

OTHER ECONOMIC INDICATORS*

**The economic indicators will not fully reflect the impact of the coronavirus until the next issue of the manufacturing update. *Only those highlighted in red reflect the impact of COVID-19*

	Recent Month	Previous Month	Year Ago	3 Year Peak
MACROECONOMIC				
GDP (All industries, billions, chained 2012)	\$1.98*	\$1.98	+2.1%	-
Retail Sales (billion)	\$52.24*	\$52.09	\$50.74	-
CPI	0.9%***	2.2%	1.9%	-
BoC Policy Interest Rate	0.25%	1.75%	1.75%	1.75%
Hourly Wage Growth (Non-Management)	\$27.96***	\$27.40	5.7%	
MANUFACTURING				
GDP Goods Producing (billion, chained 2012)	\$0.575*	\$0.574	+ 1.1%	-
Residential Building Permits (thousand)	16,441*	16,466	14,046	-
Home Price Index (2016=100)	104.1***	103.8	103.2	104.1
U.S. Housing Starts (million)	1.216	1.599	1.27	1.608 (Dec 2019)
Capacity Utilization	77.0%*	76.9%	78.5%	84.2%
Manufacturing employment (million)	1,437	1,704	-17.7%	1,770.1
Manufacturing Unemployment Rate	13%	4.5%	+9.8%	13%
Weekly Hours of Work (including OT)(manfct)	37*	36.7	36.7	38.4
Manufacturing ^{††} Occupations Hourly Wage	\$21.52***	\$21.29	4.4%	
Blue Collar [†] Occupations Hourly Wage	\$26.27***	\$26.27	3.4%	
Ratio of inventory to sales	1.55*	1.57	1.52	1.57
Manufacturing Orders (billions)	\$51.42*	\$53.59	\$51.64	--
Manufacturing Sales (billion)	\$51.3*	\$52.5	\$51.3	--
Cars and Trucks Sales (billion)	\$4.80*	\$4.24	\$4.91	--
Wood Products Sales (billion)	\$2.11*	\$2.18	\$2.14	--
Petroleum and Coal sales (billion)	\$4.9*	\$5.6	\$5.1	--
Canadian PMI	33[†]	46.1	49.7	57.1
Business Investment (non-residential) (billion)	\$53.39**	\$56.35	\$55.38	--

* February 2020; ** Quarterly Figures; ***March 2020; [†]April

*The categories under **Economic Indicators** are mostly based from StatsCan data. Unfortunately, the data indicators are generally 1-2 months behind the current date of the Update. Note also that Statistics Canada continually updates its data. As a result, there is often some discrepancy in monthly numbers and in the data provided in each subsequent monthly update.

***PMI** - An indicator of economic health in the manufacturing sector. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. A PMI of more than 50 represents expansion of the manufacturing sector, compared to the previous month. A reading under 50 represents a contraction, while a reading of 50 indicates no change.

***The Inventory to Sales Ratio** metric measures the amount of inventory you are carrying compared to the number of sales orders being fulfilled. Calculate inventory to sales using the following formula:

(Inventory value \$) ÷ (Sales value \$); an increasing ratio indicates an increasing level of inventory

***GDP measurement** refers to real GDP growth, chained (2012) dollars

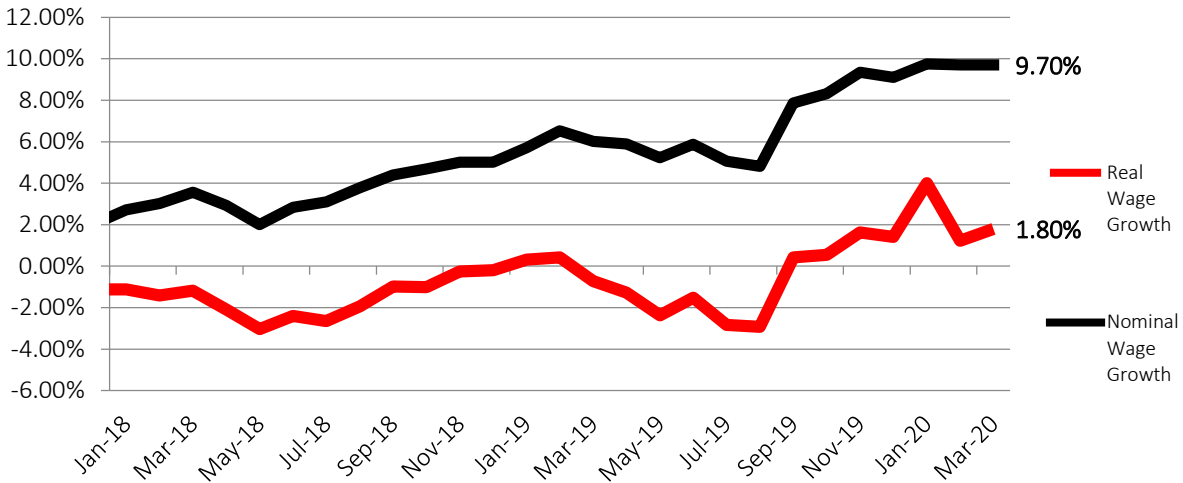
***Real unemployment rate** refers to StatCan's R8 supplementary unemployment rate, which includes discouraged searchers, waiting group, portion of involuntary part-time

†**Blue Collar Workers** category is composed of non-management/supervisory occupations in Manufacturing, Natural Resources, Trades, Transport & Equipment Operators. It covers approximately 2.9 million workers.

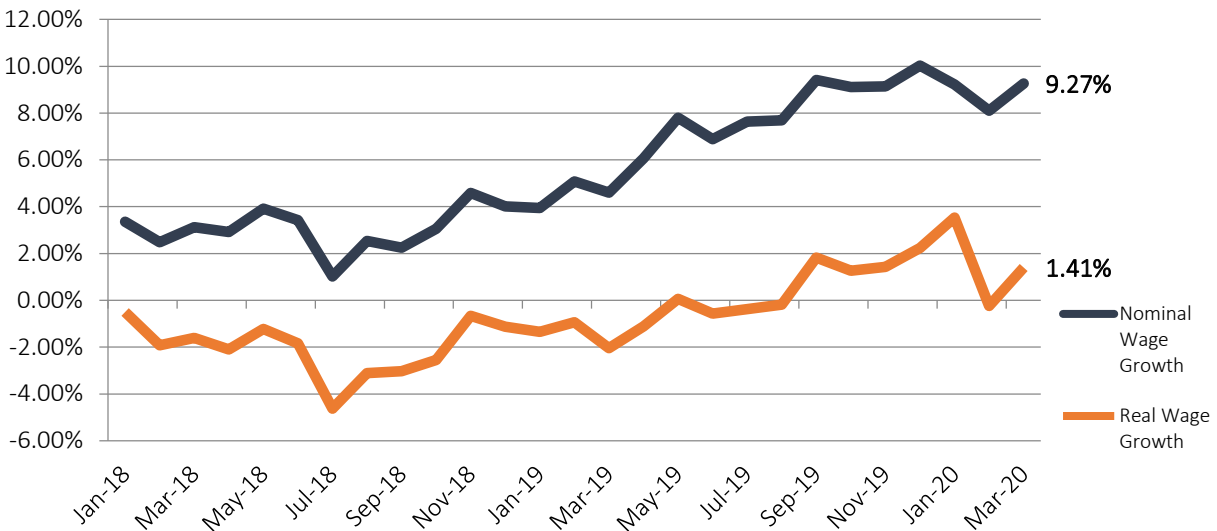
†† **Manufacturing Workers** category is composed of non-management/supervisory occupations in Manufacturing, such as processing, machine operators, production workers, assemblers and labourers. It covers approximately 615,000 workers.

MANUFACTURING AND BLUE COLLAR WAGE GROWTH

Blue Collar Wage Growth: 2017-2020



Manufacturing Wage Growth 2016-2020



The above line graphs demonstrate the growth in both nominal (money wages) and real (inflation adjusted) wages since January 2016. For Blue Collar workers, real wages have grown by 1.80%, and for Manufacturing workers they have grown by 1.41%. Most of this growth, as the graphs partially demonstrate, has come in the final third of 2019. **In March 2020, wages for blue collar workers increased by 3.46%, while manufacturing workers saw a 4.45% y-o-y increase**

TRADE INDICATORS

	March 2020	Change from previous month	Change from previous year
Trade Balance (Billion)	5 -1.411B	57.8% (from -\$0.89B)	-47%% (from -2.16B)
Trade Balance with U.S. (Billion)	\$3.9	--2.9%	-14.2%
Total Exports (Billion)	\$ 46.3	-4.7%	-8.8%
U.S. Exports (Billion)	\$35.7 34.9	-4.9%	2% -7.7%
Total Imports (Billion)	\$49.6 47.7	-03.5%	-9.9%
U.S. Imports (Billion)	31.0	-5.1%	-6.9%
Exports by type:			
Metal ores and non-metallic minerals (Billion)	1.62	-6.4%	0.1%
Metal and non-metallic minerals (Billion)	5.38	2.1%	7.6%
Motor Vehicles and parts (Billion)	\$6.35	-14.4%	-20.1%
Energy Products (Billion)	\$8.2	-7.4%	-24.1%
Forestry products (Billion)	\$3.48	2.1%	-8.3%
Industrial machinery, equipment and parts (Billion)	\$3.22	-6.2%	-6.6%

* For the overall trade balance, the 57.8% change represents an *increased* trade deficit with the world. Canada's trade surplus with the United States decreased by 2.9% on a monthly basis and by 14.2% % on an annual basis

NOTES:

Standard deviation: The standard deviation provides an indication of the variability of the commodity price over a given period of time (in this case, based on three years of prices). The closer the standard deviation is to 0, the less variability in price over the past three years. For example, if over the past three years, the standard deviation for gold is \$50, then 68% of gold prices would have fallen within 1 standard deviation (\$50 plus or minus) of the average gold price and 95% would have fallen within two standard deviations (\$100 plus or minus) of the average gold price.

Forestry index: we have included information from Statistics Canada on the wood product price index. For the products covered in the Industrial Product Price Index, prices are for goods sold at the factory gate and do not include the full price including taxes, transportation costs, or any distribution costs. Statistics Canada provides a price index to track price movement for manufactured goods in Canada and broadly tracks the economic performance of given sectors. For certain lumber products, the specific weekly or monthly prices are not publicly available, however the index provides information on the general state of prices compared to past prices. The index demonstrates that lumber product prices continue to decline in 2019.

Monthly data: Statistics Canada revises its data on a monthly basis. As a result, there are almost always some changes to the published data from the previous month. This will likely explain the discrepancies between the stats can data from the previous report and what is available in their tables [for example, we use the most recent monthly data available, which is the preliminary data; when we prepare the next month's report, the source data used in the previous report may have changed slightly, which will not be reflected in these updates.

Sources: Statistics Canada, SteelBenchmarker, TradingEconomics, Global Steel Trade Monitor, Natural Resources Canada, Government of British Columbia, World Steel Association, Financial Post, BNN Bloomberg, Market Insider