



CanaData: Accelerate your Agility

Building in a Post-Pandemic World

Tuesday, September 28, 2021 – CanaData Conference

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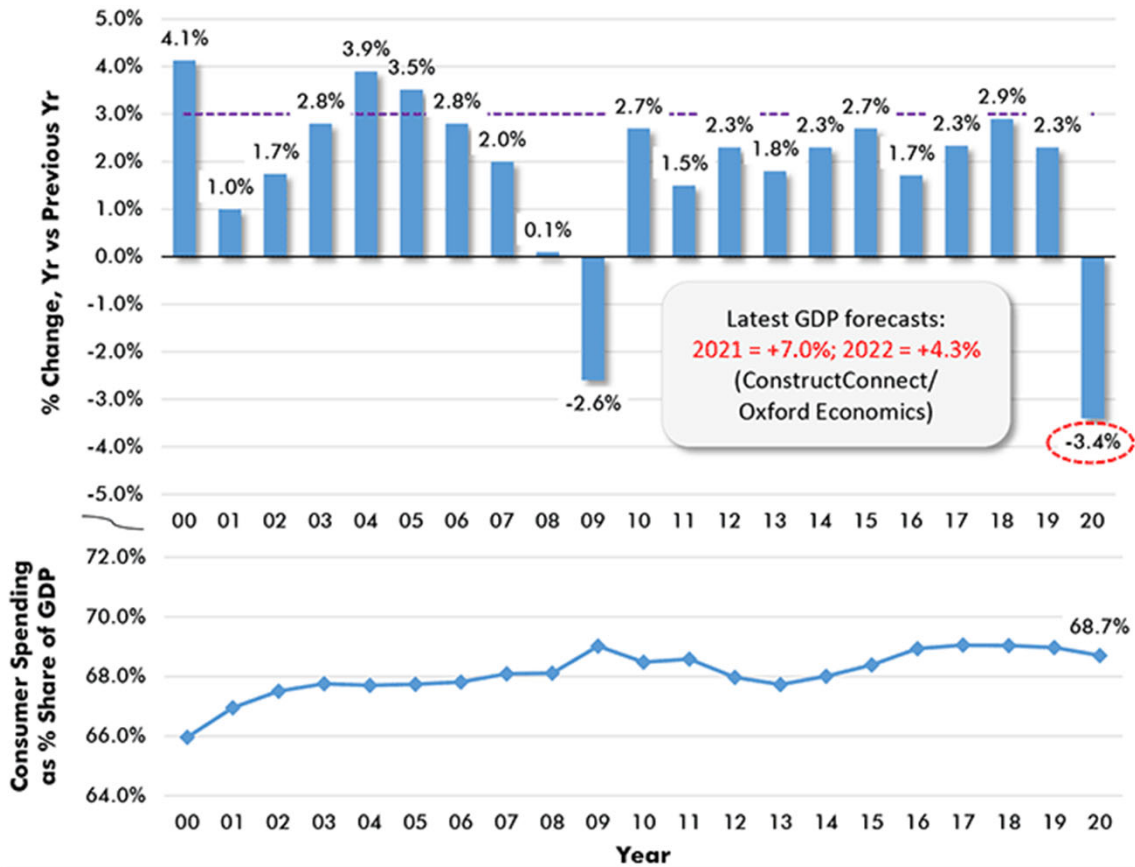


5 Underlying & Linked Trends to be Discussed Today

- Attention given to infrastructure spending
- The push to full-on electrification
- Resource sector rebirth
- De-carbonization goals
- Inflation & the bias towards higher costs & prices

See also this presentation's next to last slide which broadens the review of the above trends, plus delves into several more: the staying power of the housing boom; demographics; refurbishments/new design features; ongoing low-rise building strength; and accelerating tech advances.

U.S. 'Real' GDP Growth, Y/Y & Q/Q



U.S. 'Real' GDP Growth Q/Q Annualized:

2017	Q3 = +2.9%
	Q4 = +3.8%
2018	Q1 = +3.1%
	Q2 = +3.4%
	Q3 = +1.9%
	Q4 = +0.9%
2019	Q1 = +2.4%
	Q2 = +3.2%
	Q3 = +2.8%
	Q4 = +1.9%
2020	Q1 = -5.1%
	Q2 = -31.2%
	Q3 = +33.8%
	Q4 = +4.5%
2021	Q1 = 6.3%
	Q2 = 6.5%

'Real' is after adjustment for inflation.

Data Source: Bureau of Economic Analysis (BEA).
 Chart: ConstructConnect.

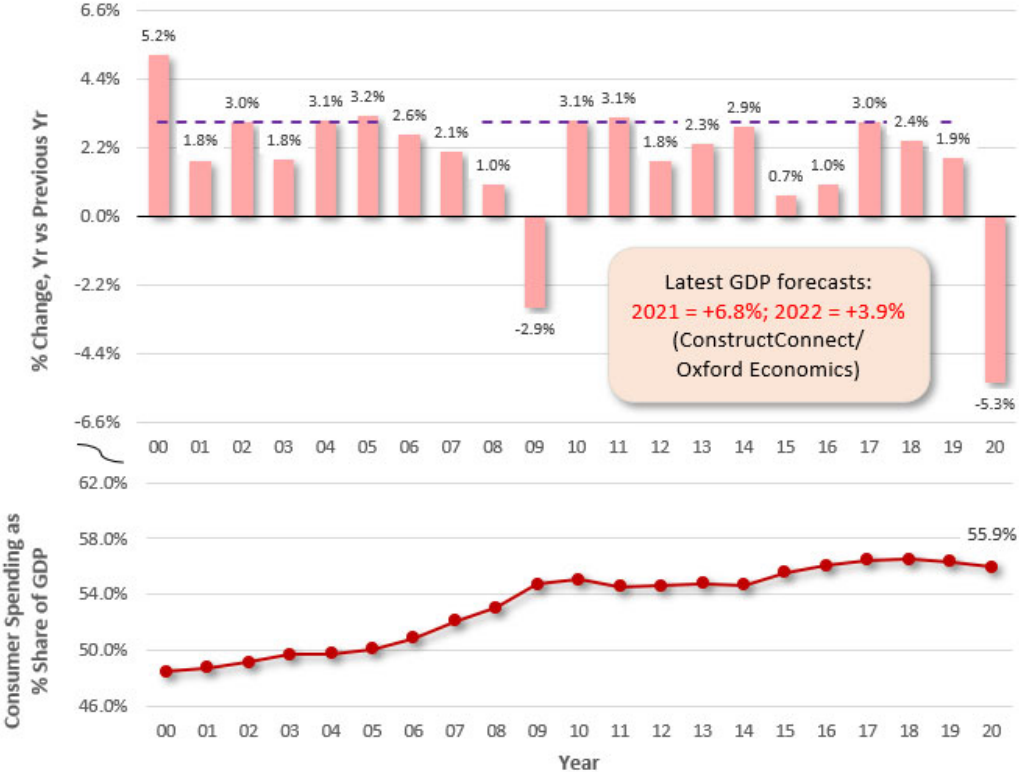
Shaded blue box numbers are Q/Q annualized (i.e., essentially multiplied by 4). The -3.4% annual decline in 2020 was the steepest since 1946 (-11.6%) when weaponry production was winding down after WWII. In 1932, during the Great Depression, GDP fell -12.9%.

Canada 'Real' GDP Growth, Y/Y & Q/Q



Canada 'Real' GDP Growth Q/Q Annualized:

2017
Q3 = +1.7%
Q4 = +2.1%
2018
Q1 = +2.7%
Q2 = +2.6%
Q3 = +2.8%
Q4 = +1.1%
2019
Q1 = +0.4%
Q2 = +4.3%
Q3 = +1.8%
Q4 = +0.4%
2020
Q1 = -7.9%
Q2 = -38.0%
Q3 = +41.7%
Q4 = +9.3%
2021
Q1 = +5.6%
Q2 = -1.1%



Data Source: Statistics Canada Table 36-10-0104-01.
Chart: ConstructConnect.

'Real' is after adjustment for inflation.

Latest GDP forecasts:
2021 = +6.8%; 2022 = +3.9%
(ConstructConnect/Oxford Economics)

These outsized percentages are somewhat misleading. They are the quarter to quarter changes annualized (i.e., essentially Q/Q multiplied by four). The official figure for full year 2020 was -5.3%.

Data source: Statistics Canada Table 36-10-0104-01 / Chart: ConstructConnect-CanaData.

Canada Construction Activity Fact Sheet



Canada Total jobs count = 18.884 million;
Canada Construction jobs count = 1.412 million.

Total jobs count year over year % change = +6.1%;
(the +6.1% includes +7.9% for bars/restaurants & hotels/motels);
Construction jobs count year over year % change = +3.4%.

The 'all jobs' unemployment rate, seasonally adjusted (SA) = 7.5% (a year ago, was 10.9%);
The 'all jobs' unemployment rate, not seasonally adjusted (NSA) = 6.1% (a year ago, was 9.6%);
Construction sector's unemployment rate, not seasonally adjusted (NSA) = 4.0% (a year ago, was 8.7%).

ConstructConnect's 'Starts' statistics (Year to date: Jan-Jul 2021/Jan-Jul 2020)

Residential = +27.7%;
Nonresidential building (1) = -13.7%;
Engineering (2) = -2.8%;
Nonresidential (sum of (1) and (2)) = -8.7%;
Grand Total = +1.6%.

Statistics Canada's investment spending figures: (Year to date: Jan-Jun 2021/Jan-Jun 2020)

Residential = +46.9%;
Nonresidential Building (NRB) = -5.2%;
Res + NRB = +28.2%

Concerning the investment spending figures, Statistics Canada does not publish 'engineering/civil' construction numbers.

The pattern has been quite similar to the U.S.: residential buoyant; engineering flat; and nonres building floundering.

Canada Mortgage & Housing Corp (CMHC)'s housing starts in units year to date (vs Jan-Jul 2020) = +40%.

(In Canada, multiples as share of total (75%) are much higher than in U.S.; singles only a little stronger than multis ytd.

Construction Worker Earnings, June 2021 year over year:

Basic union wage rate, including supplements, Toronto (as representative) average for 17 trades = +2.0% y/y.

U.S. & Canadian Jobs Markets – August 2021

	U.S.	Canada
Change in Jobs Count Month over Month (M/M)		
Total Employment	+235,000	+90,000
Construction Employment	-3,000	+21,000
Number of Jobs Year over Year (Y/Y)		
Total Employment	+4.3%	+5.3%
Service Sector	+5.5%	+6.1%
Manufacturing	+2.9%	+2.1%
Construction	+2.7%	+4.5%
Leisure & Hospitality in U.S. / Accommodation & Food Services in Canada	+17.4	+10.1%
Pandemic		
Decline in Total Employment Feb 2020 to Apr 2020	-14.7%	-15.6%
Recovery in Total Employment Since Apr 2020 ('Claw-Back' Ratio)	76.2%	94.8%
% Level		
Unemployment Rate (SA)	5.2%	7.1%
Unemployment Rate (NSA)	5.3%	5.8%
Central Bank Interest Rate	Federal Reserve's Federal Funds Rate (range) 0.00% to 0.25%	Bank of Canada's Overnight Rate 0.25%

Canada experienced a slightly greater decline in total jobs count in the Spring of last year (-15.6% between Feb & April) than the U.S. (-14.7%) when lockdown measures were first adopted in both countries to combat the spread of COVID-19.

Since April 2020, however, Canada has managed to restore more (94.8%) of its big jobs drop than has the U.S. (76.2%).

The not seasonally adjusted (NSA) unemployment rates in both countries are nearly the same, 5.3% for the U.S. and 5.8% for Canada (when Statistics Canada adopts the same strict calculation methodology as the BLS).

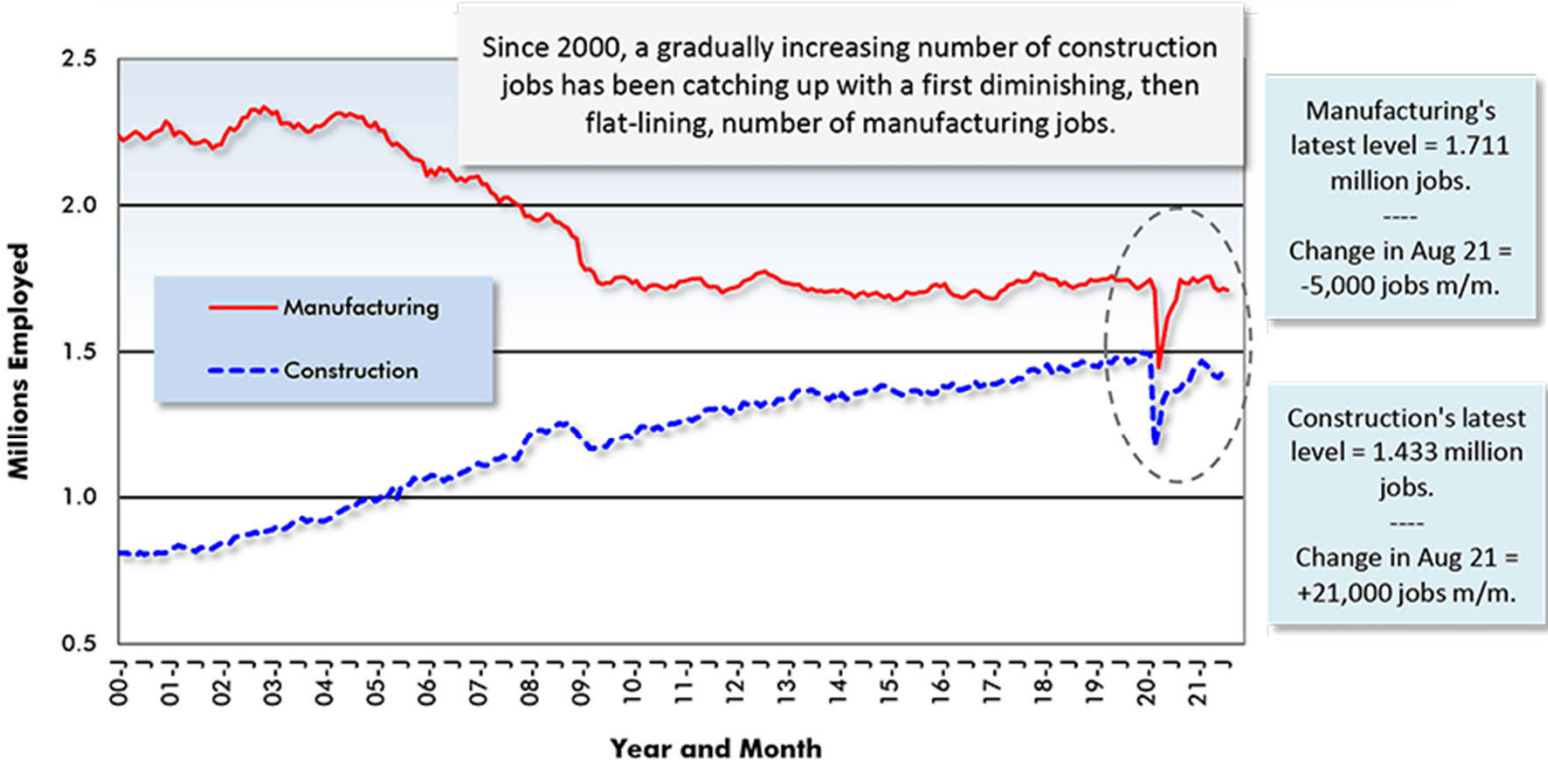
SA is seasonally adjusted / NSA is not seasonally adjusted.
U.S. labor data is from a 'payroll survey' / Canadian labour data is from a 'household survey'.
Cdn NSA unemployment rate known as 'R3' is adjusted to U.S. concepts (i.e., it adopts U.S. equivalent methodology).

Data sources: U.S. Bureau of Labor Statistics (BLS) & Statistics Canada.
Table: ConstructConnect.

Manufacturing vs Construction Employment in Canada

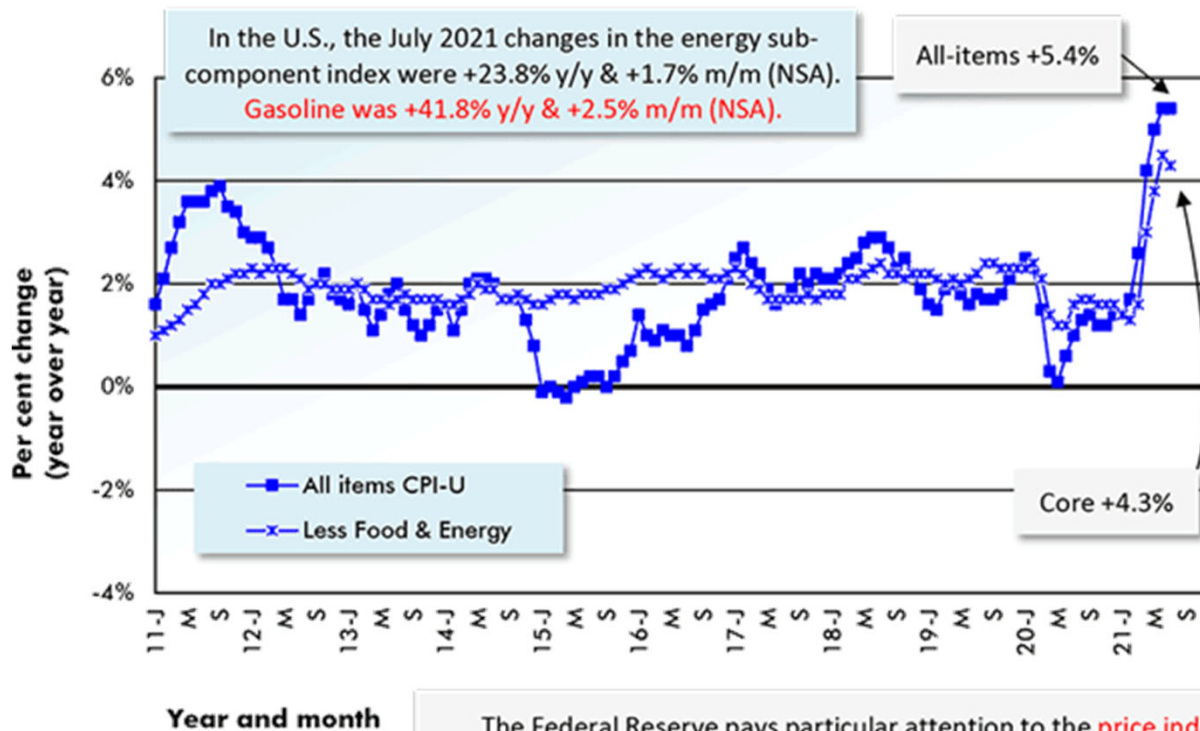
The last data points are for August 2021.

Data Source: Statistics Canada.
Chart: ConstructConnect.



Both sectors managed nice jobs recoveries after last Spring's cratering, but they've struggled a bit lately. In 2000, the ratio of construction to manufacturing jobs in Canada was 0.36 to 1.00. Now, it's 0.84 to 1.00.

U.S. Inflation: All Items (CPI-U) vs All Items Less Food & Energy (i.e., 'Core'*)



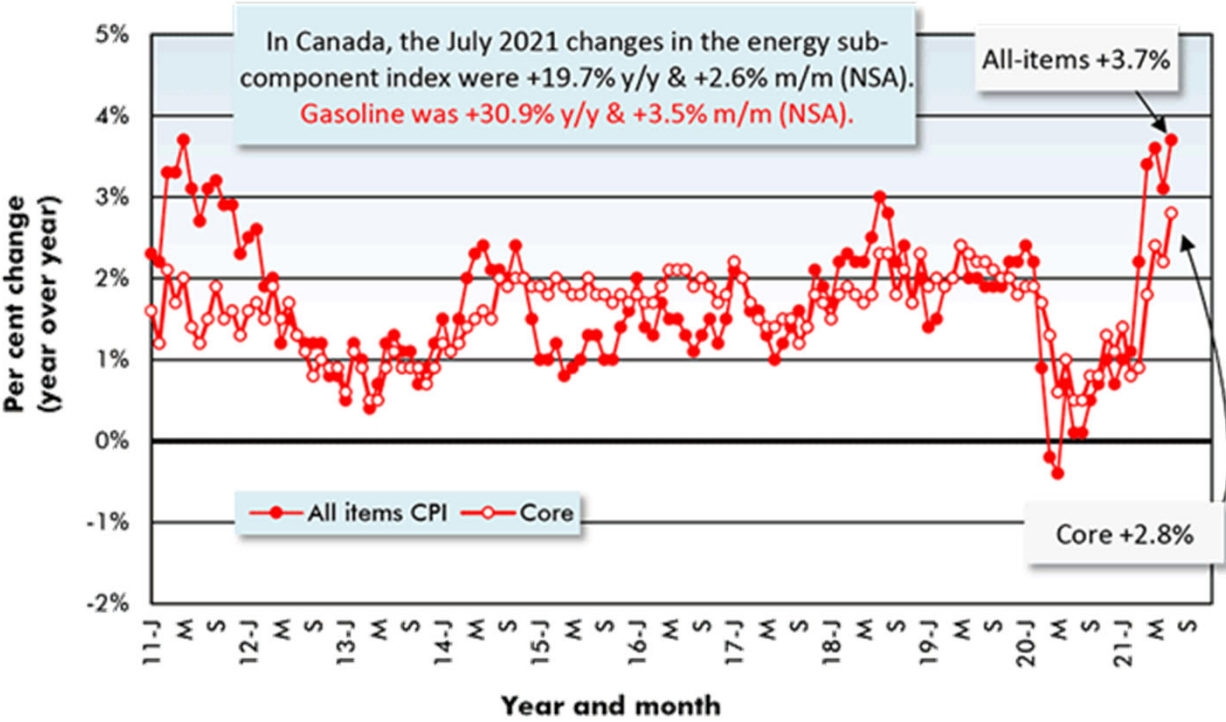
The Federal Reserve pays particular attention to the **price index for Personal Consumption Expenditures** (PCE in national accounts), excluding food & energy. In July 2021, it was +3.5% y/y.

- Year over Year Changes in some Sub-Indices:
- car & truck rental, +73.5%;
 - used cars & trucks, +41.7%;
 - hotel/motel rooms, +24.1%;
 - piped gas service, +19.0%;
 - airline fares, +19.0%;
 - women's dresses, +18.8%;
 - moving expense, +13.3%;
 - bacon, +11.1%;
 - domestic services, +11.0%.
 -
 - telephone hardware and calculators, -16.6%.

U.S. figure (CPI-U) is All Items Consumer Price Index for All Urban Consumers. (Based on not seasonally adjusted/NSA index values.) *Core inflation is CPI-U less its often most volatile sub-components, food and energy. Latest data points are for July 2021.

Data Source: U.S. Bureau of Labor Statistics (Department of Labor). Chart: ConstructConnect.

Canada Inflation: All Items CPI vs Core*



Year over Year Changes in some Sub-Indices:

- rental of vehicles, +29.8%;
- natural gas service, +18.6%;
 - jewellery, +14.1%;
 - bacon, +13.1%;
 - cigarettes, +10.2%;
 - butter, +10.0%;
- fridges & freezers, +9.8%.
-
- tomatoes, -33.6%;
- cellular services, -18.4%;
- oranges, -9.2%.
-

The average for the 3 separate Bank of Canada 'core' index measurements ('common', 'median' & 'trim') in July 2021 was +2.5% y/y.

Latest data points are for July 2021. The Canada figure (CPI) is the All Items Consumer Price Index. (Based on not seasonally adjusted/NSA index values.) *Core inflation is the All-items CPI less its often most volatile sub-components, food and energy.

Data Source: Statistics Canada.
Chart: ConstructConnect.

Average Hourly Earnings Y/Y – 'All Jobs' & Construction

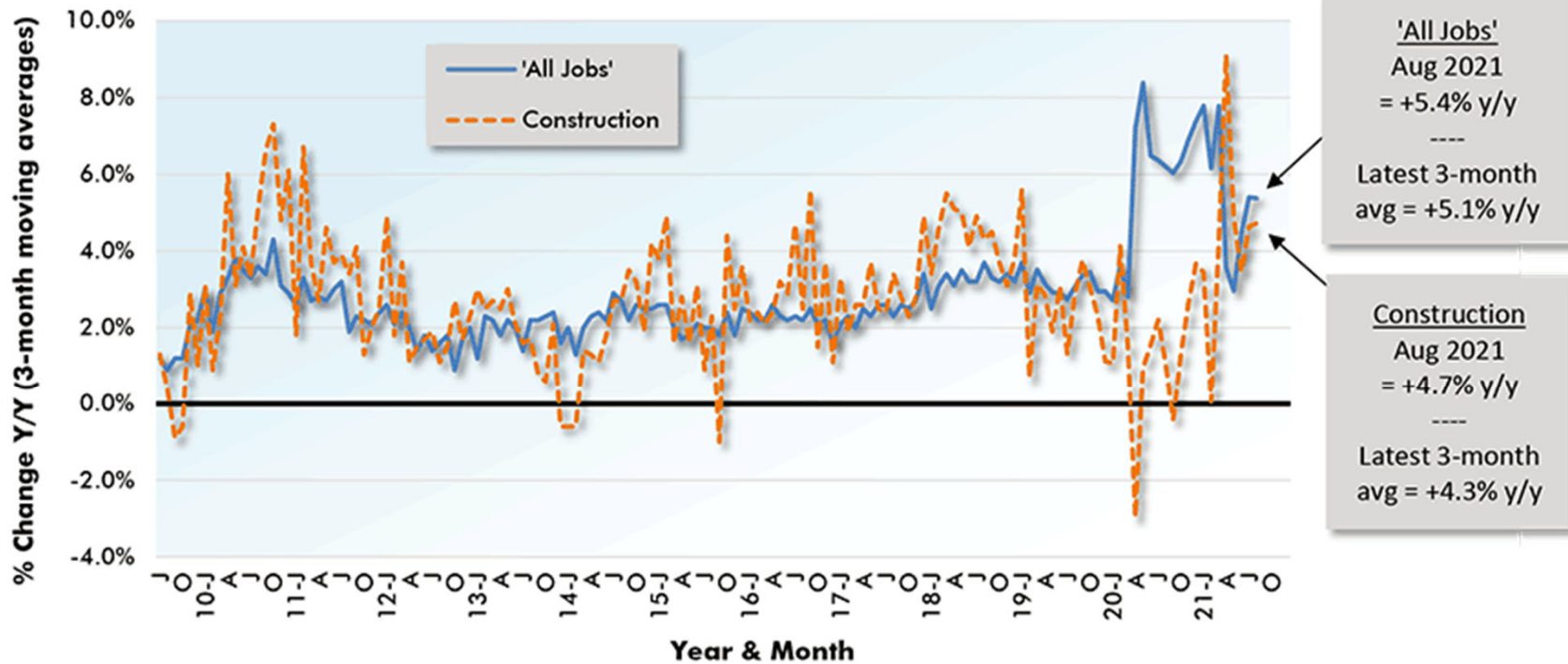


From 'Production Workers and Nonsupervisory Personnel' Table (B8). The latest data points are for August 2021.

Data Source: Bureau of Labor Statistics (BLS)'s *Employment Situation* report. Chart: ConstructConnect.

Analysts will be keeping a sharp eye on earnings. They're a reflection of overall economic activity. Perhaps more important, though, they can provide an early warning of mounting behind-the-scenes inflationary pressure.

Average Weekly Earnings Y/Y – 'All Jobs' & Construction

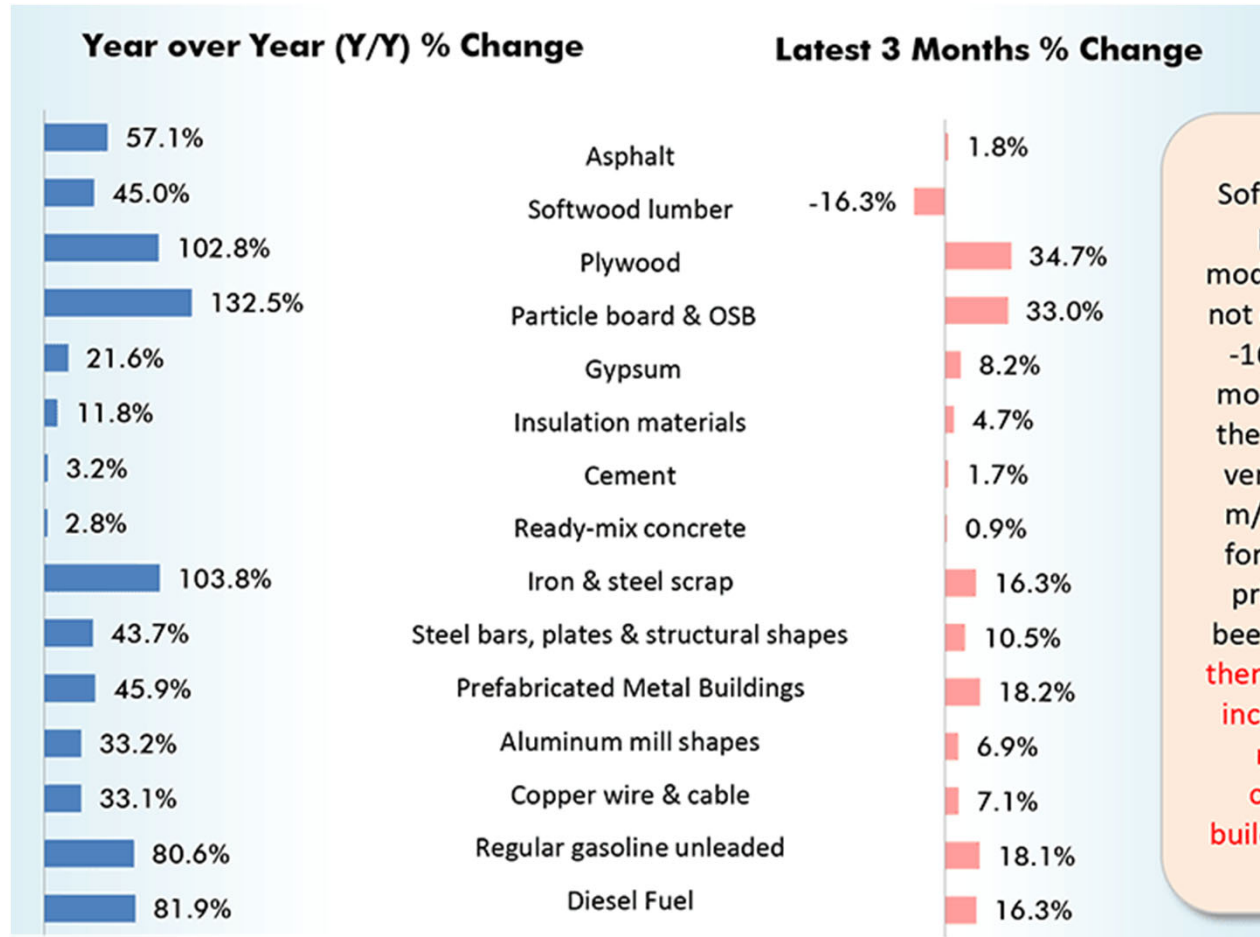


From 'Production Workers and Nonsupervisory Personnel' Table (B8). The latest data points are for August 2021.

Data Source: Bureau of Labor Statistics (BLS)'s *Employment Situation* report.
Chart: ConstructConnect.

U.S. construction's total jobs count in August vs July decreased by -3,000. The sector's latest not seasonally adjusted (NSA) unemployment rate was 4.6% compared with the prior month's 6.1%. A year ago, in August 2020, it had been 7.6%.

U.S. Construction Material Cost Changes From Producer Price Index (PPI) Series - July 2021



Softwood lumber prices have moderated. In July, not only were they -16.3% versus 3 months prior, but they were -29.0% versus June (i.e., m/m). But other forestry product prices have not been abating. **And there remain sharp increases among many other construction building materials.**

Data Source: Bureau of Labor Statistics (BLS).
Chart: ConstructConnect.

Canadian Construction Material Costs Based on Industrial Product Price Index (IPPI) Series from Statistics Canada



The most dramatic increases are denoted with red arrows.

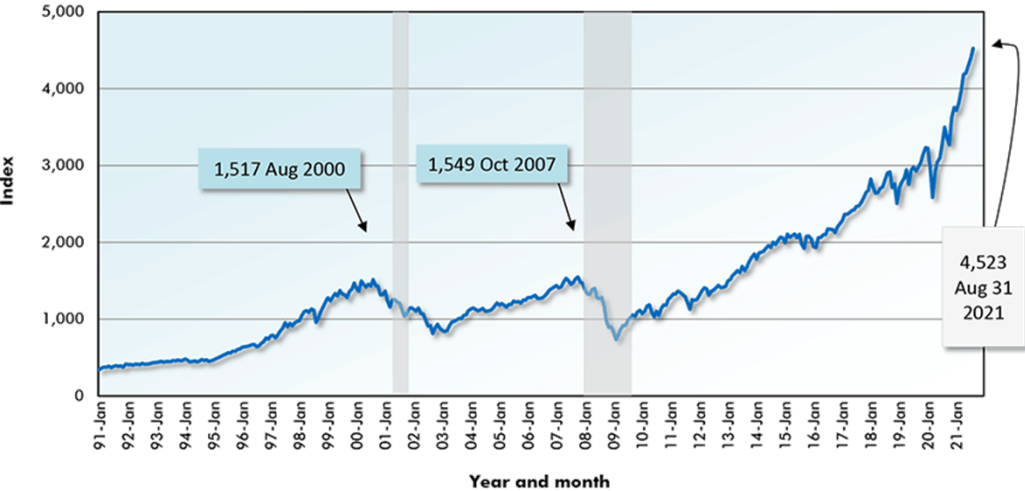
	Year over Year Jun 2021/Jun 2020	Latest 3 Months Jun 2021/Mar 2021
Paints, coatings, and adhesive products	0.7%	1.4%
Plastic and foam building and construction materials	11.7%	12.7%
Hardwood lumber	25.0%	11.0%
Softwood lumber	→ 169.7%	→ 21.5%
Wood trusses and engineered wood members	32.6%	3.8%
Veneer and plywood	→ 136.5%	→ 24.8%
Wood windows and doors	13.7%	7.3%
Wood cabinets and counter tops	2.5%	1.6%
Coke and other coke oven products (for steelmaking)	-10.5%	-25.2%
Motor gasoline	→ 59.8%	9.9%
Diesel and biodiesel fuels	→ 53.9%	2.0%
Asphalt (except natural) and asphalt products	27.9%	11.8%
Iron or steel pipes and tubes	→ 57.3%	→ 23.8%
Waste and scrap of iron and steel	→ 54.9%	7.6%
Metal building and construction materials	28.3%	12.6%
Fabricated steel plate & other fabricated structural metal	26.9%	9.0%
Metal windows and doors	17.3%	8.9%
Hardware	5.8%	7.3%
Heating & cooling equipment (except home fridges & freezers)	1.0%	1.3%
Industrial & commercial fans, blowers, air purification equipment	3.8%	3.5%
Communication and electric wire and cable	→ 74.9%	→ 29.0%
Electric lamps & lighting fixtures (except bulbs and tubes)	-10.8%	-11.4%
Glass and glass products (except automotive glass)	12.8%	7.7%
Cement	0.6%	3.7%
Ready-mixed concrete	2.1%	1.7%
Lime and gypsum products	-3.2%	5.4%

Data Source: Statistics Canada's Industrial Product Price Index (IPPI) series, Table 18-10-0266-01. Table: ConstructConnect.

Stock Markets

New York Stock Exchange: Dow-Jones Industrials (30)

New York Stock Exchange: Standard and Poor's (500)



Upon closing, Aug. 31 2021, the DJI was +1.2% m/m and +24.4% y/y. Compared with its all-time high of 35,631 just recently reached on Aug. 16, 2021, the DJI ended the month -0.8%.

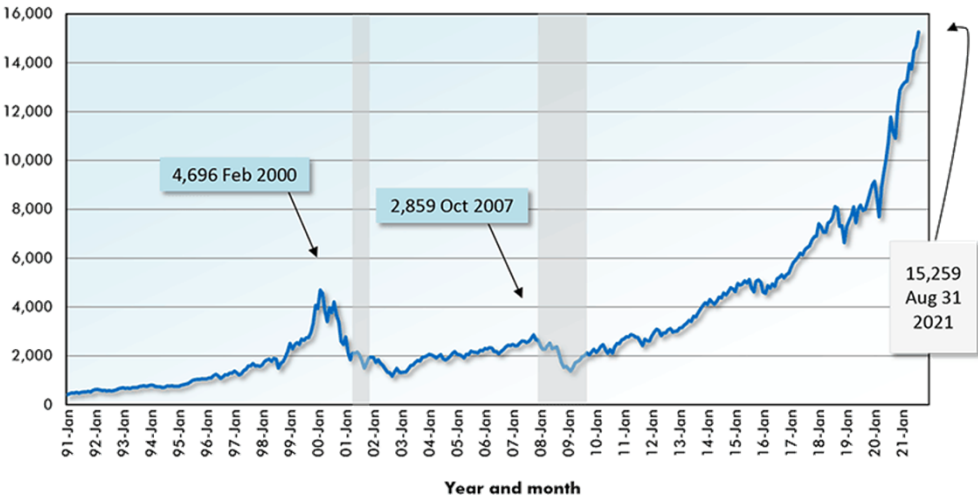
Upon closing, Aug. 31 2021, the S&P 500 was +2.9% m/m and +29.2% y/y. Compared with its all-time high of 4,537 just recently reached on Aug. 30, 2021, the S&P 500 ended the month -0.3%.

Areas of gray shading denote century's 2 prior recessions ('dot.com' collapse in 2001 & Great Recession Q1 08 to Q2 09). The charts show month-end closing figures. The latest data points are for August 31, 2021.

Data sources: New York Stock Exchange (NYSE), Standard and Poor's (S & P), National Association of Securities Dealers Automated Quotations (NASDAQ), Toronto Stock Exchange (TSE) and Reuters. Charts: ConstructConnect.

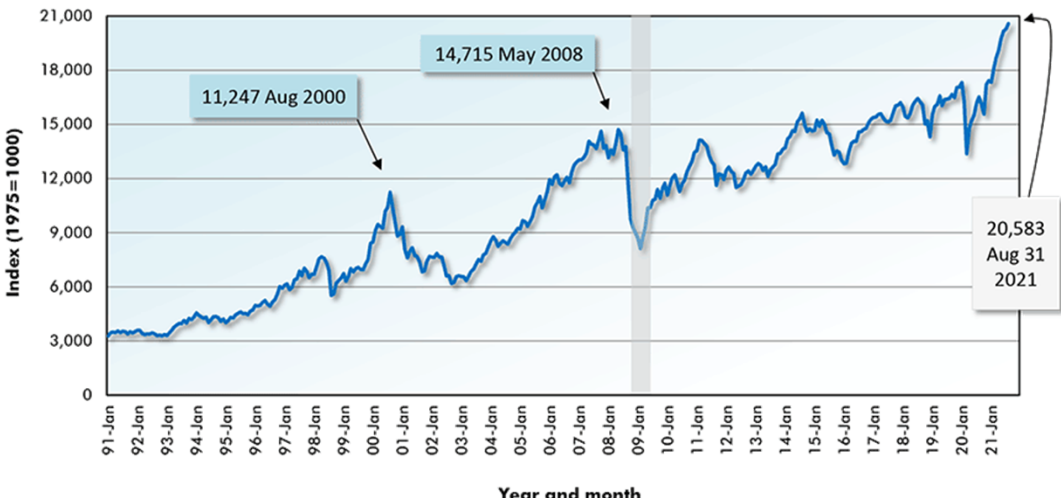
Stock Markets

NASDAQ Composite Index



Upon closing, Aug. 31 2021, NASDAQ was +4.0% m/m and +29.6% y/y. Compared with its all-time high of 15,288 just recently reached on Aug. 30, 2021, NASDAQ ended the month -0.2%.

S&P/TSX Composite Index: Toronto Stock Exchange

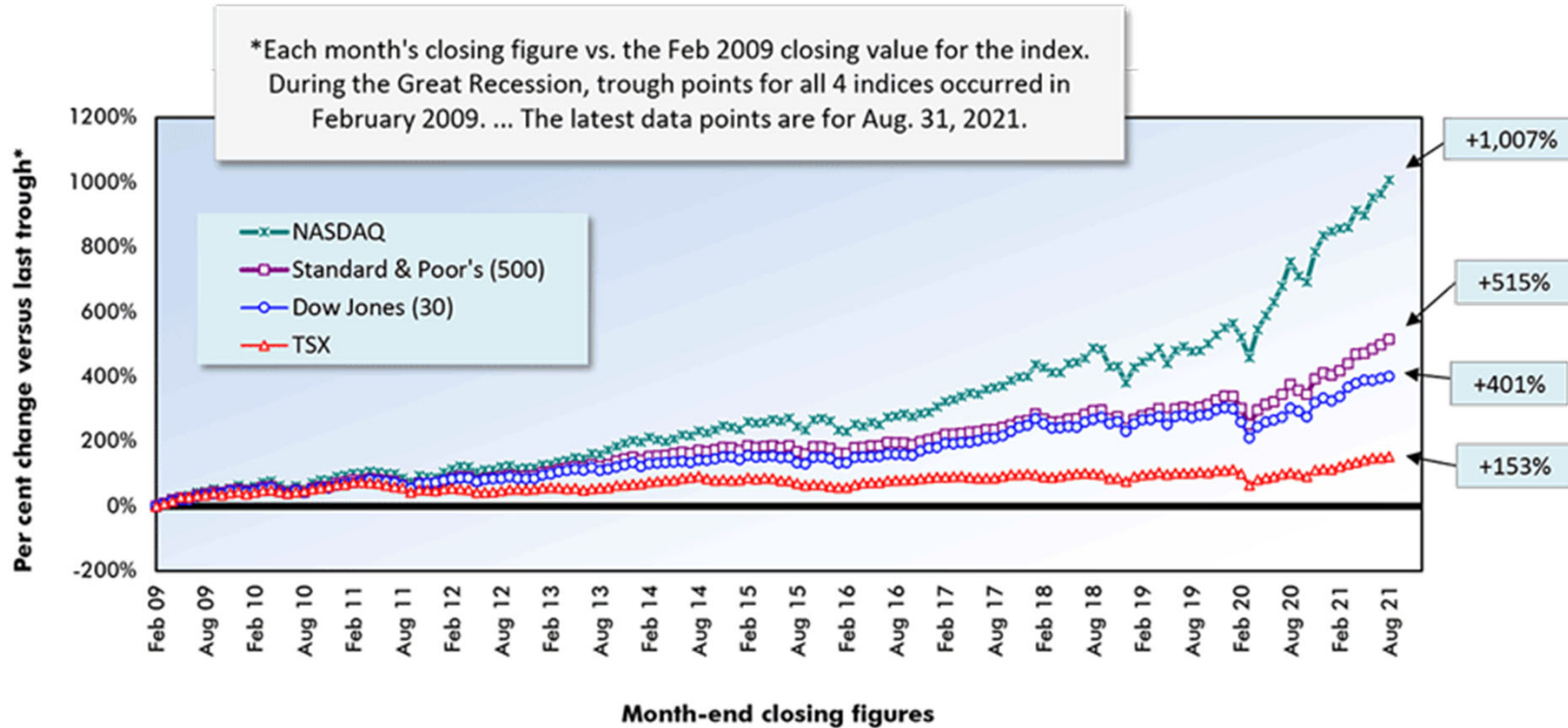


Upon closing, Aug. 31 2021, the TSX was +1.5% m/m and +24.6% y/y. Compared with its all-time high of 20,704 reached on the same day, Aug. 31, 2021, the TSX ended the month -0.6%.

Areas of gray shading denote century's 2 prior recessions ('dot.com' collapse in 2001 & Great Recession Q1 08 to Q2 09). For the S&P/TSX, area of gray shading denotes Canada's earlier recession in current century (Q4 2008 to Q2 2009; no 'dot.com' collapse). The charts show month-end closing figures. The latest data point are for August 31, 2021.

Data sources: New York Stock Exchange (NYSE), Standard and Poor's (S & P), National Association of Securities Dealers Automated Quotations (NASDAQ), Toronto Stock Exchange (TSE) and Reuters. Charts: ConstructConnect.

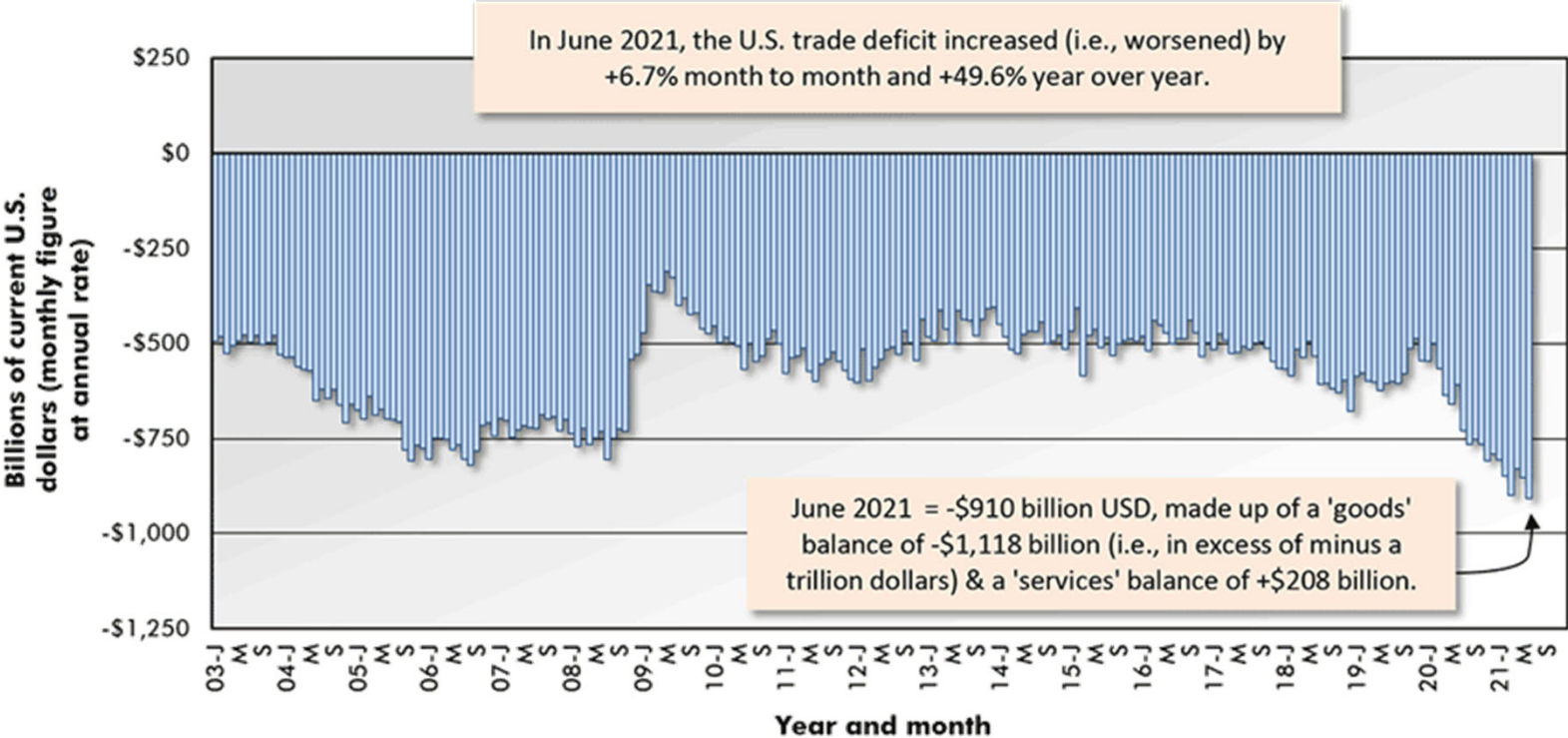
Performances of Key Stock Market Indices Since 2008-09 Downturn



Data Sources: NYSE, NASDAQ, TSE and Reuters.
Chart: ConstructConnect.

As of Aug. 31 2021 closing values, % increases of key stock market indices since their February 2009 major troughs have been: NASDAQ +1,007%; S&P 500 +515%; DJI +401%; & TSX +153%. **NASDAQ's 12-year climb has been spectacular! Without question, the U.S. economy gains a tremendous advantage from the strength of its high-tech sector.**

United States Foreign Trade: Goods & Services Balance – June 2021



The last data point is for June 2021. Based on seasonally adjusted monthly figures, projected at an annual rate.

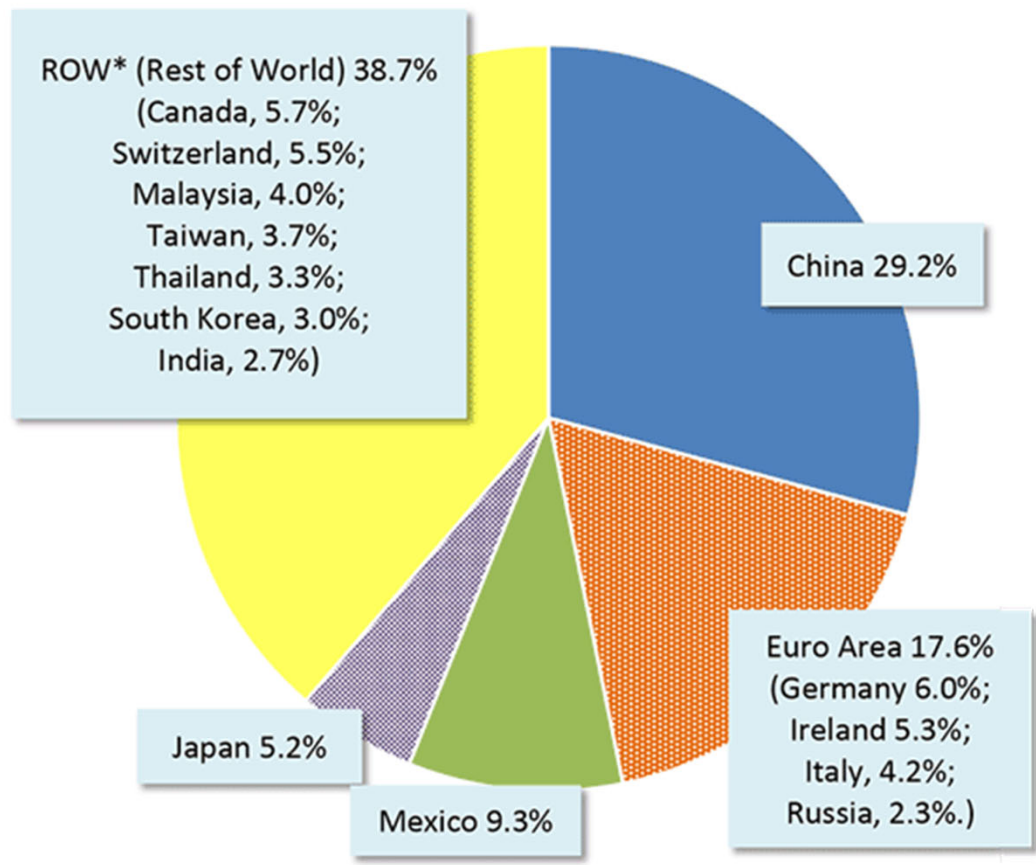
Data Source: Bureau of Economic Analysis (BEA). Chart: ConstructConnect.

In moving well past minus a trillion dollars (annualized) in June, the 'goods trade' deficit has now set a new all-time record. Furthermore, the help coming from the 'services' trade surplus isn't as strong as it used to be (-3.9% m/m and -18.4% y/y in June). The famous 'twin deficits' problem encompasses foreign trade & Washington's fiscal position. The latter is expected to be -\$3.4 trillion for the year ending Sep 30 2021. Last year's budgetary shortfall was -\$3.1 trillion.

Geographic Sources of U.S. Total Foreign Trade Deficit in Goods – June 2021

Several years ago, China routinely accounted for as much as 1/2 of America's total foreign trade deficit each month. Since then, China's share has dropped significantly. In the latest month (June 2021), for the first time since early in the 2008-2009 recession, **China's share fell below 30% (to 29.2%).**

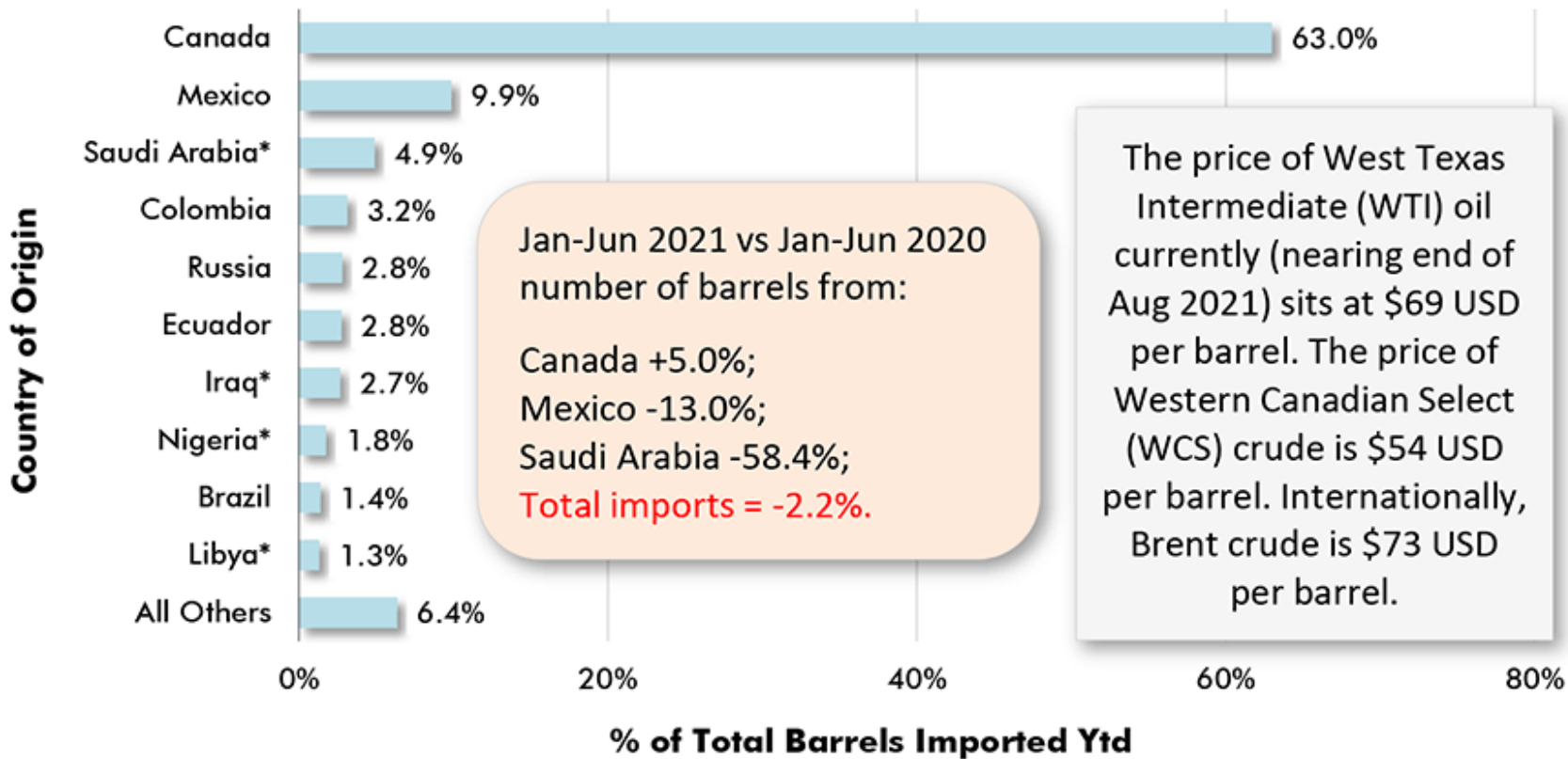
By product designation, 50% of the total U.S. trade deficit is in 'consumer goods'.



The last data point is for June 2021.
Based on seasonally adjusted monthly figures, projected at an annual rate.

Data Source: U.S. Census Bureau and Bureau of Economic Analysis (BEA).
Chart: ConstructConnect.

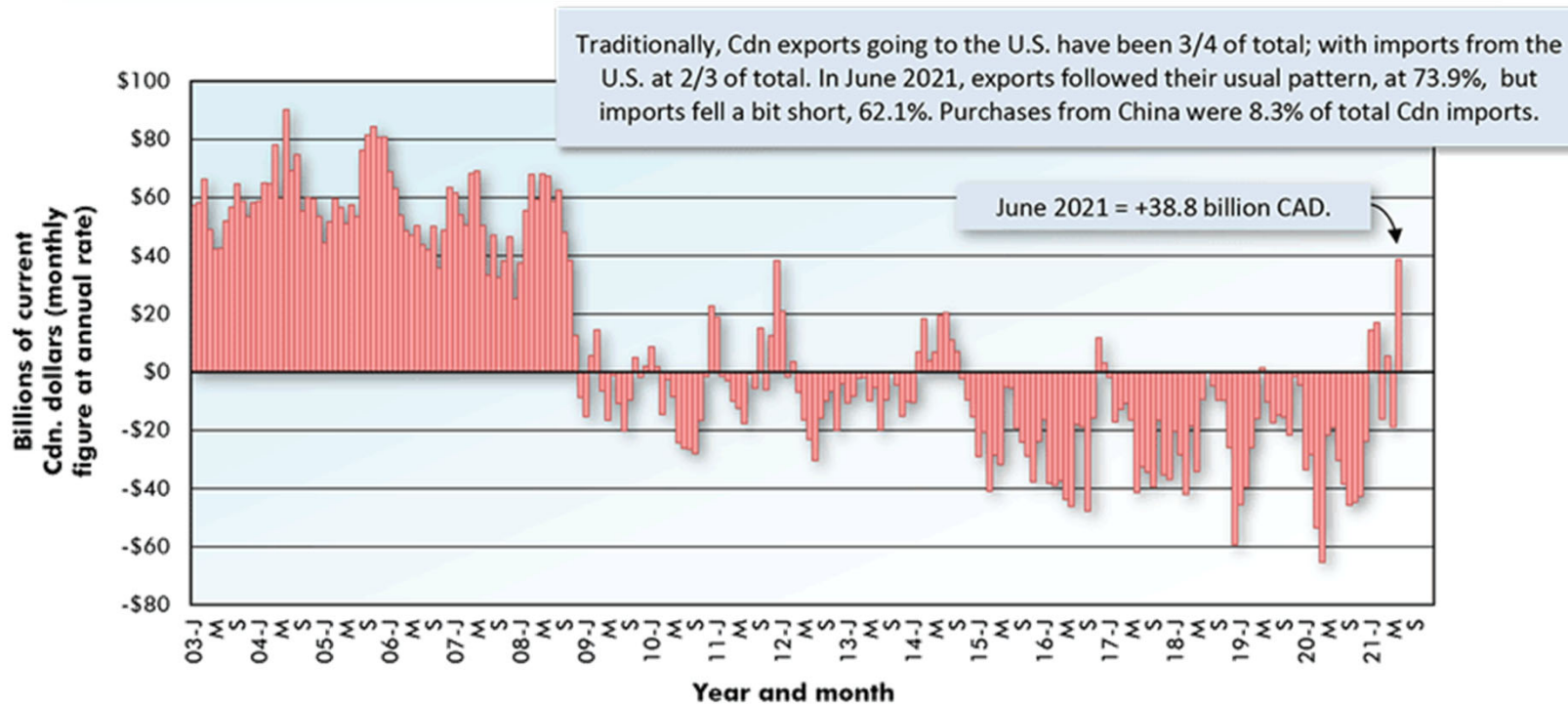
Foreign Sources of U.S. Imported Oil % of Total Barrels – Jan-Jun 2021



* Asterisk indicates country among OPEC members. Ecuador left OPEC in January 2020.

Data source: Census Bureau & Bureau of Economic Analysis (BEA).
Chart: ConstructConnect.

Canada's Foreign Trade: The Merchandise Trade Balance – June 2021



The last data point is for June 2021.
Based on seasonally adjusted monthly figures, projected at an annual rate.

Data Source: Statistics Canada.
Chart: ConstructConnect.

During the first half of 2021, Canada experienced 4 months of foreign trade surpluses & 2 of deficits. **June 2021's figure of +\$38.8 billion CAD (annualized) was the best since before the 2008-2009 recession.** A wave of commodity price increases, especially in the oil & natural gas spheres, is helping Canada move to a positive trade position and away from shortfalls. A foreign trade surplus contributes directly to gross domestic product (GDP) growth.

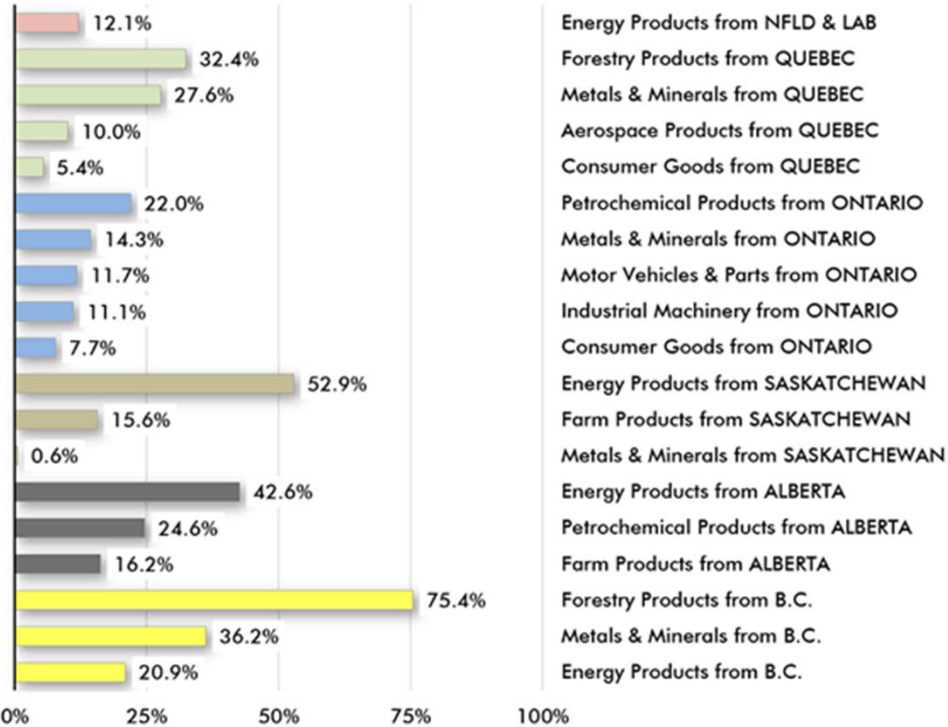
Canada's Key Export Product Sales by Province

Energy product exports from Saskatchewan & Alberta and forestry product exports from B.C. have been doing exceptionally well.

The two goods categories accounting for the largest dollar volumes of exports are Alberta energy products (+42.6% ytd) and Ontario motor vehicles and parts (+11.7% ytd).

Every % change in the chart is positive; there are no negatives.

Jan-Jun 2021 vs Jan-Jun 2020

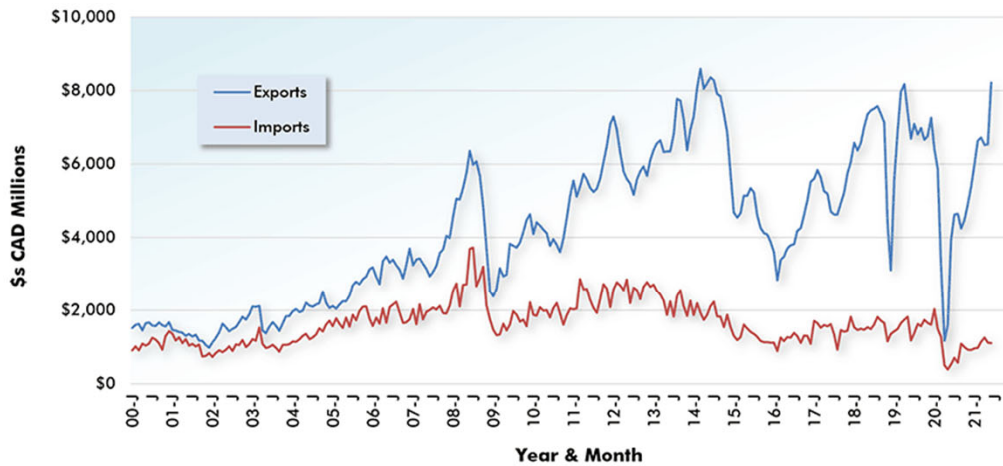


Key Export Products & Province of Origin

Data Source: Statistics Canada Table 12-10-0119-01. Chart: ConstructConnect.

This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (1)

Canada's Foreign Trade in Crude Oil & Crude Bitumen



For more than a decade, Canada has managed a strong surplus in the trade of crude oil. The dollar volume of Canadian oil exports is many times (i.e., currently 8x) the value of natural gas exports.

Canada's Foreign Trade in Natural Gas

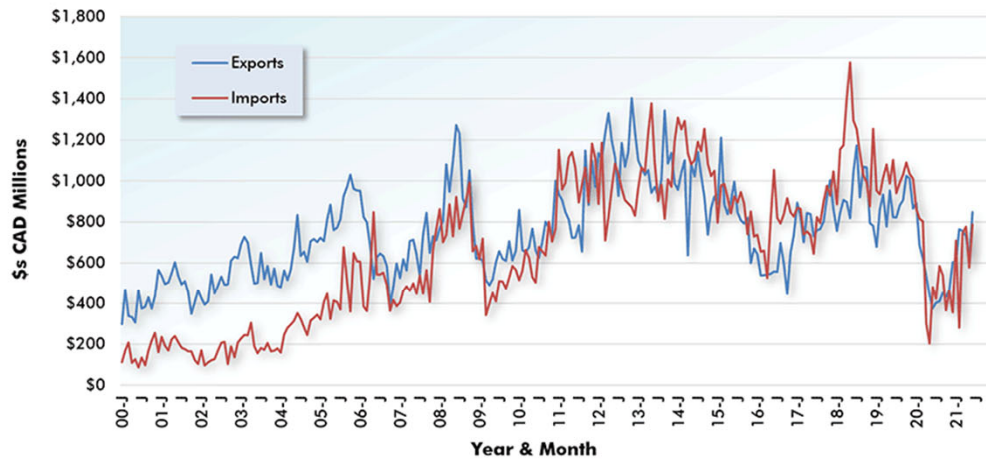


Canada's earlier big advantage in the trade of natural gas with the U.S. has largely dissipated due to the emergence of large hydraulic fracturing capacity south of the border. Moving forward, Canada's best prospects for gas exports probably lie in LNG projects on both coasts.

The latest data points are for June 2021.

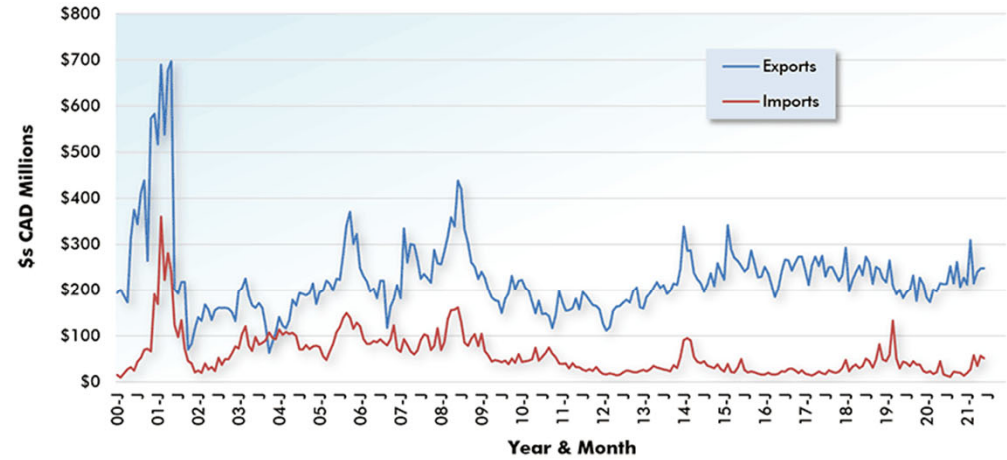
This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (2)

Canada's Foreign Trade in Refined Petroleum Product



Most of Canada's refined petroleum exports are shipped out of Irving's Saint John, N.B., refinery.

Canada's Foreign Trade in Electricity

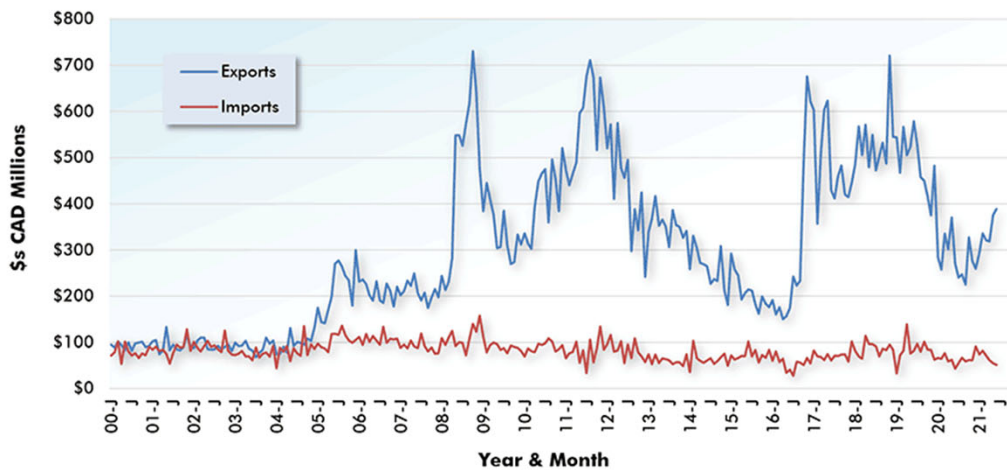


Canada has almost entirely shifted to no carbon or low carbon emitting sources of electric power generation. Many U.S. states are still heavily into thermal coal. New reversible transmission lines are being built north-south from Manitoba, Ontario & Quebec, so the opportunities for net export gains are clear.

The latest data points are for June 2021.

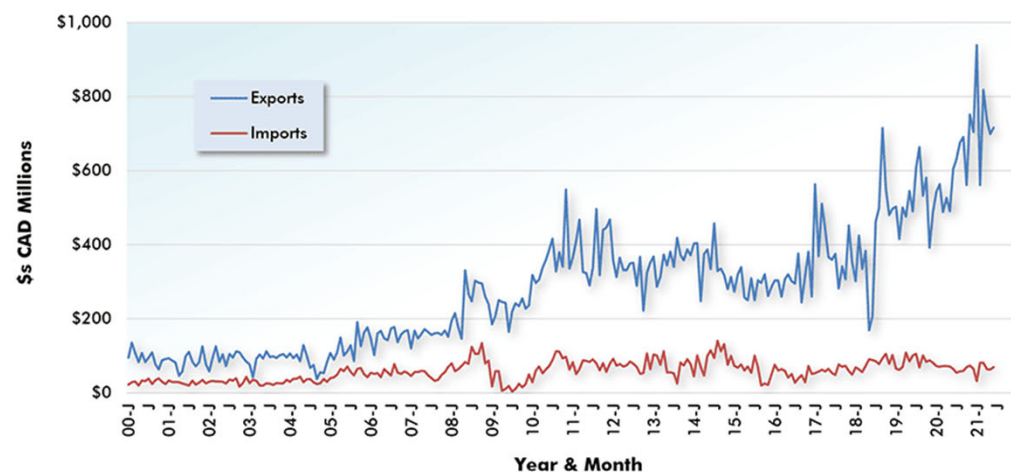
This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (3)

Canada's Foreign Trade in Coal



Thermal coal-fired electricity in Canada is being eliminated. But Canada is still an important exporter of the metallurgical coal used in steelmaking, with mines in the provinces of B.C. and Alberta being the major sources and Teck Resources being one of the largest international suppliers.

Canada's Foreign Trade in Iron Ore

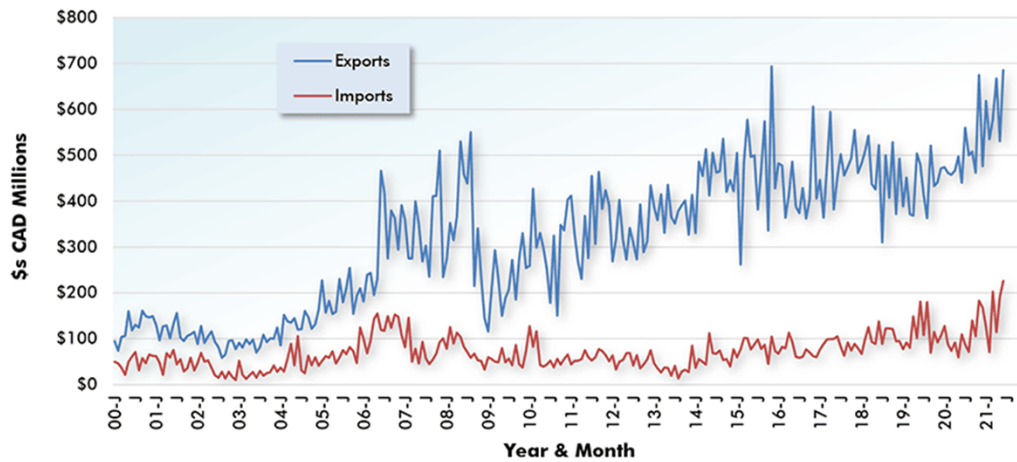


Most of the iron ore in Canada is mined along the Quebec-Labrador border. Nunavut also accounts for some production. (Rio Tinto is the major shareholder of Iron Ore Company of Canada.)

The latest data points are for June 2021.

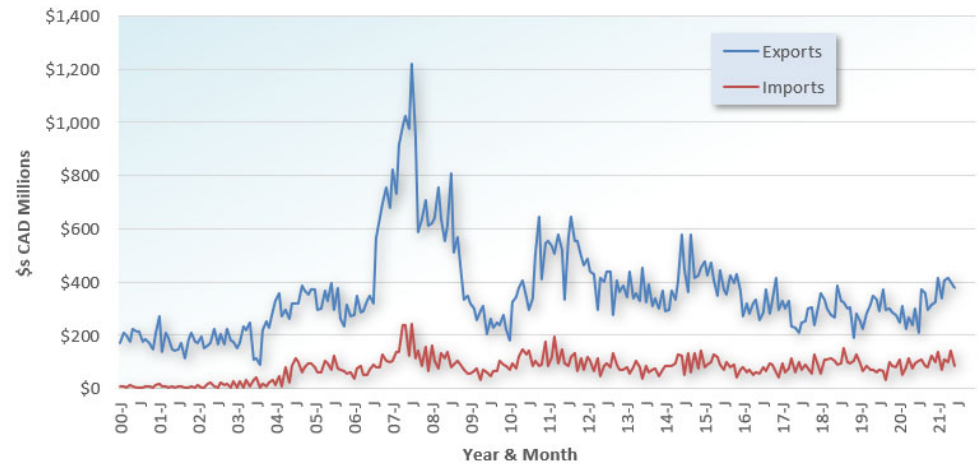
This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (4)

Canada's Foreign Trade in Copper



The two major copper producing provinces are British Columbia and Ontario. Further back in terms of output are Manitoba, Quebec and Nfld/Labrador.

Canada's Foreign Trade in Nickel



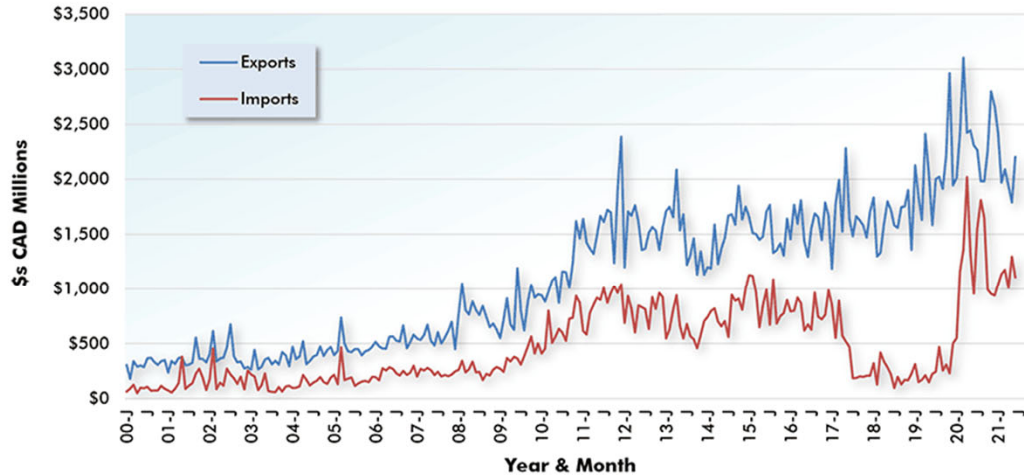
Ontario is number one for nickel production, but the names of the grand old giants in the industry, Inco and Falconbridge, have given way to Vale and Xstrata/Glencore. Quebec & Nfld/Labrador (Voisey's Bay) are other nickel producing provinces. Manitoba is far back in fourth spot.

Nickel ore, unwrought nickel and nickel alloys.

The latest data points are for June 2021.

This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (5)

Canada's Foreign Trade in Gold, Silver & Platinum



Ontario is number one for gold production in Canada, with Quebec not far behind. British Columbia is a distant third. The nation's major players are Newmont (acquired Goldcorp) and Barrick.

Canada's Foreign Trade in Potash



Nutrien, formed through the merger of Potash Corp of Saskatchewan and Agrium, is Canada's largest producer. All output comes from Saskatchewan; mining in New Brunswick has been terminated.

The latest data points are for June 2021.

This is How Canada Works – Surpluses in the Foreign Trade of Raw Materials (6)

Canada's Foreign Trade in Aluminum



Aluminum production in Canada is concentrated in Quebec (Sept-Iles region) and British Columbia (Kitimat). The biggest companies in the field are Rio Tinto Alcan & Alcoa Corporation.

Canada's Foreign Trade in Lumber & Other Sawmill Products

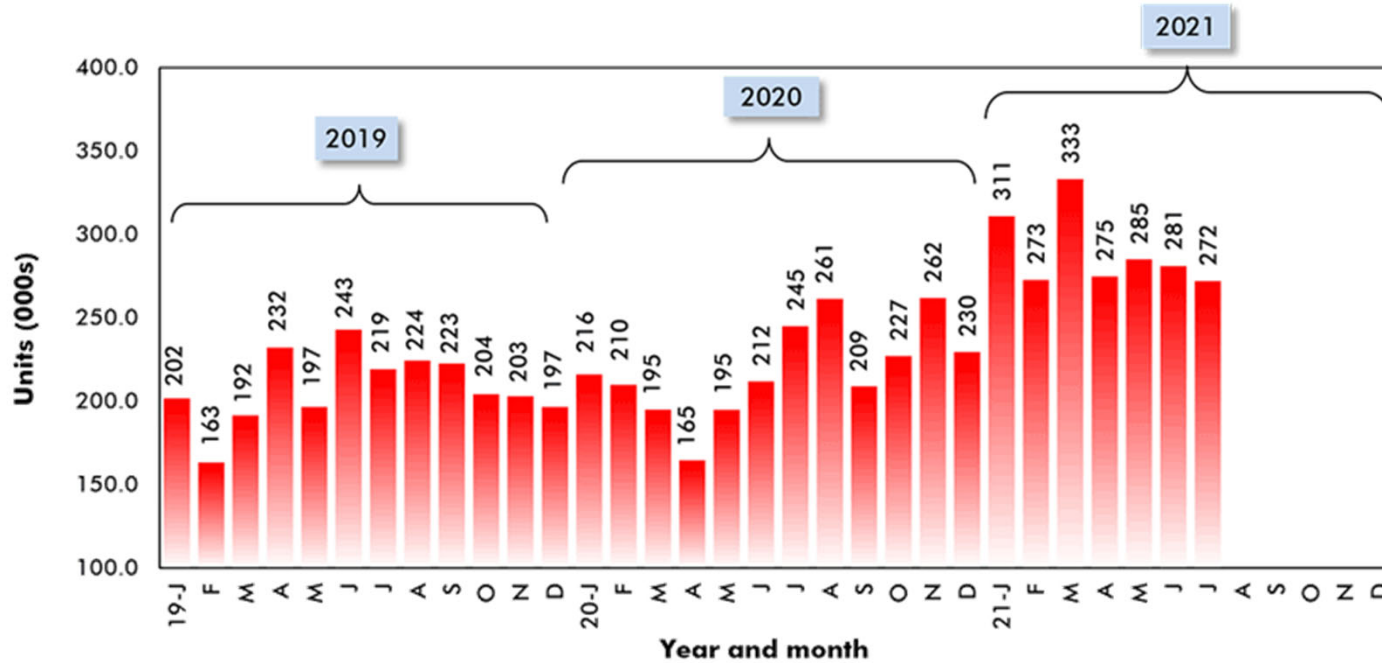


Among provinces, B.C. is Canada's large forestry product exporter. Quebec and Ontario are also major producers. Proportionally, the forestry sector is especially important to the economy of New Brunswick. The two major Canadian woodlot companies are West Fraser Timber & Canfor.

The latest data points are for June 2021.

Canada Monthly Housing Starts

Seasonally Adjusted at Annual Rates (SAAR)



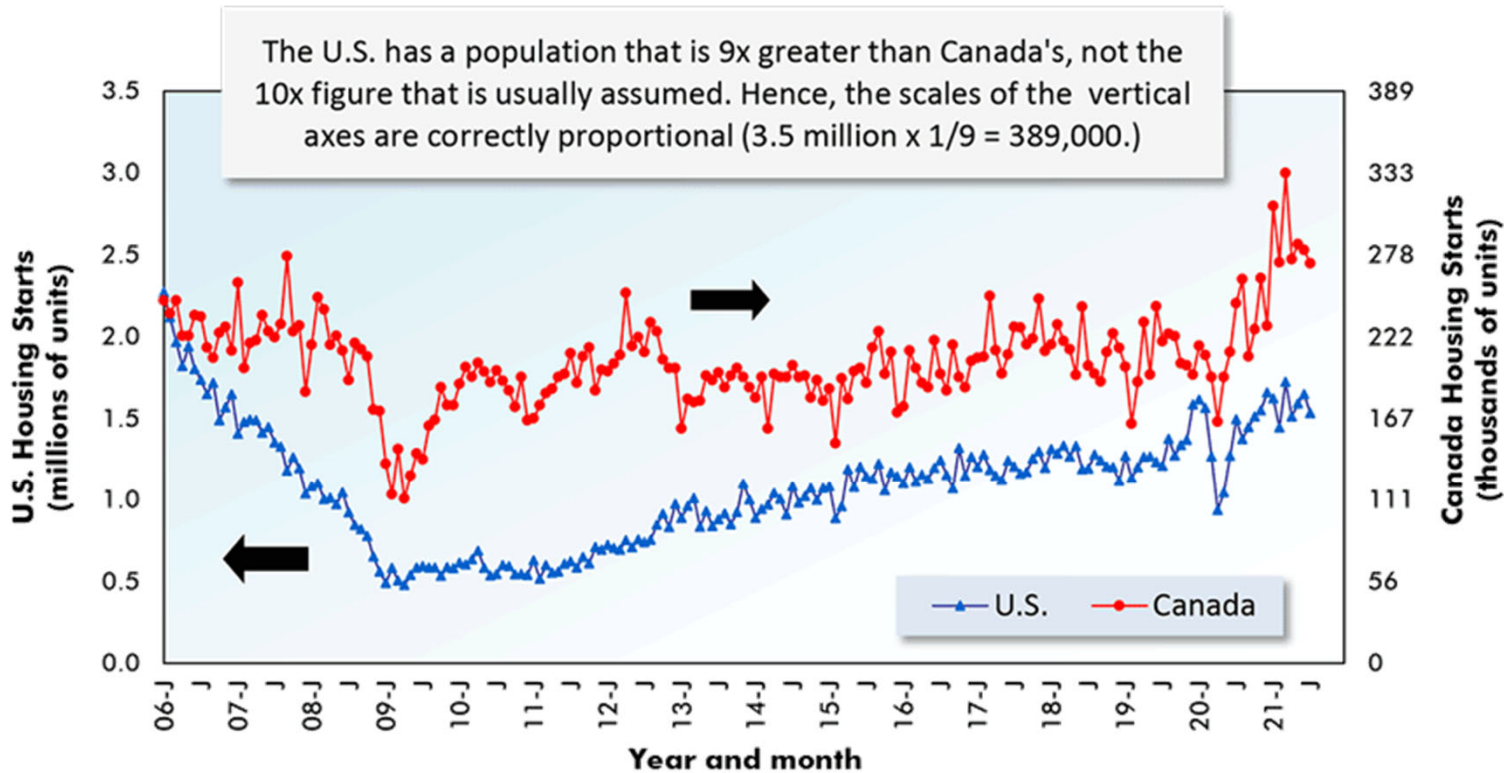
Data Source: Canada Mortgage and Housing Corporation (CMHC).
Chart: ConstructConnect.

Canada's Annual Starts:
 2015 = 195,535 units (+3.3%);
 2016 = 197,915 units (+1.2%);
 2017 = 219,763 units (+11.0%);
 2018 = 212,843 units (-3.1%);
 2019 = 208,685 units (-2.0%);
 2020 = 217,802 units (+4.4%).

Jan-Jul Avg. 2020 = 205,500 units;
 Jan-Jul Avg. 2021 = 290,100 units (+41.2% ytd).
333,000 units SAAR in Mar 2021 soared well past previous record high levels.

U.S. and Canadian Monthly Housing Starts

Seasonally Adjusted at Annual Rates (SAAR)



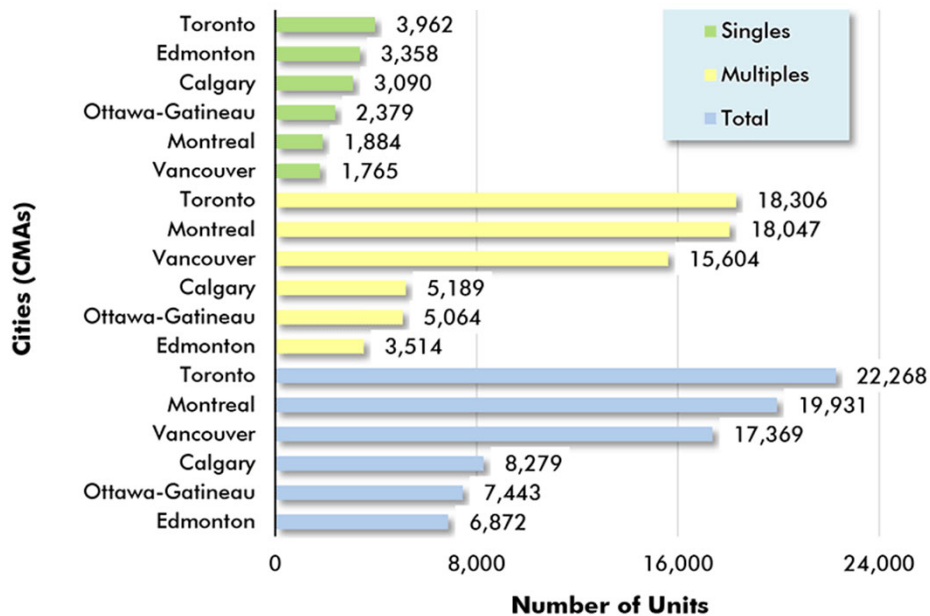
Last data points are for July 2021.
ARROWS: U.S. nos. to be read from left axis; Canadian from right axis.

Data Source: U.S. Census Bureau & Canada Mortgage & Housing Corp (CMHC).
Chart: ConstructConnect.

Monthly average U.S. housing starts ytd in 2021 are +20.4% (vs Jan-Jul 2020). In Canada, the rate of increase has been 2x as fast, +41.2%. On a per capita basis, Canada has recorded a higher level of home starts than the U.S. in every month for the past 16 straight years.

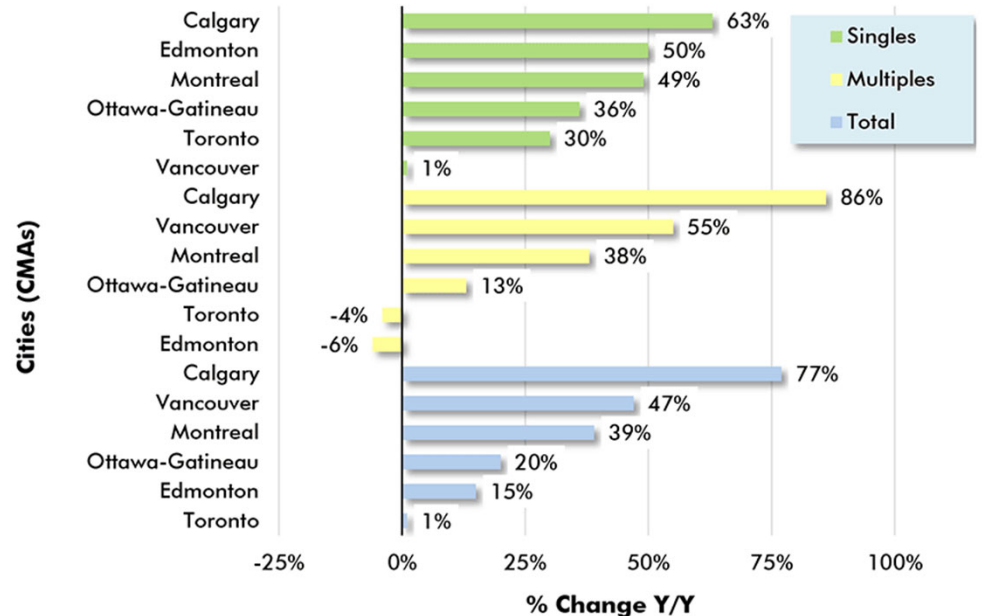
Housing Starts in Canada's 6 Most Populous Cities

January to July 2021 Actuals



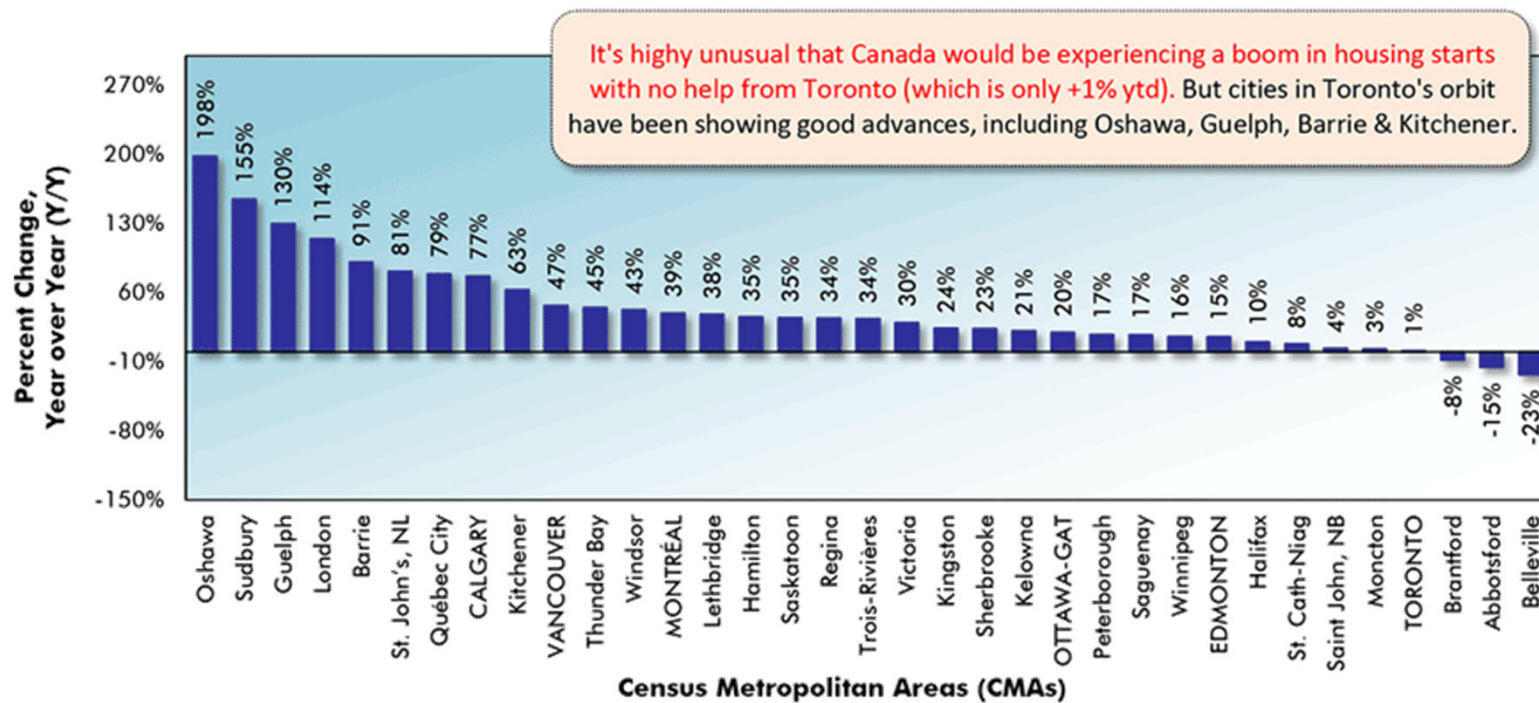
Toronto is the leader in all 3 categories, but it's ahead of Montreal in 'multiples' by the slimmest of margins. Ytd, Toronto, Montreal & Vancouver combined have accounted for 55% of total multiple & 48% of grand total starts by Canada's 35 census metro areas (CMAs).

Jan-Jul 2021 vs Jan-Jul 2020



On a percentage-change basis, Calgary is leading in all three categories. ... It's a shock to see that Toronto, which during the past decade has held the crown for super-charged condo construction in North America, is -4% for multiples year to date in 2021.

Percent Change in Year-to-Date Housing Starts – Ranking of Canada’s Major Cities (Jan-Jul 2021 vs Jan-Jul 2020)



Canada's Census Metropolitan Areas (CMAs) have core populations of 50,000 plus. Canada's 6 CMAs with populations in excess of 1 million are in capital letters.

Data Source: Canada Mortgage & Housing Corporation/CMHC (not seasonally adjusted).
Chart: ConstructConnect.

Among Canada's six most populous cities, Calgary (+77%) is the leader in ytd percentage-change. Also noteworthy for their increases, however, have been Vancouver (+47%) and Montreal (+39%). ... B.C. is the one province where its share of 'starts' (19.1%) is much higher than its share of Canada's population, 13.5%.

Canada Type-of-Structure Starts Forecasts

(Insight version of table - \$ Billions CAD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Verticals							
All Other Civil	17.492	12.218	10.746	17.177	20.861	23.219	25.268
Bridges	2.280	3.665	2.321	3.251	3.548	3.733	3.782
Dams / Canals / Marine Work	0.714	0.605	0.633	0.725	0.801	0.845	0.895
Power Infrastructure	3.147	2.727	3.285	4.730	5.684	6.722	7.421
Roads	9.701	10.169	9.312	10.080	10.894	11.621	12.193
Water and Sewage Treatment	3.886	2.987	3.698	3.979	4.260	4.540	4.821
CIVIL	37.221	32.371	29.996	39.942	46.048	50.681	54.379
<i>(Yr/yr % change)</i>	5.6%	-13.0%	-7.3%	33.2%	15.3%	10.1%	7.3%
Offices (private)	3.804	2.085	1.388	1.891	2.301	2.672	2.963
Parking Garages	0.383	0.143	0.085	0.127	0.149	0.169	0.191
Transportation Terminals	1.497	5.565	3.242	4.412	4.967	4.984	5.046
Commercial	5.684	7.793	4.714	6.430	7.417	7.825	8.200
<i>(Yr/yr % change)</i>	-38.4%	37.1%	-39.5%	36.4%	15.4%	5.5%	4.8%
Amusement	2.371	1.025	1.737	1.786	1.891	2.175	2.392
Religious	0.050	0.036	0.067	0.079	0.088	0.098	0.107
Community	2.421	1.060	1.804	1.864	1.979	2.273	2.499
<i>(Yr/yr % change)</i>	-8.8%	-56.2%	70.1%	3.3%	6.2%	14.8%	10.0%
Educational	5.270	5.234	5.451	5.772	6.092	6.409	6.622
<i>(Yr/yr % change)</i>	24.6%	-0.7%	4.2%	5.9%	5.5%	5.2%	3.3%
Fire and Police Stations	1.028	0.836	1.073	1.141	1.210	1.290	1.371
Government Offices	3.215	1.474	0.991	1.250	1.691	1.756	1.811
Government	4.243	2.310	2.065	2.391	2.901	3.046	3.181
<i>(Yr/yr % change)</i>	17.4%	-45.6%	-10.6%	15.8%	21.3%	5.0%	4.4%

Fall 2021 Edition.

Arranged to match the alphabetical category drop-down menus in INSIGHT.
 Source of actuals: ConstructConnect Insight /
 Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Canada Type-of-Structure Starts Forecasts

(Insight version of table - \$ Billions CAD)

	Actuals		Forecasts				
	2019	2020	2021	2022	2023	2024	2025
Verticals - Non-res Building Cont'd							
Manufacturing	3.465	2.395	4.005	5.766	6.756	7.637	8.432
Warehouses	1.560	1.876	1.243	1.508	1.631	1.764	1.899
Industrial	5.025	4.271	5.248	7.274	8.387	9.401	10.331
(Yr/yr % change)	-76.8%	-15.0%	22.9%	38.6%	15.3%	12.1%	9.9%
Hospitals / Clinics	3.674	3.589	6.774	5.255	5.596	5.810	5.947
Medical Misc.	0.295	0.146	0.135	0.277	0.342	0.409	0.468
Medical	3.969	3.734	6.909	5.532	5.938	6.219	6.416
(Yr/yr % change)	7.7%	-5.9%	85.0%	-19.9%	7.3%	4.7%	3.2%
Hotels	0.657	0.385	0.191	0.553	0.755	0.865	0.995
Retail Misc.	0.238	0.093	0.082	0.161	0.209	0.236	0.266
Shopping	2.346	0.351	0.205	0.589	0.885	1.103	1.213
Retail	3.241	0.829	0.478	1.303	1.849	2.204	2.475
(Yr/yr % change)	120.5%	-74.4%	-42.4%	172.8%	41.9%	19.2%	12.3%
NON-RESIDENTIAL BUILDING	29.854	25.231	26.670	30.566	34.563	37.377	39.725
(Yr/yr % change)	-35.8%	-15.5%	5.7%	14.6%	13.1%	8.1%	6.3%
Multi-Family	18.717	12.972	13.225	13.703	14.938	16.160	17.114
Single-Family	12.331	13.301	17.770	18.463	18.570	19.049	19.752
RESIDENTIAL	31.048	26.273	30.995	32.166	33.508	35.208	36.866
(Yr/yr % change)	4.4%	-15.4%	18.0%	3.8%	4.2%	5.1%	4.7%
TOTAL NON-RESIDENTIAL	67.075	57.603	56.665	70.507	80.611	88.057	94.104
(Yr/yr % change)	-18.0%	-14.1%	-1.6%	24.4%	14.3%	9.2%	6.9%
GRAND TOTAL	98.123	83.876	87.660	102.673	114.119	123.266	130.970
(Yr/yr % change)	-12.0%	-14.5%	4.5%	17.1%	11.1%	8.0%	6.2%

Winter 2020-2021 Edition.

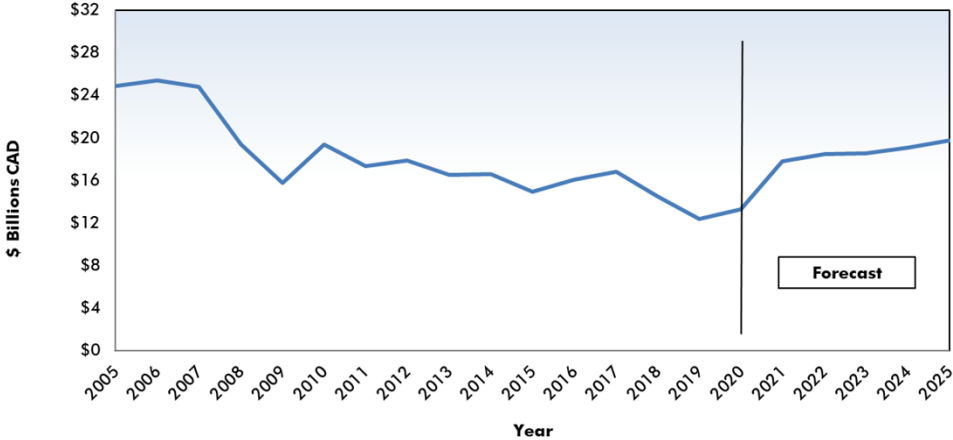
Arranged to match the alphabetical category drop-down menus in INSIGHT.
 Source of actuals: ConstructConnect Insight /
 Forecasts: Oxford Economics and ConstructConnect / Table: ConstructConnect.

Canada Construction Starts – ConstructConnect



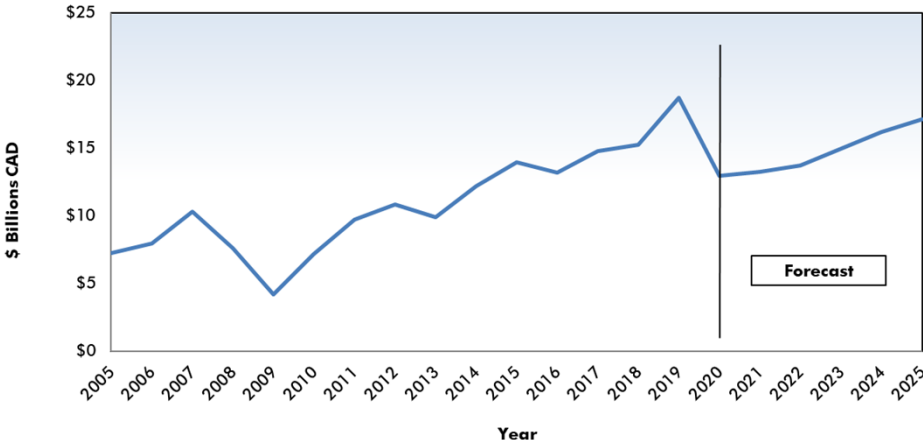
Canada Single-family Construction Starts

ConstructConnect



Canada Multi-family Construction Starts

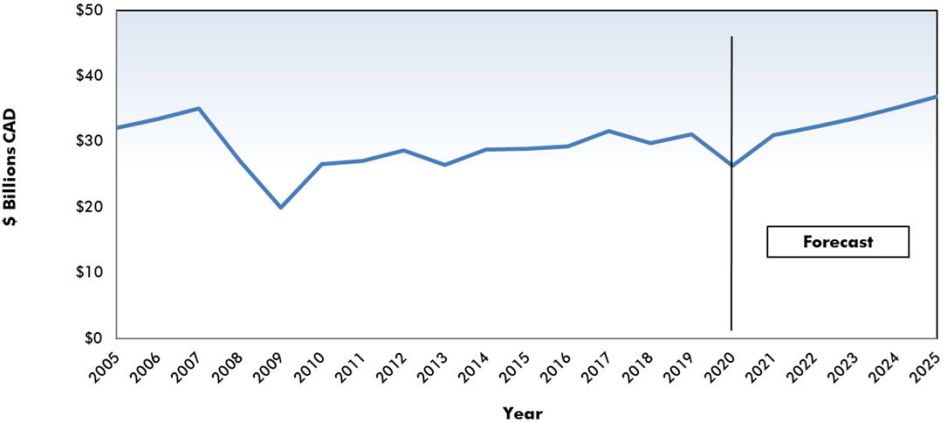
ConstructConnect



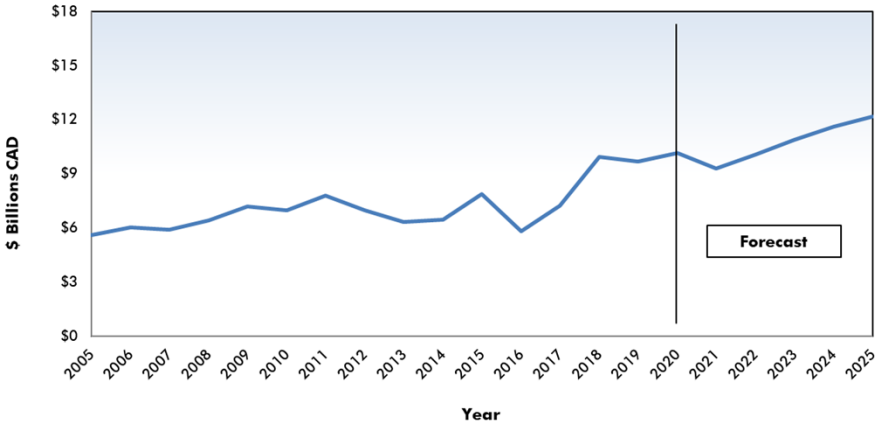
Source of actuals: ConstructConnect "Insight". Forecasts: Oxford Economics & ConstructConnect. Charts: ConstructConnect.

Canada Construction Starts – ConstructConnect

Canada Total Residential Construction Starts
ConstructConnect



Canada Roadwork Construction Starts
ConstructConnect

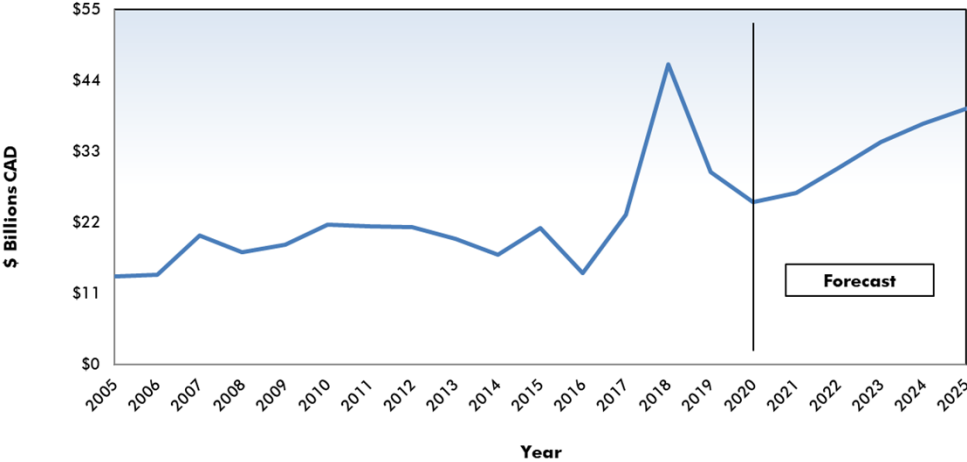


Source of actuals: ConstructConnect "Insight". Forecasts: Oxford Economics & ConstructConnect.
Charts: ConstructConnect.

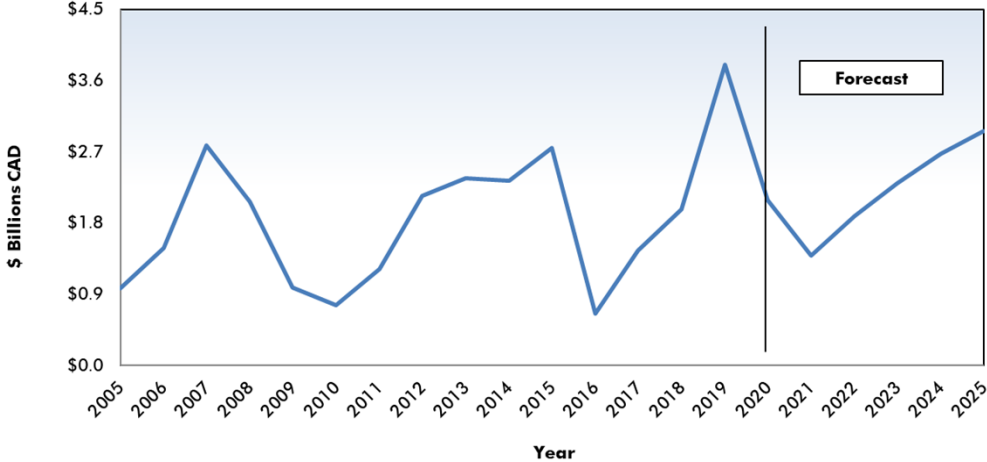
Canada Construction Starts – ConstructConnect



Canada Total Non-residential Building Construction Starts
ConstructConnect



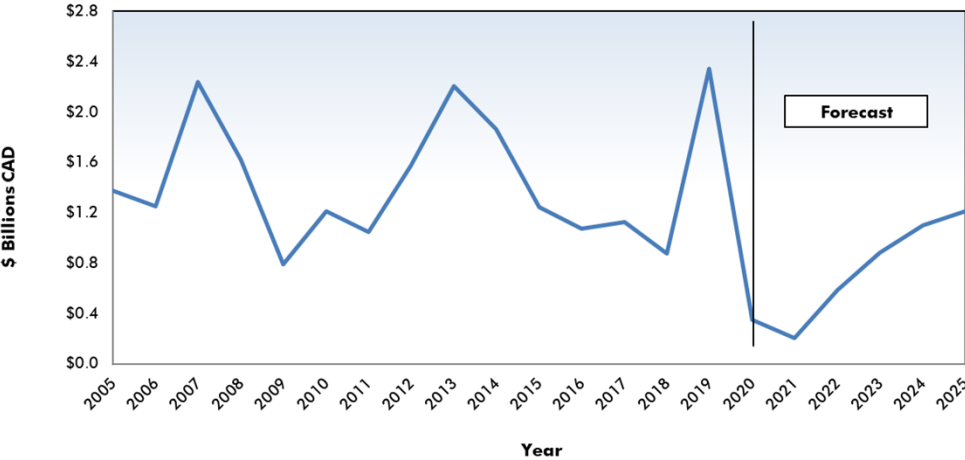
Canada Private Offices Construction Starts
ConstructConnect



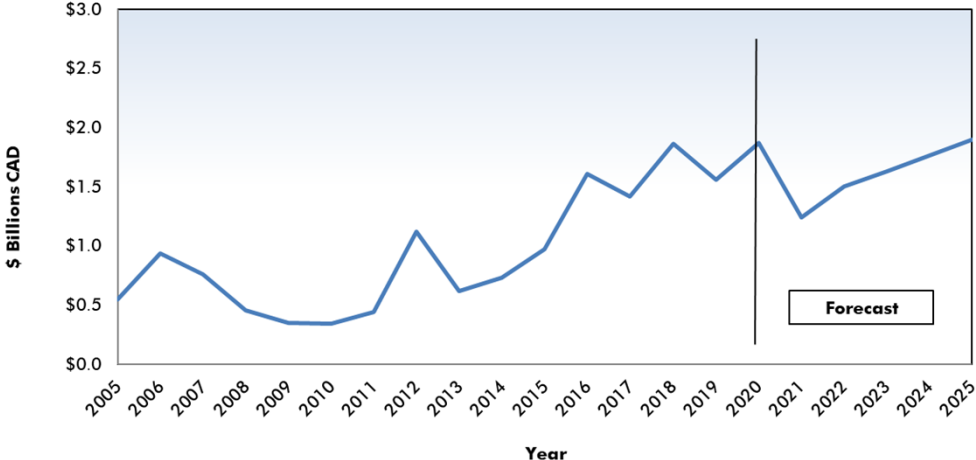
Source of actuals: ConstructConnect "Insight". Forecasts: Oxford Economics & ConstructConnect.
Charts: ConstructConnect.

Canada Construction Starts – ConstructConnect

Canada Shopping/Retail Construction Starts
ConstructConnect



Canada Warehouse Construction Starts
ConstructConnect

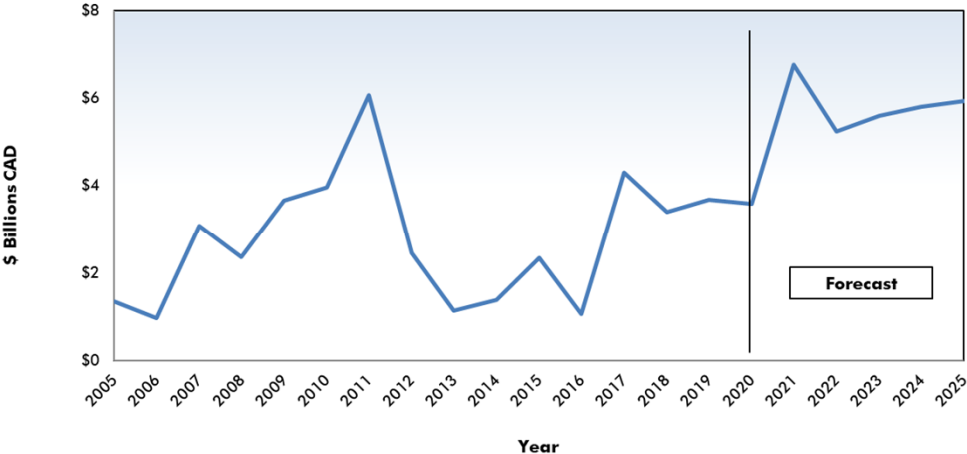


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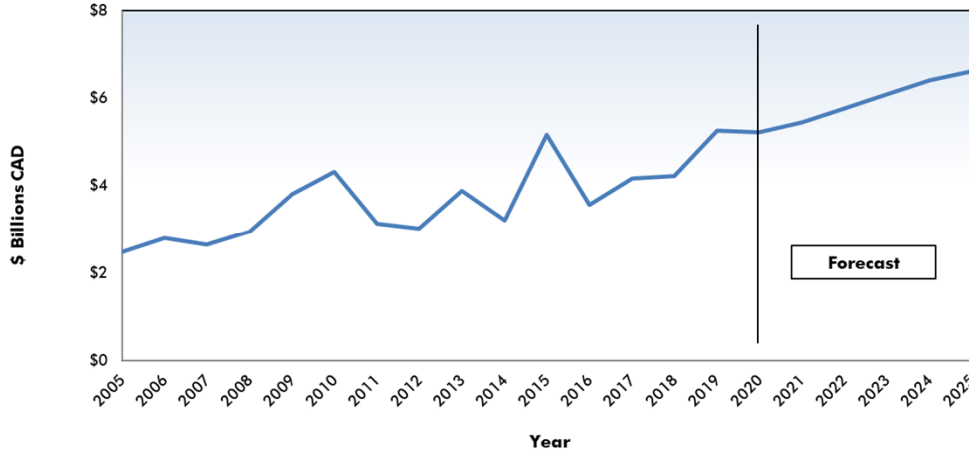
Canada Construction Starts – ConstructConnect



Canada Hospital/Clinic Construction Starts
ConstructConnect



Canada Education Construction Starts
ConstructConnect

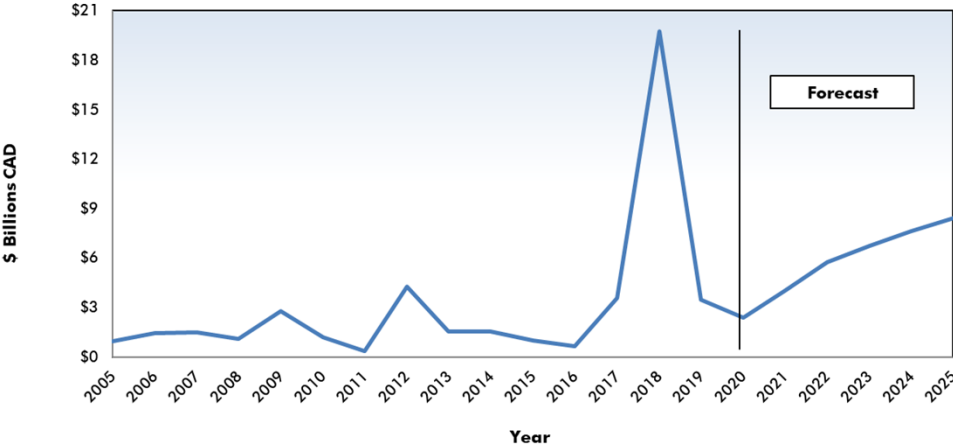


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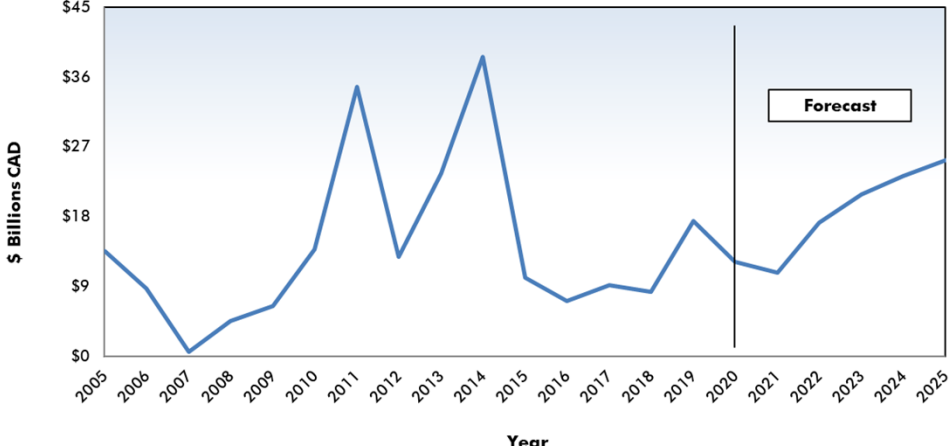
Canada Construction Starts – ConstructConnect



Canada Manufacturing Construction Starts
ConstructConnect



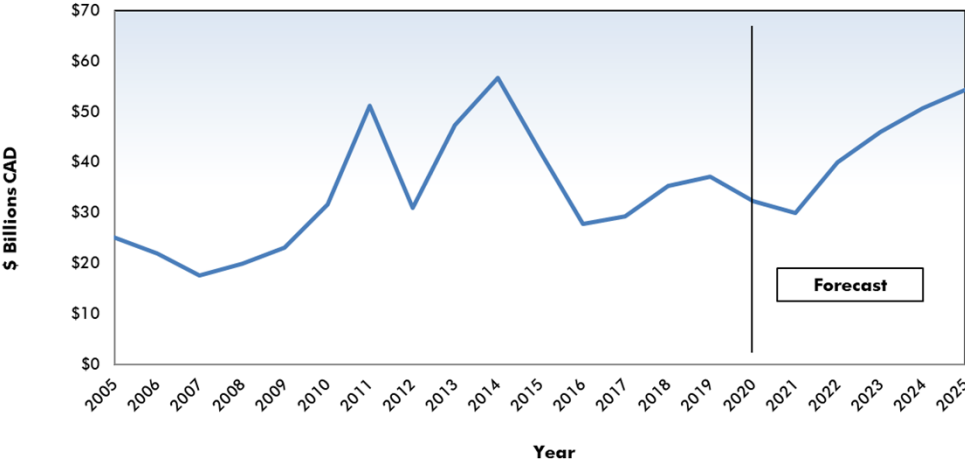
Canada All Other Civil Construction Starts
ConstructConnect



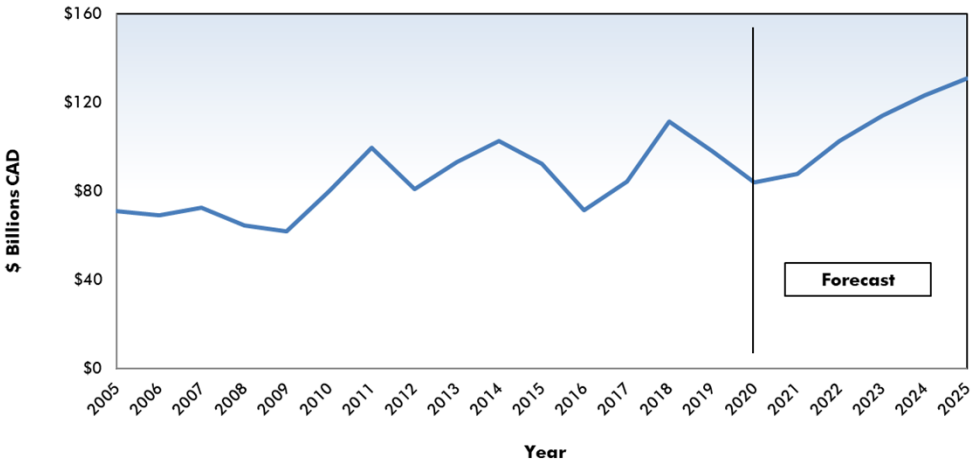
Source of actuals: ConstructConnect "Insight". Forecasts: Oxford Economics & ConstructConnect.
Charts: ConstructConnect.

Canada Construction Starts – ConstructConnect

Canada Total Engineering Construction Starts
ConstructConnect



Canada Grand Total Construction Starts
ConstructConnect



Source of actuals: ConstructConnect "Insight". Forecasts: Oxford Economics & ConstructConnect.
Charts: ConstructConnect.

Major Upcoming Macro & Micro Issues for the Construction Sector

- **Inflation** (temporary due largely to shortages that will be rectified ... or more ingrained?)
- Higher priority for **infrastructure** spending initiatives, but where to place the emphasis (roads, bridges, transit, water systems, ports, broadband, schools, medical facilities)?
- **Resource sector rebirth**, but capital spending dollars on expansion projects will compete with costly de-carbonization efforts in steel, cement, and aluminum production.
- Wind, solar and battery plant **electrification** of the economy to fulfill 'greening' goals in motor vehicle operation, HVAC systems, LNG production and 'hyperloops'.
- What's the shelf life of the current **housing boom**? When will the baton be passed to nonresidential construction?
- Changing **demographics** (accommodating an age structure that is growing older; also, considering more immigration as an answer to the slowdown in population growth).
- Post-COVID **refurbishments** of existing buildings and **design features** for new structures will facilitate sanitizing; healthier air circulation; and better people movement.
- A big boost given to **low-rise construction** (e.g., fulfillment and data centers) from the acceleration in advanced technology applications – We all now live on the Internet!
- Embracing **tech advances** to improve and speed construction processes, including a wider acceptance of offsite component manufacturing, partly to expand the labor pool.



Alex Carrick, Chief Economist, ConstructConnect

He has delivered presentations throughout North America on the U.S., Canadian and world construction outlooks.

Mr. Carrick has been with the company since 1985. Links to his numerous articles are featured on Twitter [@ConstructConnx](https://twitter.com/ConstructConnx), which has 50,000 followers.

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