

Economic Monitor

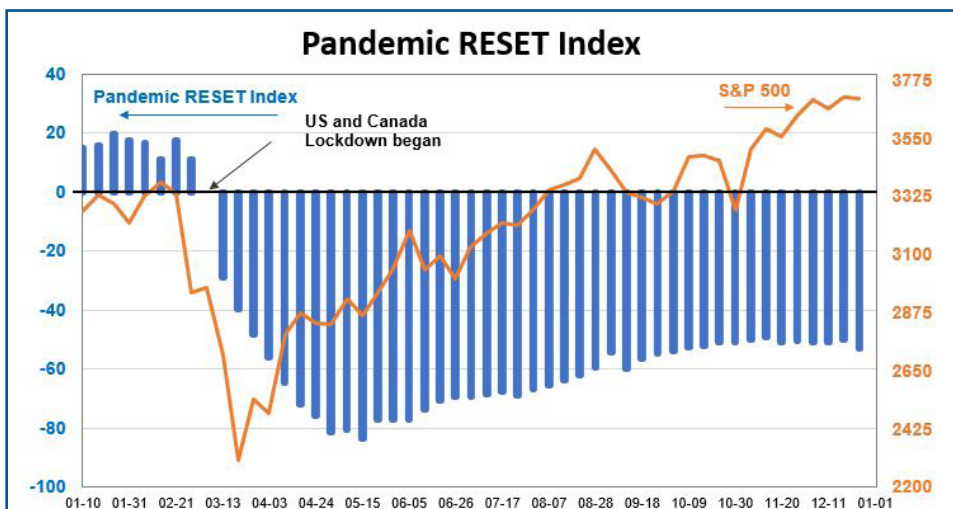
Chantelle Schieven
Chantelle@murenbeeld.com

December 30, 2020

2020 has certainly been like no other year! As the year comes to a close much of the world has mandated social distancing and travel restrictions in place, which include no large gatherings. This has changed many traditional holiday plans and limits gatherings for ringing in the new year. Many of the social distancing, and travel restrictions are expected to stay in place well into fall of 2021, when it is expected that a significant percent of the population will have received the coronavirus vaccine.

Even while large portions of the global economy are shutdown, equity markets have had a stellar run, as have precious and base metals – and with new fiscal stimulus packages (with additional expected), accommodative monetary policy, and improved economic activity these markets are likely to stay buoyant in 2021.

Our **Pandemic RESET Index** (blue bars on the chart below) captures the extent sectors of the economy hardest hit by the lockdown restrictions have stayed below pre-coronavirus levels.



Source: Bloomberg, Boxoffice mojo, Opentable.com, Murenbeeld & Co.

To gain a 'real-time' view of economic activity we created the **Pandemic RESET Index**. The RESET (Real Economy Statistical Evidence Tracker) Index includes: Consumer outlook (The Bloomberg Comfort Index), unemployment data (US continuing Unemployment Claims), merchandise retail sales (The Johnson Redbook Index), travel data (TSA Checkpoint data), restaurant reservations (open table), total box office revenues (Boxoffice mojo).

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How can governments reduce their debt levels?

The coronavirus-induced lockdowns and government fiscal stimulus response – estimated at over \$9 trillion by the IMF – has significantly increased already rising government debt levels. Central banks have also responded to the slowdown in economic activity with aggressive quantitative easing and reduction of interest rates. The Fed and Bank of Canada have also revised their inflation targets to ‘*average inflation over time*’, meaning that they will let inflation run over their 2% targets for a period of time (since inflation has been below target for a number of years, if inflation runs over 2%, then the average will be 2%).

With government deficits expected to remain large in 2021 and debt to GDP ratios rising we turned to one of Martin’s articles in a recent *Gold Monitor* titled *A Primer on Debt*, where he explains how debt to GDP ratios rise, and how inflation is part of the preferred equation to lower debt to GDP ratios.

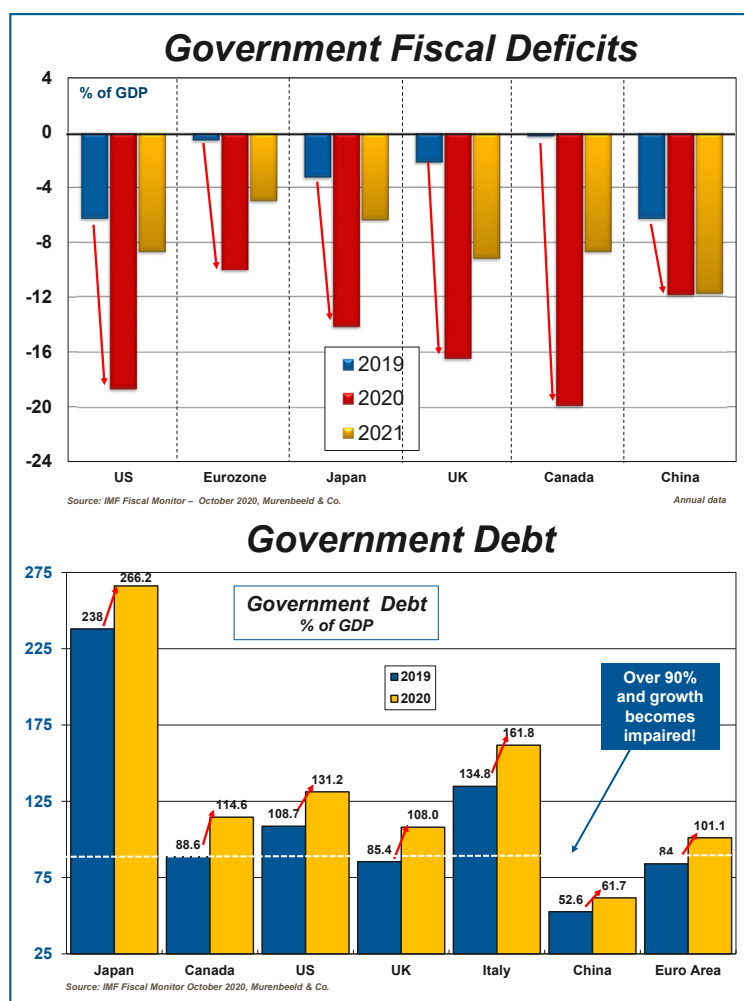
At the end of 2019 gross US government debt totaled \$22.7 trillion; subtracting the \$5.9 trillion of intergovernmental debt leaves \$16.8 trillion, which is held by the public and the Federal Reserve. (*Intragovernmental debt is debt that one part of the government owes to another part. In almost all cases, it is debt held in government trust funds, such as the Social Security trust funds. These debts represent assets to the part of the federal government that owns it (i.e., Social Security), but a liability to the part of the government that issues them (the Treasury Department), and so they have no net effect on the government's overall finances, see Committee for a Responsible Federal Budget, September 11, 2017.*)

Nominal US GDP totaled \$21.7 trillion at the end of 2019. Depending upon the reader’s preference in using gross debt, \$22.7 trillion, or net debt, \$16.8 trillion, I think a 100% debt/GDP ratio is a reasonable starting point for this discussion.

The formula that decides whether the debt/GDP ratio rises or falls in any given year depends upon the growth rate of nominal GDP (that is, real plus inflation), the interest rate the government incurs on its debt, and the government’s primary budget balance (surplus or deficit) for the year. (The primary budget balance excludes interest on debt, which is of course added to obtain the final budget balance.)

For the debt/GDP ratio to decline ***the growth of nominal GDP plus the primary balance must exceed the interest rate on debt.*** Otherwise, the ratio rises.

This can best be seen by two examples in the table overleaf. In the first example we assume US nominal GDP will grow at a steady rate of 4%, that the primary balance is held at 0% (i.e.



the budget is balanced except for the interest cost of outstanding debt), and the interest rate on government debt is held at 2%. According to the formula, since $4\% + 0\% > 2\%$ the debt/GDP ratio will decline, as the example shows. The ratio of debt to GDP falls from 100% to 82% over 10 years.

In the second example we only change the primary balance assumption, from 0% to -3.5% (i.e. the government runs persistent primary deficits). Since $4\% + (-3.5\%) < 2\%$ the debt/GDP ratio will rise – in this case to 114% over 10 years.

The last panel represents a more realistic scenario. The US economy will see something in the order of an 8% contraction this year, and a rebound next year in the order of 5.5% (4.0% real growth plus 1.5% inflation). The primary deficit will be in the order of 13.5% this year and a still large 7% next year (IMF projections). Interest rates will be low however – thanks to the Fed. We also

assume there will be a mild recession in year six, after which the US caps interest rates and boosts nominal growth by allowing inflation to overshoot.

The debt/GDP ratio rises through year six in this scenario. Thereafter, on the back of inflationary growth and better control of the budget deficit, the debt/GDP ratio declines. And that is the lesson here: inflation will help reduce the debt/GDP ratio, but interest rates must be capped below inflation, and the budget deficit must be brought under control. Through years 7 to 10 the primary balance approaches zero and nominal GDP rises faster than interest rates. Accordingly, about 10 percentage points will be knocked off the debt/GDP ratio by year 10 as compared to year 6.

Bottom Line: we expect significant rises in many countries' debt/GDP ratios for the next five years or so. This will stress the financial system, and will be an underlying positive force directing gold higher.

EXAMPLE 1											
	0	1	2	3	4	5	6	7	8	9	10
NGDP		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
INTEREST RATE		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
PRIMARY BALANCE		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
\$-DEBT	100	102	104	106	108	110	113	115	117	120	122
\$-NGDP	100	104	108	112	117	122	127	132	137	142	148
DEBT/NGDP	100%	98%	96%	94%	93%	91%	89%	87%	86%	84%	82%

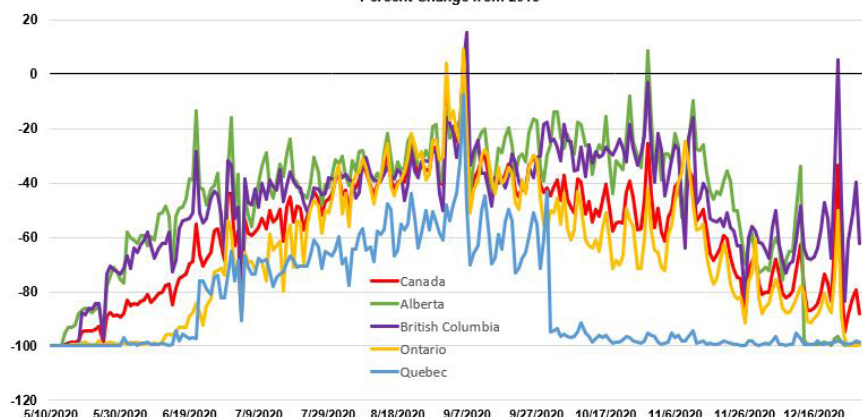
EXAMPLE 2											
	0	1	2	3	4	5	6	7	8	9	10
NGDP		4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
INTEREST RATE		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
PRIMARY BALANCE		-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%	-3.5%
DEBT	100	106	112	118	124	131	138	145	153	161	169
NGDP	100	104	108	112	117	122	127	132	137	142	148
DEBT/NGDP	100%	102%	103%	105%	106%	108%	109%	110%	112%	113%	114%

A HYPOTHETICAL SCENARIO											
	0	1	2	3	4	5	6	7	8	9	10
NGDP		-8.0%	5.5%	4.0%	4.0%	3.0%	1.0%	3.5%	4.0%	6.0%	8.0%
INTEREST RATE		0.8%	1.0%	1.5%	2.0%	2.5%	1.0%	1.5%	2.0%	3.0%	4.0%
PRIMARY BALANCE		-13.5%	-7.0%	-3.5%	-2.5%	-2.5%	-5.5%	-2.0%	-1.5%	-0.5%	0.0%
TOTAL DEBT	100	113	121	126	132	138	145	149.5	154.2	159	166
NGDP	100	92	97	101	105	108	109	113.0	117.6	125	135
DEBT/NGDP	100%	123%	125%	125%	125%	127%	133%	132%	131%	128%	123%

The growth of nominal GDP plus Primary Surplus must exceed interest on the debt

High-Frequency Indicators

Open Table Data - Canada
Percent Change from 2019

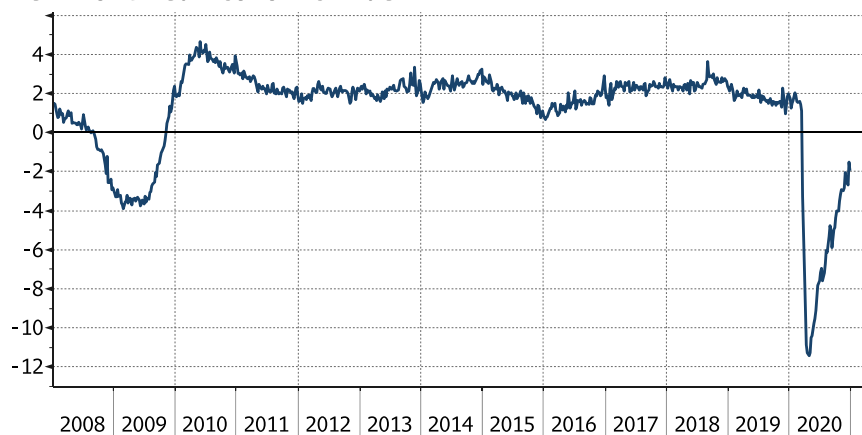


Source: Opentable State of the Industry, Murenbeeld & Co.

Open Table data suggests that dining at restaurants is declining again. Renewed restrictions are in place across Canada with restaurants dining rooms closed in Quebec.

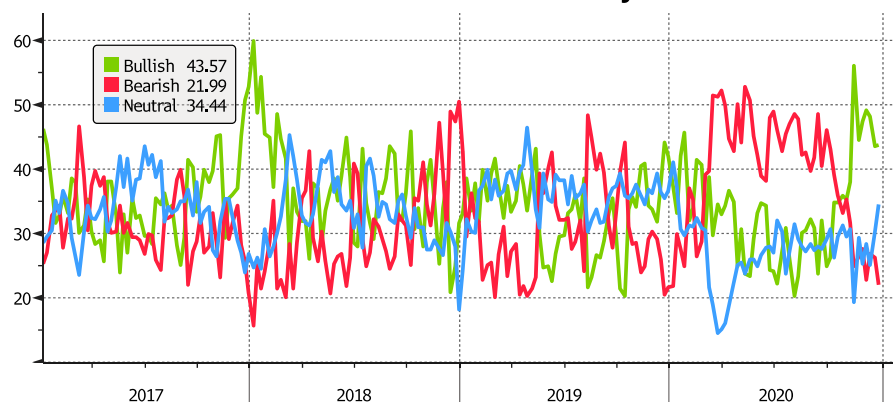
The New York Fed Economic Index shows there are parts of the economy still suffering from restrictions and closures. This index includes measures of same-store retail sales, an index of consumer sentiment, employment measures, steel production, fuel sales and electricity consumption.

New York Fed Economic Index



Source: New York Fed, Bloomberg, Murenbeeld & Co.

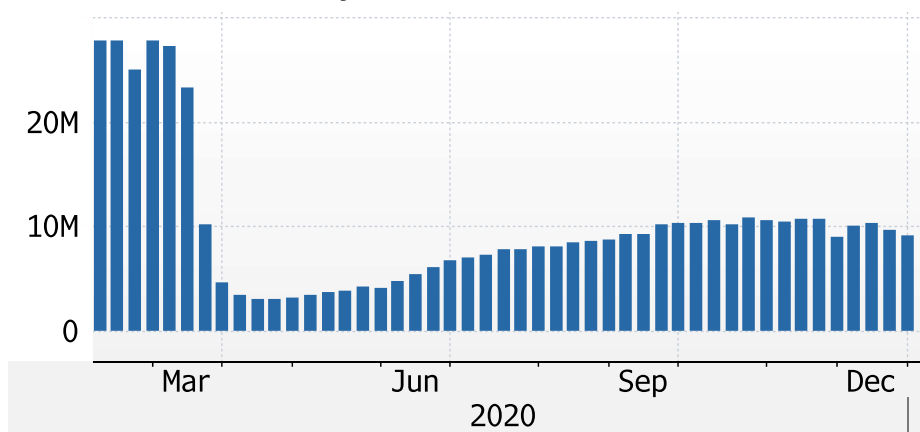
AAII Investor Sentiment
American Association of Individual Investors Survey



Source: Bloomberg, Murenbeeld & Co

Equity market sentiment has been very bullish since mid-November.

New York Subway Ridership Turnstile Entries - Weekly Total

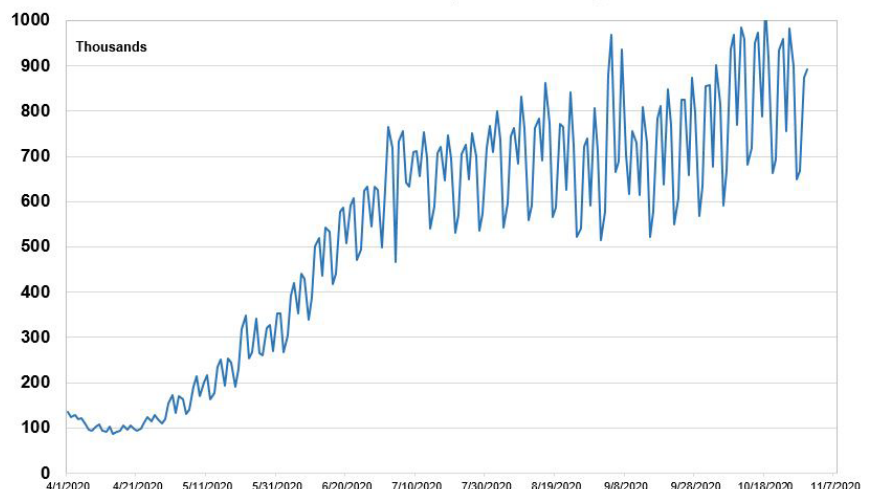


Source: MTA, Bloomberg, Murenbeeld & Co.

According to the New York Metropolitan Transport Authority the number of passengers through the turnstiles declined to 9.13 million for the week of December 25. This is up from a low of 2.9 million in March but remains well below the pre-lockdown 'normal' of over 25 million subway passengers per week.

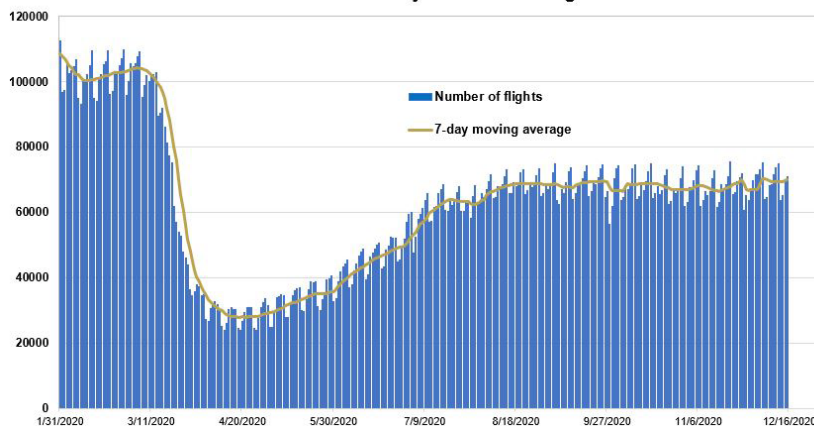
TSA Checkpoint Passengers

The number of passengers through TSA checkpoints per day has increased from a low of 88 thousand to 1.0 million – but remains 50% below last year's number of 2.0 million.



Source: tsa.gov, Bloomberg, Murenbeeld & Co.

Number of Total Daily Commercial Flights

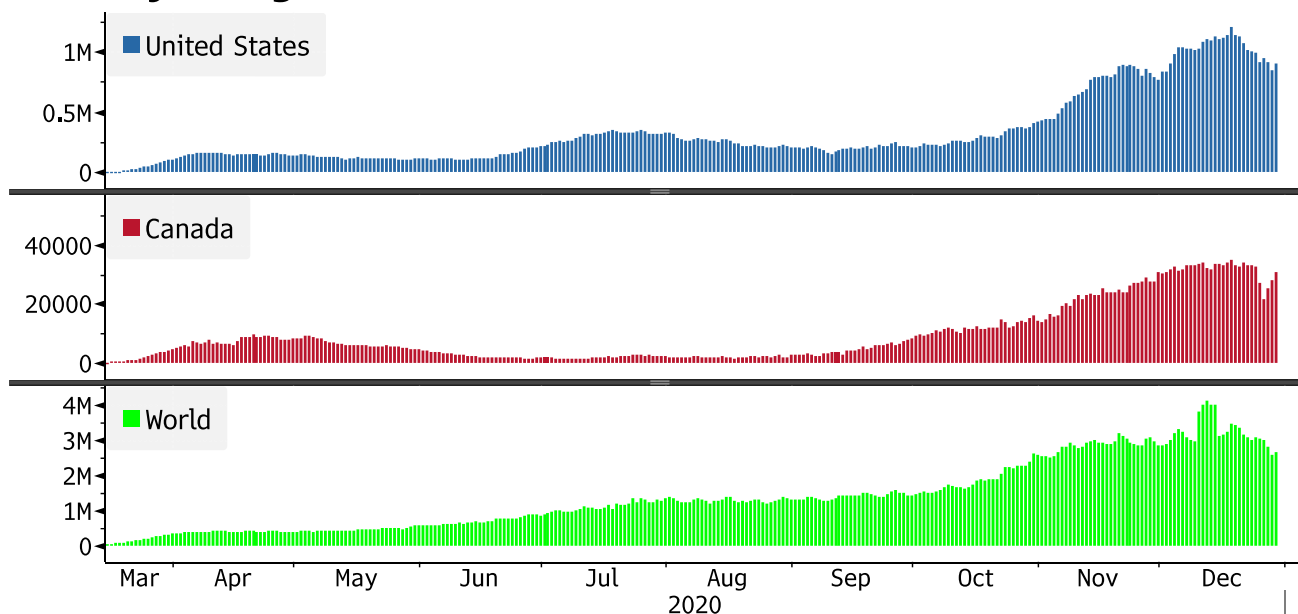


Source: flightradar24, Murenbeeld & Co.

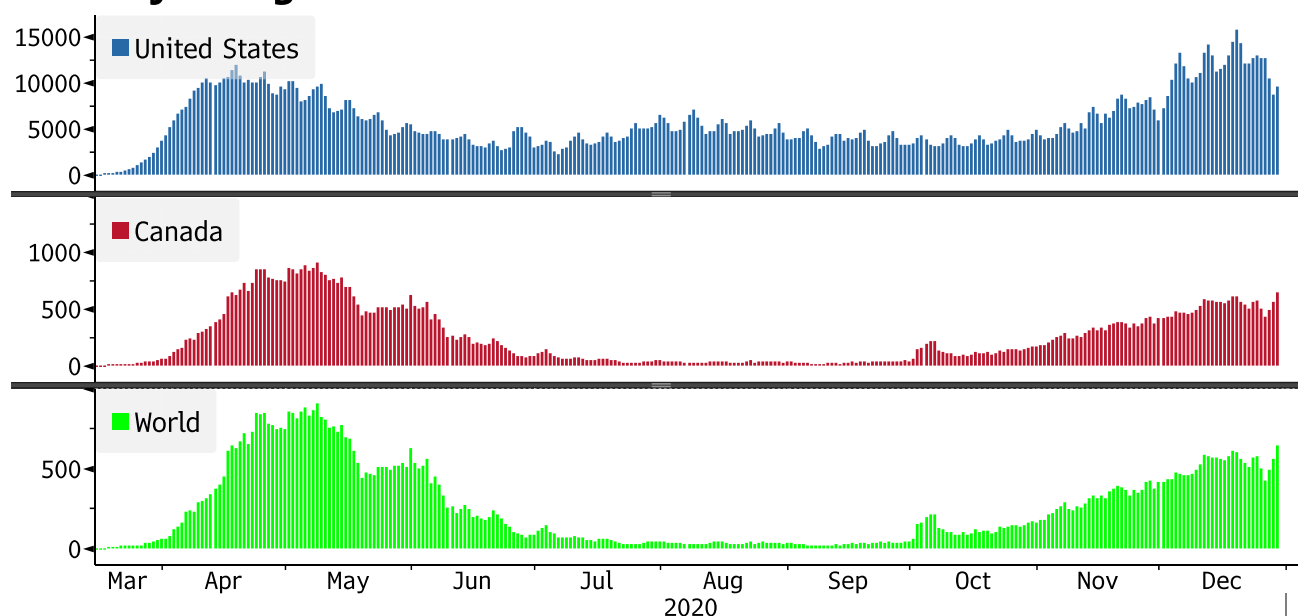
Flightradar24.com data shows the number of commercial flights is slowly increasing from a low of 27.9 thousand to 69.9 thousand (7-day average). The average for the first two months of the year was 102.7 thousand per day.

COVID-19 Update

Five day change in Confirmed COVID-19 Cases



Five day change in Confirmed COVID-19 Deaths



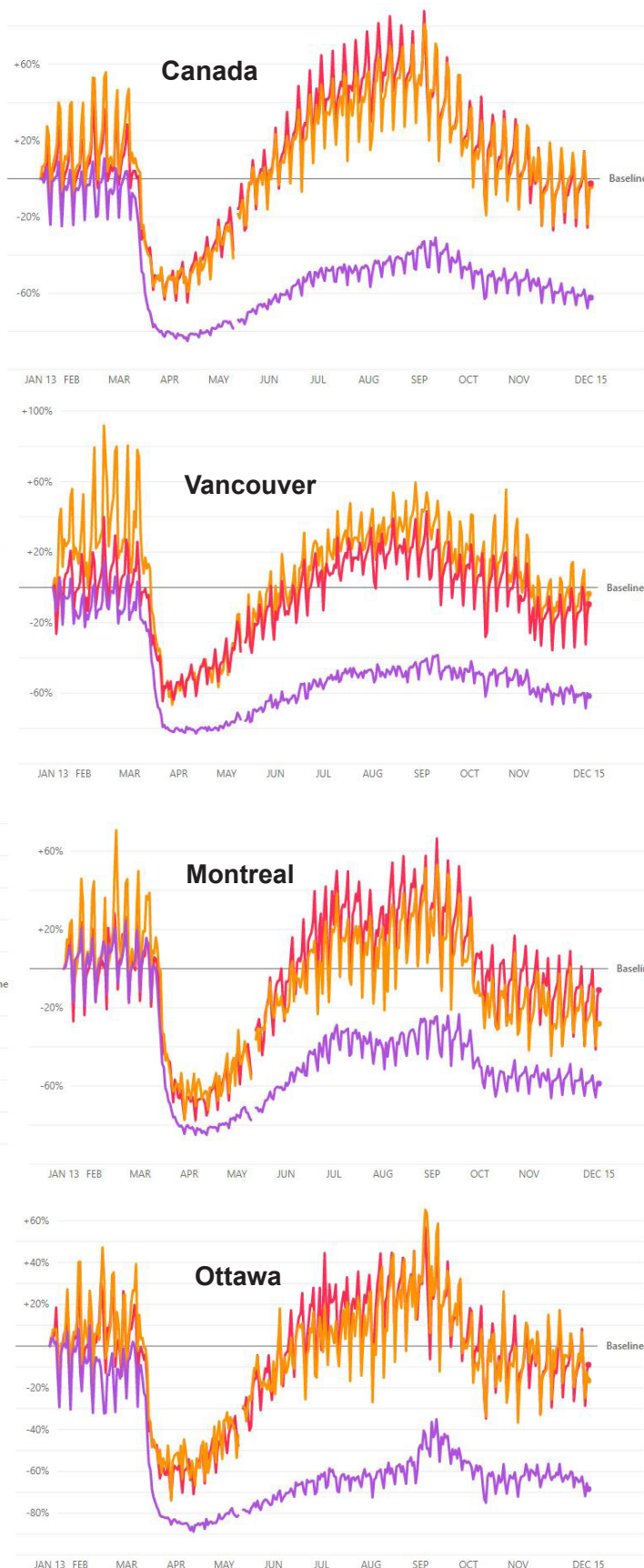
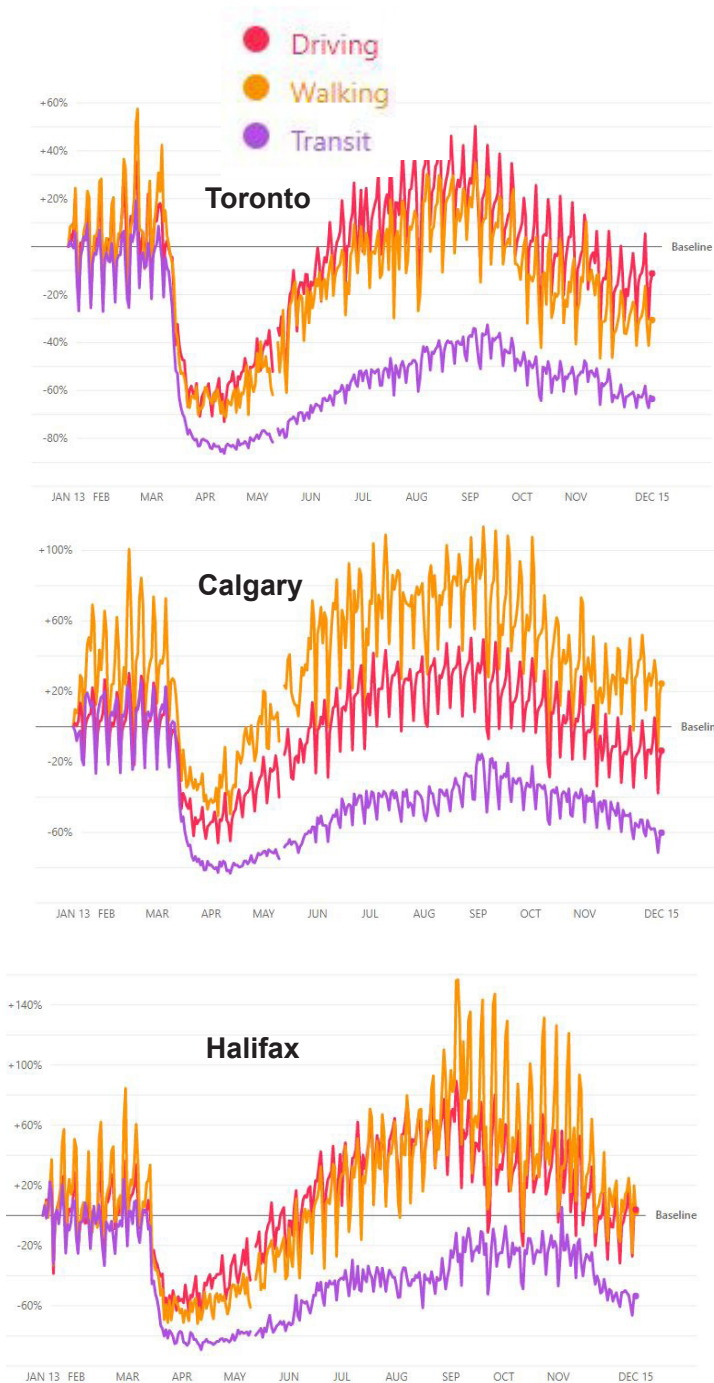
Source: Bloomberg, Murenbeeld & Co.

The rising trend in Covid-19 cases appears to have turned the corner and is now trending lower. Although, the 5-day change in Covid related deaths are still rising worldwide. The new Covid strain, variant B.1.1.7 discovered in the UK which could be as much as 70% more transmittable according to news reports, is popping up worldwide. It is expected it will take up to a year until a significant portion of the population has received the vaccine.

Canadian Mobility Trends

These charts show the change in routing trends since January 13 reflected by requests for directions in Apple Maps for Canada and select Canadian cities.

All forms of requests for transportation directions are trending lower again.

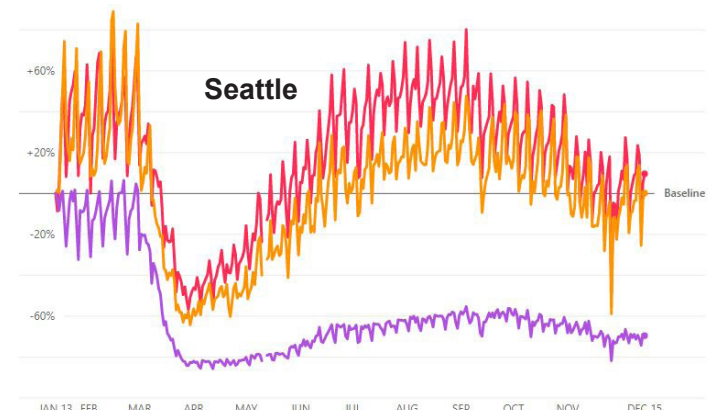
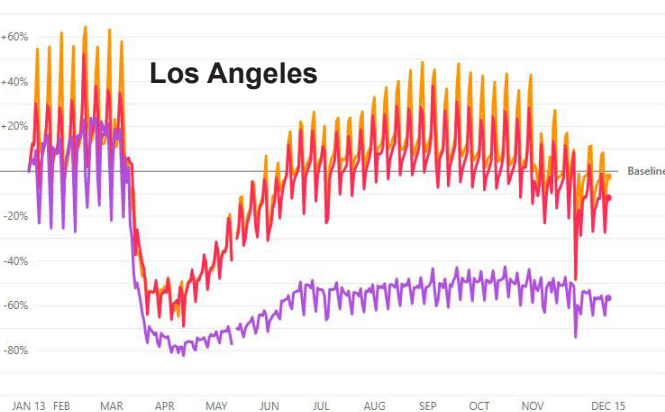
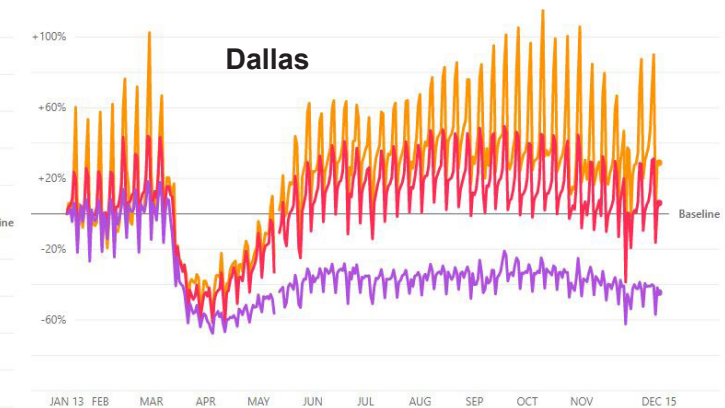
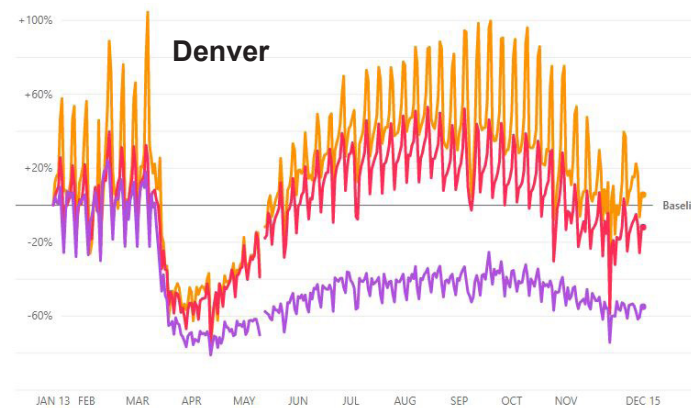
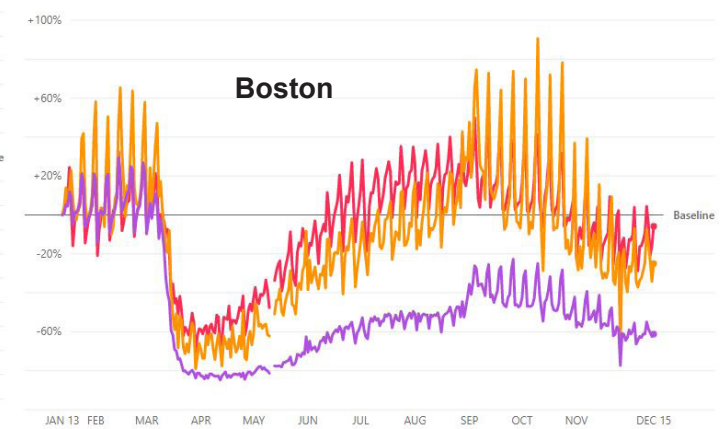
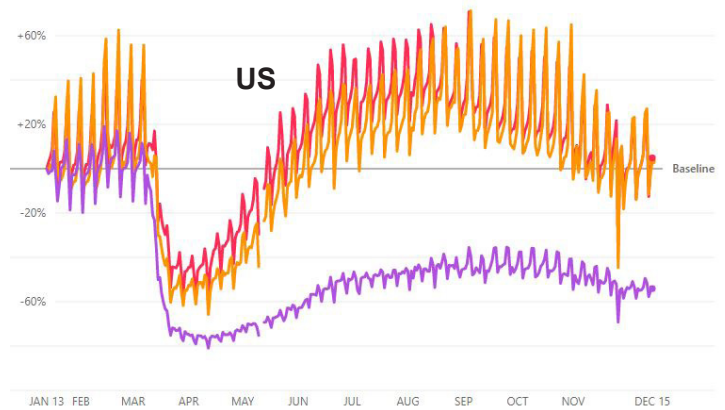
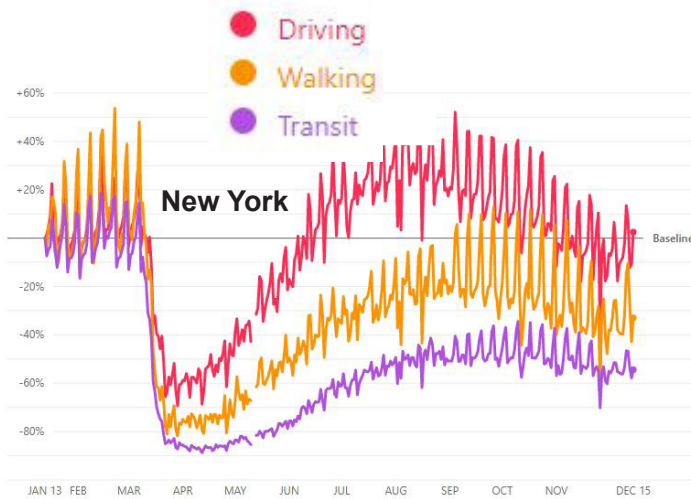


Source: apple.com

US Mobility Trends

These charts show the change in routing trends since January 13 reflected by requests for directions in Apple Maps for Canada and select Canadian cities.

Requests for transportation directions are also trending lower in the US.

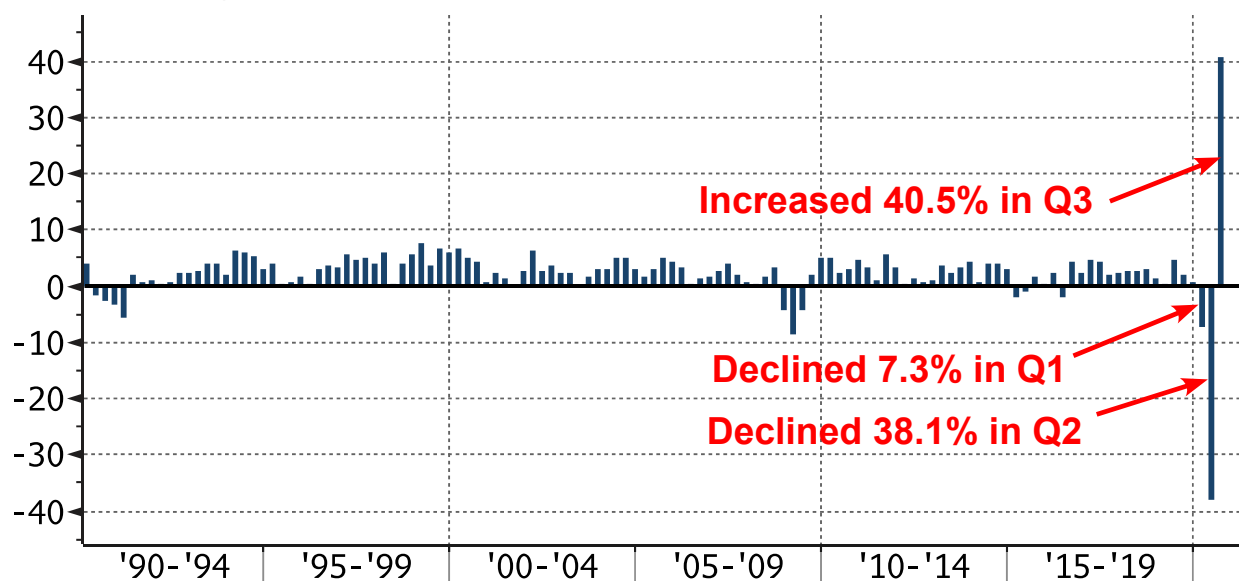


Source: apple.com

Canada – Economic Indicators

Canada Gross Domestic Product

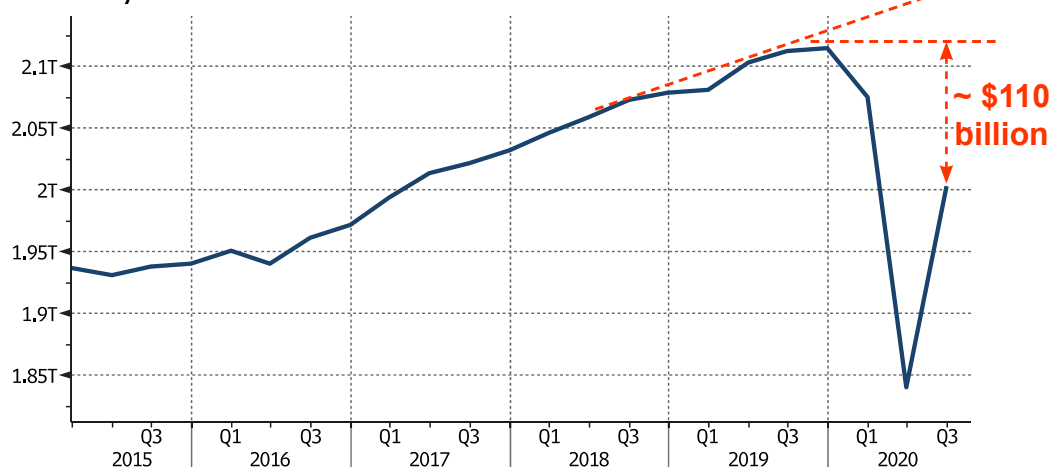
Annualized growth rate



Source: Bloomberg, Murenbeeld & Co.

Canada GDP Trillions, SAAR

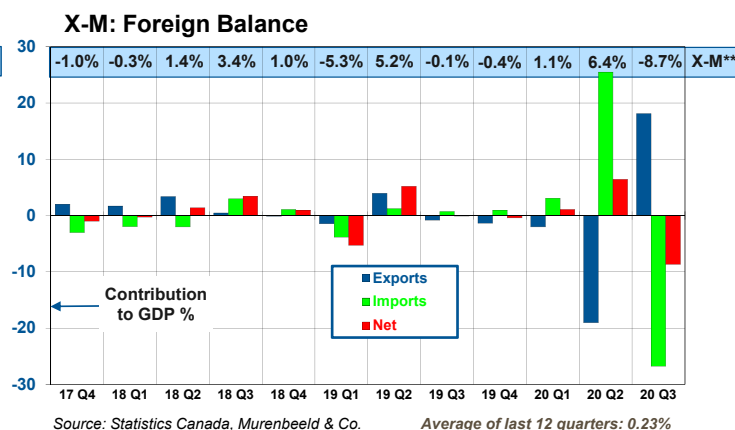
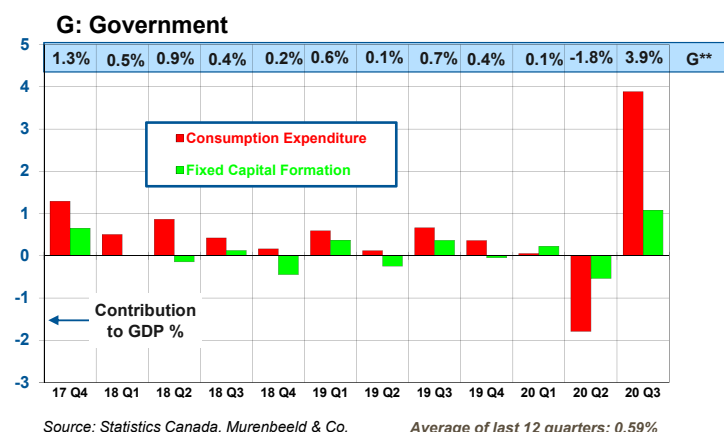
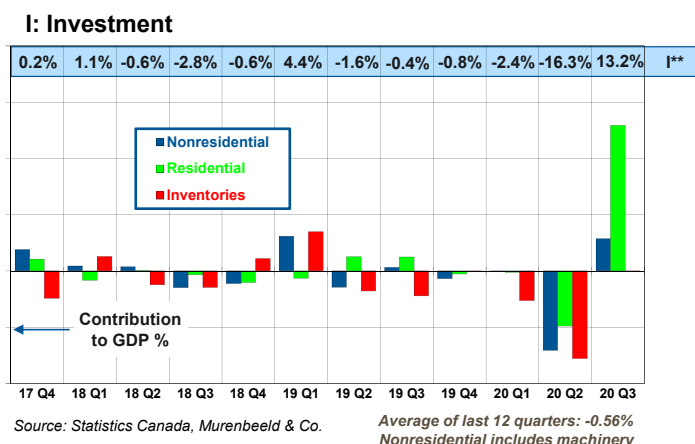
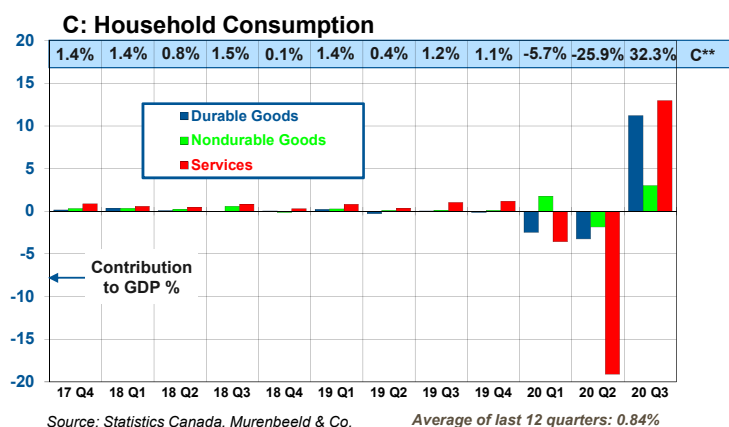
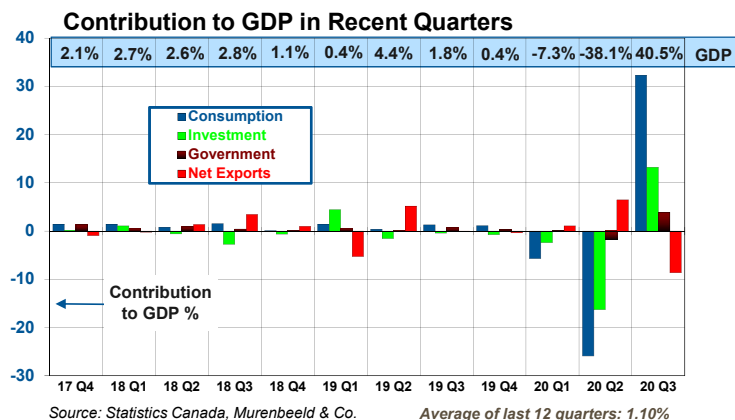
Canadian GDP increased 40.5% (SAAR). However, GDP remains \$110 billion below its Q4-2019 level and about \$140 billion below the pre-coronavirus trend. We expect GDP to decline 5.5% for all of 2020, then increase by 4.2% in 2021. It will take several years before GDP returns to the pre-coronavirus trend.



Source: StatCan, Bloomberg, Murenbeeld & Co.

Canada – Economic Indicators

Household Consumption contributed the most to 2020-Q3 GDP increasing 32.3%; both goods and services contributed significantly to this increase. *Business Investment* contributed 13.2%, and *Government* added 3.9%. *Net-Exports* subtracted 6.4% – imports increased more than exports.



Quarter Average	GDP	C	I	G	X-M
Since 2010-Q1	1.94	1.29	0.32	0.28	0.02
Last 12 Quarters	1.10	0.84	-0.56	0.59	0.23
Last Four Quarters	-1.13	0.44	-1.59	0.63	-0.39

Canada – Economic Indicators

Canada Leading Indicator

Percent change year-over-year



Source: Macdonald Laurier Institute, Bloomberg, Murenbeeld & Co.

Canada Manufacturing Shipments

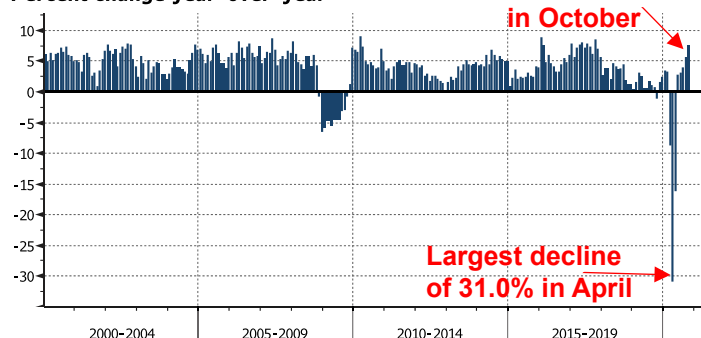
Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

Canada Retail Sales

Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

Canada Manufacturing New Orders

Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

Canada Industrial Production

Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

Canada Inventory-to-Shipments Ratio



Source: Bloomberg, Murenbeeld & Co.

The leading indicator shows strong signs of recovery (month-to-month) after its sharp decline; other economic indicators have improved since the April low, but remain below levels a year ago, with the notable exception of retail sales.

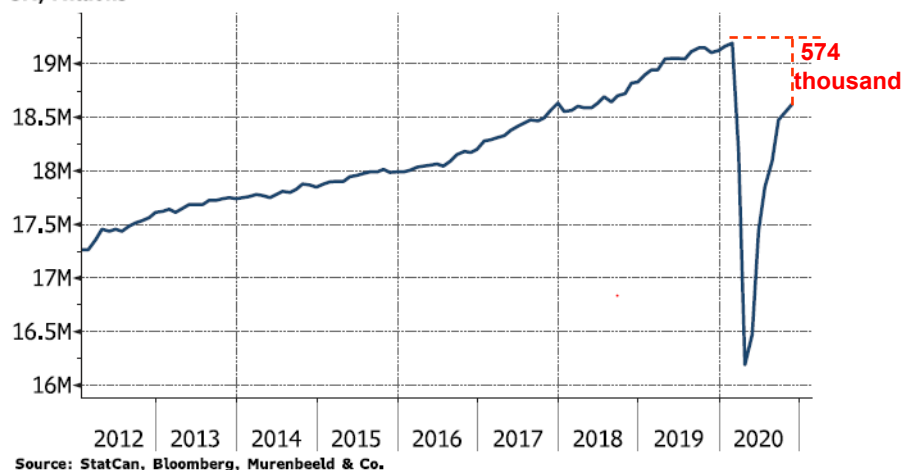
Canada – Employment Data

According to Statistics Canada employment fell by more than 3 million from February to April and rebounded by 2.4 million May to November – employment remains 574 thousand below pre-COVID levels.

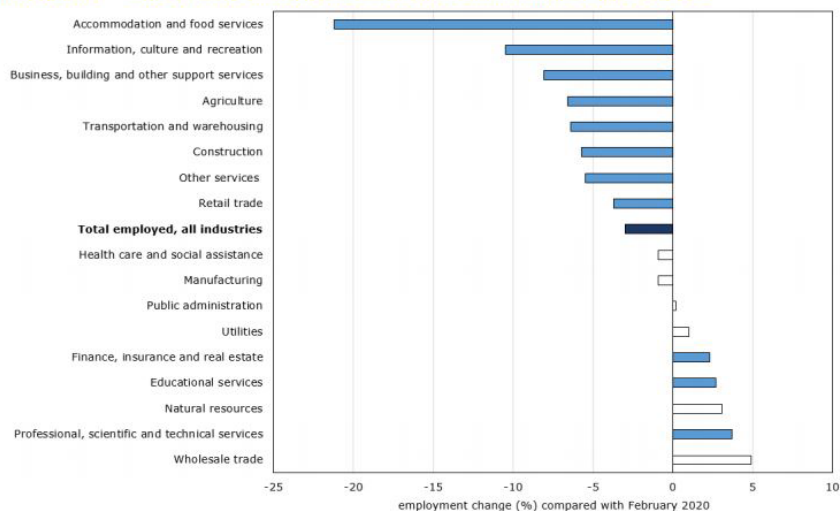
Employment growth continued to vary across industries in November. Employment fell in industries most directly affected by public health restrictions, notably in accommodation and food services. On the other hand, employment continued to approach or exceed pre-COVID levels in industries where working from home or physical distancing is more feasible, such as professional, scientific and technical services.

By April, the initial widespread COVID-19 economic shutdown had directly affected 5.5 million Canadian workers, including 3.0 million who had lost employment and 2.5 million who remained employed but had experienced COVID-related absences from work. By November, the equivalent figure was 1.0 million, including a 574,000 (-3.0%) drop in employment since February and a 448,000 (+55.5%) increase since February in Canadians who were employed but worked less than half their usual hours.

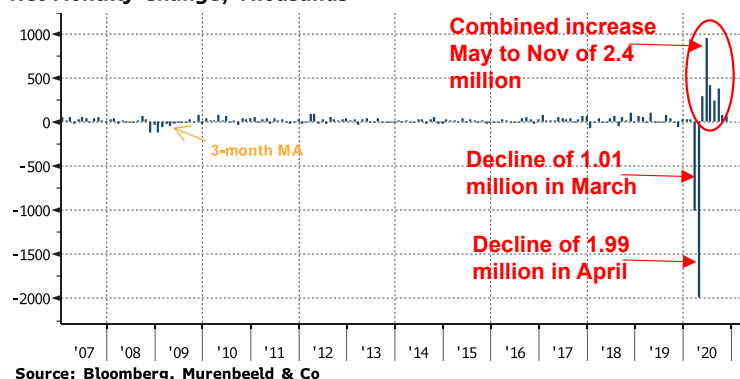
Canada Labour Force
SA, Millions



Infographic 3 – Employment furthest from recovery in accommodation and food services



Canada Job Creation
Net Monthly Change, Thousands



Canada Unemployment Rate
Percent

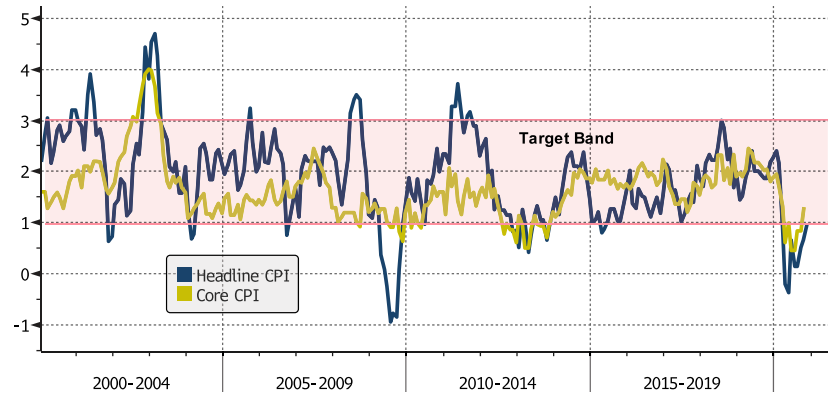


Canada – Inflation

Consumer price inflation remains in the bottom portion of the BoC's target band. Inflation is likely to stay subdued through 2022.

Canada Consumer Price Inflation

Percent change year-over-year

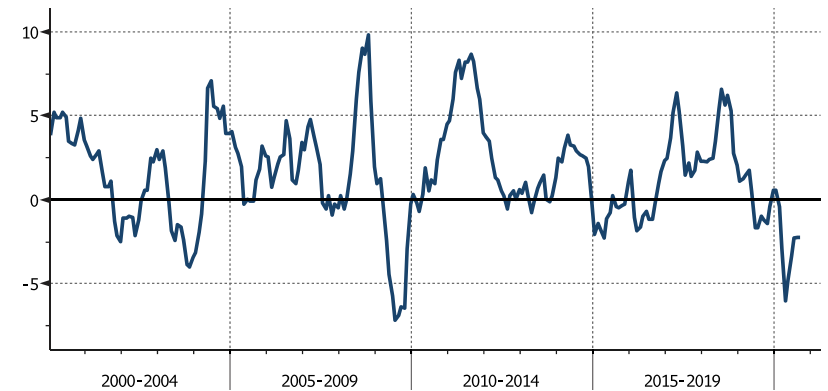


Source: Bloomberg, Murenbeeld & Co.

Industrial Product Price Inflation has been negative since February..

Canada Industrial Product Price Inflation

Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

Total Average Weekly Earnings increased 5.9% in October and public administration increased 6.0%.

Canada Average Weekly Earnings

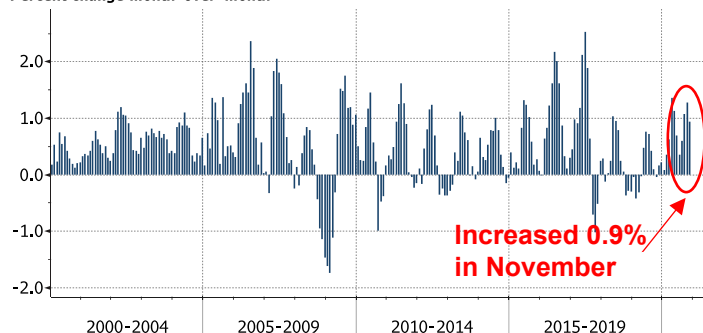
Percent change year-over-year



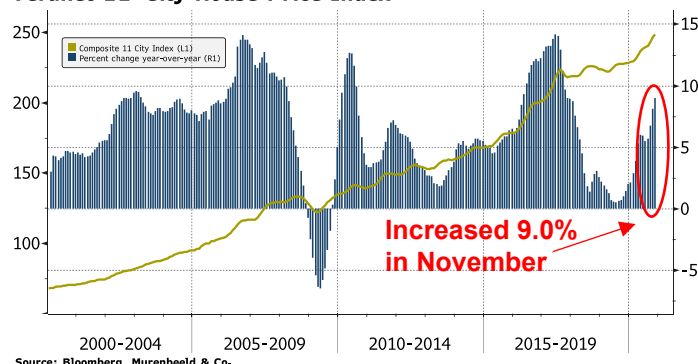
Source: Bloomberg, Murenbeeld & Co.

Canada – Teranet-National Bank House Price Index

Teranet 11-City House Price Index
Percent change month-over-month



Teranet 11-City House Price Index



The 11-city composite index increased 0.9% from October 2020, and 9.0% from November 2019 – to set a new high.

According to the House Price Index report: *In November the Teranet–National Bank National Composite House Price Index was up 0.9% from the previous month, the strongest gain for a month of November in the 22 years of the index. It was the second consecutive month to show the biggest rise in index history for the month in question. The rise was led by six metropolitan areas: Hamilton (1.9%), Halifax (1.6%), Montreal (1.4%), Ottawa-Gatineau (1.3%), Victoria (1.1%) and Vancouver (1.0%).*

The strong rise of prices is consistent with the revival of home sales volume over the last several months reported by the Canadian Real Estate Association.

[However], the unsmoothed composite index, seasonally adjusted, was up 0.8% in November – a cooling from the rises of the previous three months, suggesting that the uptrend of the published (smoothed) index could slow in coming months.

Teranet-National Bank House Price Index - November 2020

Metropolitan area	Index Level	% change m/m	% change y/y	From peak	Peak date
Composite 11	248.39	0.93	8.96	0	Nov-20
Alberta					
Calgary*	173.66	0.24	-2.27	-7.80	Oct-14
Edmonton*	176.95	0.38	1.00	-5.83	Sep-07
Lethbridge	177.09	-0.61	2.51	-0.61	Oct-20
British Columbia					
Abbotsford-Mission	256.48	1.93	7.99	0.00	Nov-20
Kelowna	218.52	0.81	2.14	0.00	Nov-20
Vancouver*	291.05	0.97	6.31	-1.01	Jul-18
Victoria*	224.10	1.11	6.15	0.00	Nov-20
New Brunswick					
Moncton	118.17	1.93	10.29	0.00	Nov-20
Saint John	112.07	-0.16	6.95	-0.65	Sep-20
Newfoundland					
Saint John's	180.72	0.00	-2.87	-8.73	Sep-14
Manitoba					
Winnipeg*	221.46	0.57	5.26	0.00	Nov-20
Nova Scotia					
Halifax*	182.04	1.61	15.73	0.00	Nov-20
Ontario					
Barrie	246.67	1.71	16.47	0.00	Nov-20
Belleville	220.62	2.82	14.82	0.00	Nov-20
Brantford	263.01	1.89	15.99	0.00	Nov-20
Guelph	257.10	1.86	13.01	0.00	Nov-20
Hamilton*	283.13	1.86	14.67	0.00	Nov-20
Kingston	199.50	0.71	10.77	0.00	Nov-20
Kitchener-Cambridge-Waterloo	263.81	2.14	17.75	0.00	Nov-20
London	231.16	1.60	13.93	0.00	Nov-20
Oshawa	269.13	2.03	18.14	0.00	Nov-20
Ottawa-Gatineau*	205.25	1.32	18.72	0.00	Nov-20
Peterborough	242.93	0.12	11.68	0.00	Nov-20
St. Catharines - Niagara	257.86	2.26	14.55	0.00	Nov-20
Greater Sudbury	215.91	0.82	12.95	0.00	Nov-20
Thunder Bay	203.50	-0.93	8.18	-0.93	Oct-20
Toronto*	280.99	0.78	10.32	0.00	Nov-20
Windsor	214.46	2.81	18.86	0.00	Nov-20
Quebec					
Montréal*	212.43	1.42	14.48	0.00	Nov-20
Québec City*	195.50	0.66	5.90	0.00	Nov-20
Sherbrooke	185.19	2.52	9.22	0.00	Nov-20
Trois-Rivières	185.66	-0.79	6.93	-0.79	Oct-20

* Included in the Composite 11-City Index

Source: housepriceindex.ca, Murenbeeld & Co.

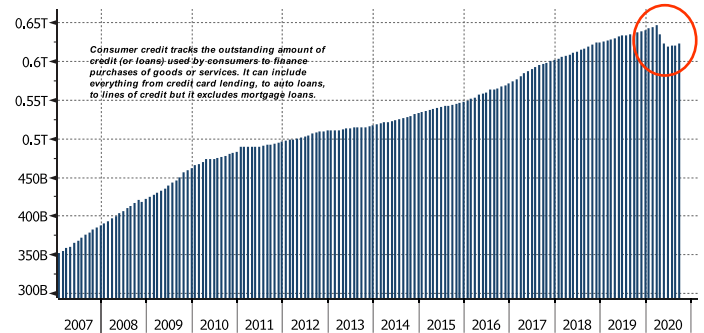
Canada – Credit and Debt

Consumer credit contracted has contracted since April, but mortgage credit and business credit has continued to expand, by 5.7% and 3.0% respectively (in September).

Canada Consumer Credit Growth
Percent change year-over-year



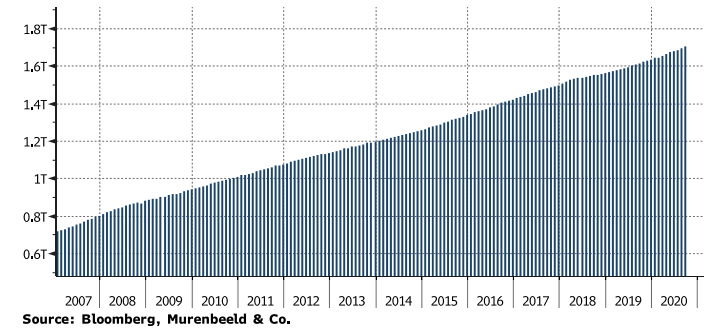
Canada Consumer Credit
Billions/Trillion



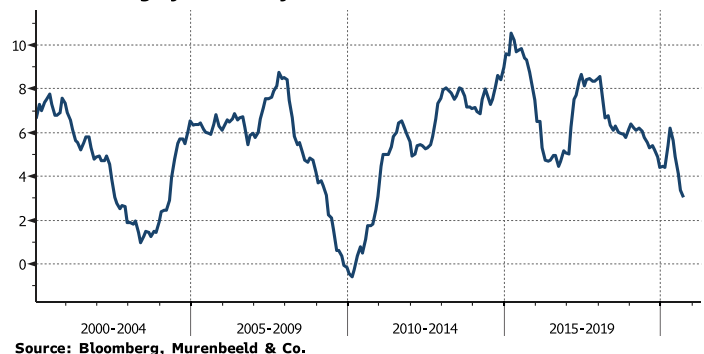
Canada Residential Mortgage Credit Growth
Percent change year-over-year



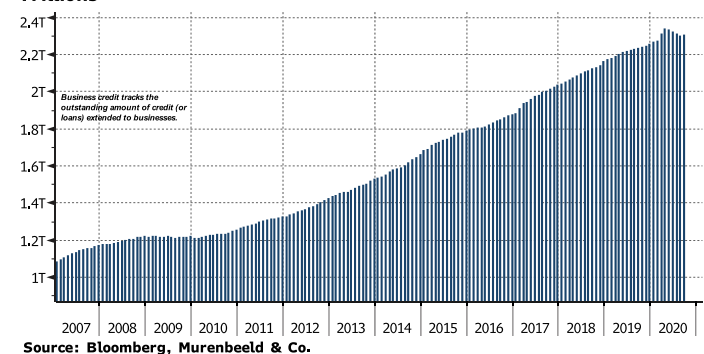
Canada Residential Mortgage Credit
Trillions



Canada Business Credit Growth
Percent change year-over-year



Canada Business Credit
Trillions



Canada – Monetary Policy

The Bank of Canada's balance sheet totaled \$545 billion on December 16.

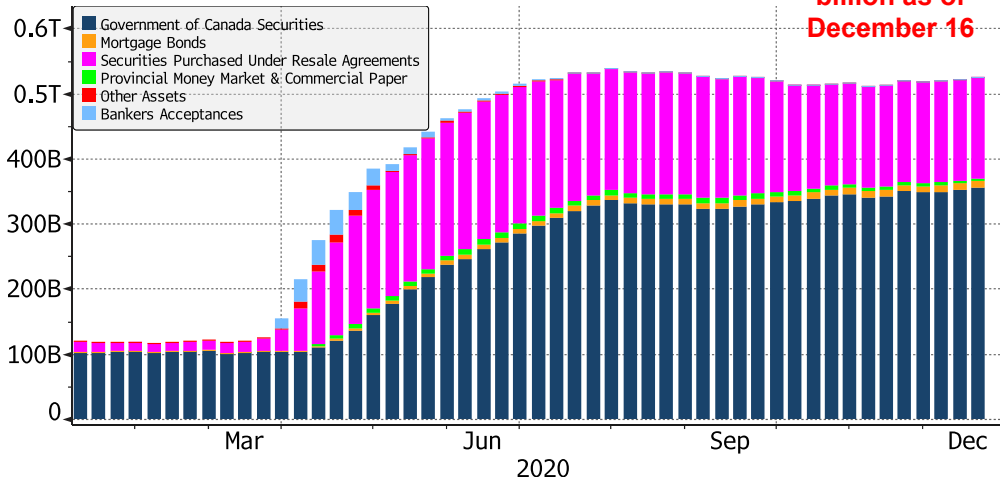
Highlights from the BoC's December 9 meeting statement: – *The Bank of Canada today maintained its target for the overnight rate at the effective lower bound of ¼ percent, with the Bank Rate at ½ percent and the deposit rate at ¼ percent. The Bank is maintaining its extraordinary forward guidance, reinforced and supplemented by its quantitative easing (QE) program, which continues at its current pace of at least \$4 billion per week...*

... Canada's economic recovery will continue to require extraordinary monetary policy support. The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the 2 percent inflation target is sustainably achieved. In our October projection, this does not happen until into 2023. To reinforce this commitment and keep interest rates low across the yield curve, the Bank

will continue its QE program until the recovery is well underway and will adjust it as required to help bring inflation back to target on a sustainable

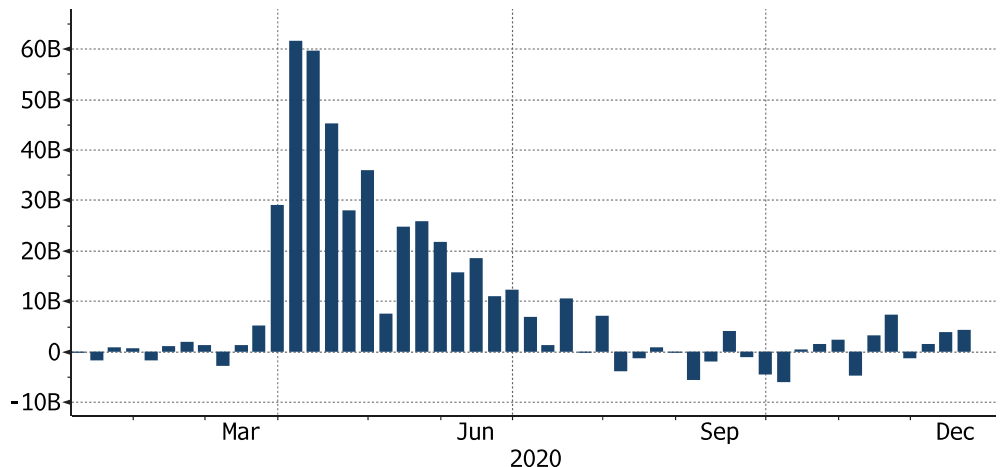
basis. We remain committed to providing the monetary policy stimulus needed to support the recovery and achieve the inflation objective.

Bank of Canada Assets
Billions, \$CAD



Source: Bloomberg, Capitalight.co

Weekly change of Bank of Canada Total Assets
\$CAD



Source: Bloomberg, Murenbeeld & Co.

Target Rate .25%
Next meeting January 20, 2021

Canada – Equity Markets

S&P/TSX Composite Index



Source: Bloomberg, Murenbeeld & Co.

S&P/TSX GICS Sectors (percent change)

	Value on 12/29/20	Year to Date	1-Month	3-Month	6-Month	1-Year	5-Year
S&P/TSX	17543.43	2.81	2.05	8.82	13.07	2.60	33.49
Energy	1495.16	-30.50	0.44	13.53	2.87	-30.44	-24.71
Materials	2940.33	19.30	2.81	-4.17	4.23	18.50	91.18
Industrials	4128.33	15.74	3.02	7.13	21.28	15.36	93.92
Cons Disc	2541.63	15.50	6.56	21.56	31.09	15.11	38.32
Cons Stap	5595.40	4.42	0.73	-4.45	3.79	3.76	31.20
Health Care	268.76	-24.79	-11.76	27.90	9.43	-21.06	-84.40
Financials	2814.07	-2.70	1.89	15.66	18.88	-2.95	27.69
Info Tech	918.46	85.72	6.14	10.81	14.78	85.06	308.66
Telecom	1444.94	-7.53	-0.89	3.28	4.10	-7.75	12.63
Utilities	2741.70	11.05	0.88	4.95	15.32	10.95	50.11

Data as of December 29, 2020

Source: Bloomberg, Murenbeeld & Co.

The S&P/TSX is within striking distance of setting a new high. The Information Technology sector has increased a stellar 85.7% year-to-date. The Materials, Industrials, Consumer Discretionary, and Utilities sectors have all had double digit gains this year.

Canada – S&P/TSX GICS Sectors

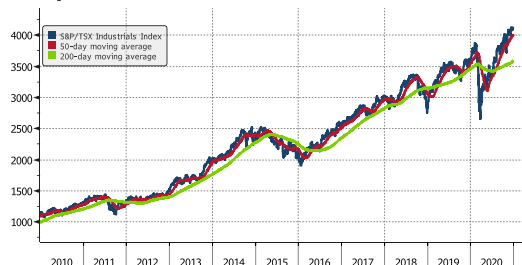
S&P/TSX Energy Index



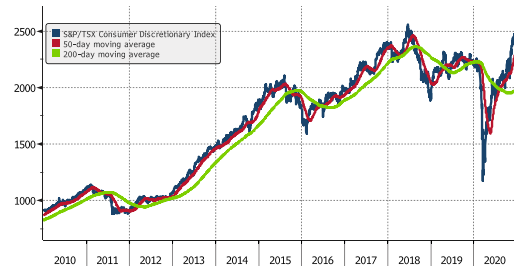
S&P/TSX Materials Index



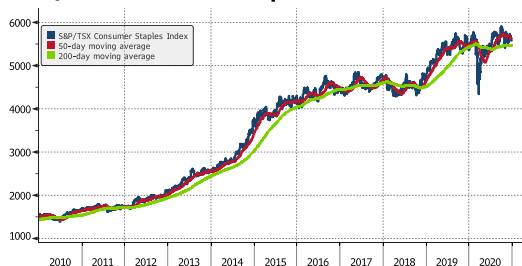
S&P/TSX Industrials Index



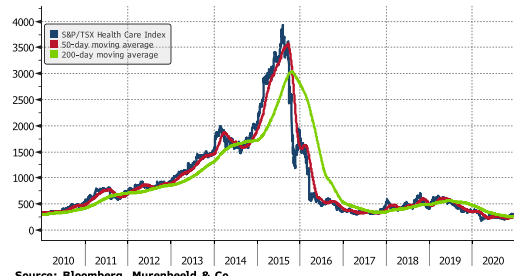
S&P/TSX Con Discretionary Index



S&P/TSX Consumer Staples Index



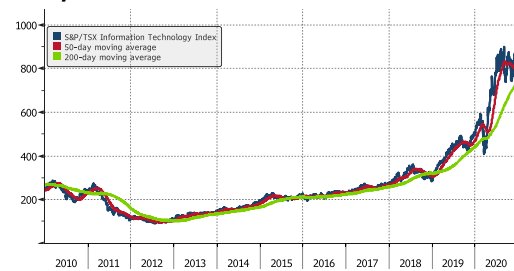
S&P/TSX Health Care Index



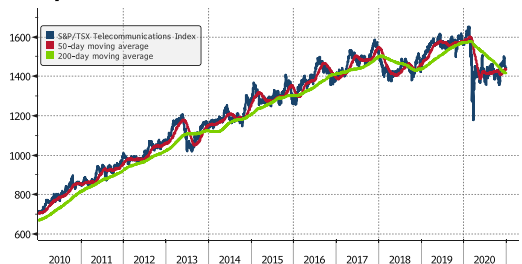
S&P/TSX Financials Index



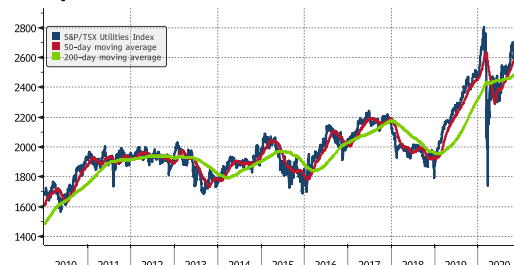
S&P/TSX IT Index



S&P/TSX Telecommunications Index

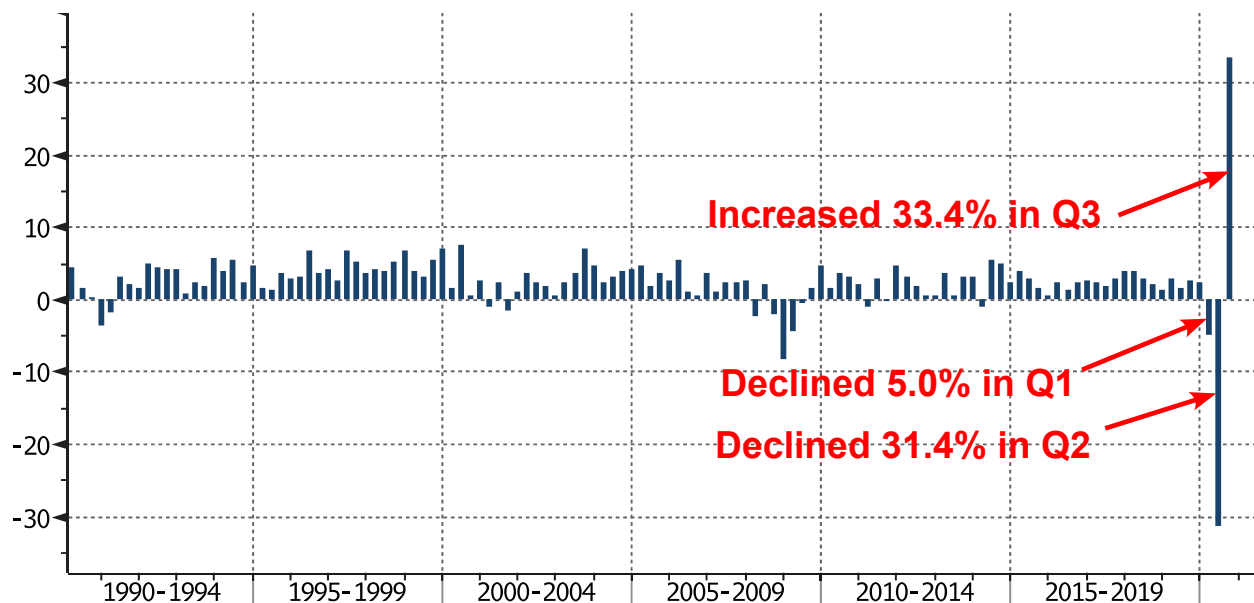


S&P/TSX Utilities Index



US – Economic Indicators

US Gross Domestic Product Annualized growth rate

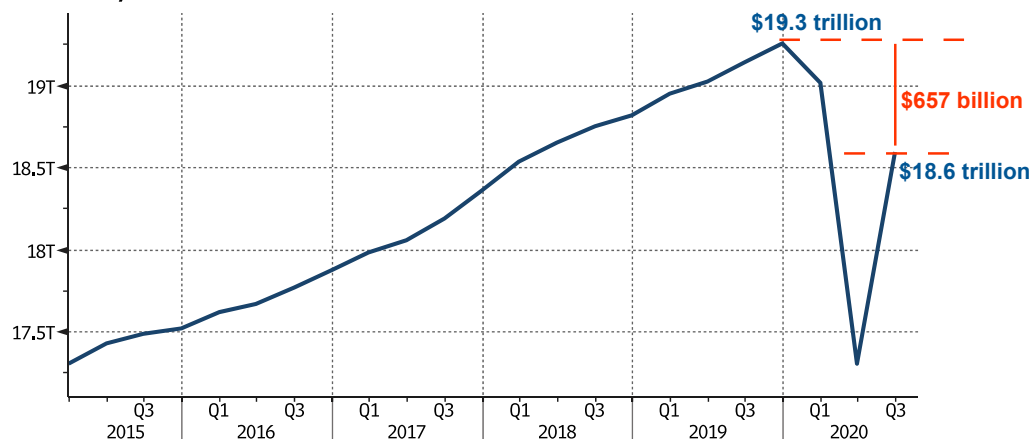


Source: Bloomberg, Murenbeeld & Co.

The first estimate of US GDP showed an increase of 33.4% in Q3 (annualized) after a 31.4% decline in Q2. The US economy is still \$657 billion below the \$19.3 trillion peak in Q1.

The Federal Bank of Atlanta's GDPNow model estimates Q4 growth at 10.4%

US GDP Trillions, SAAR

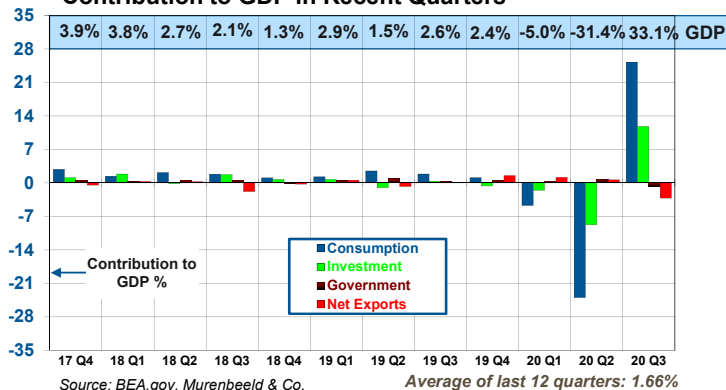


Source: BEA, Bloomberg, Murenbeeld & Co.

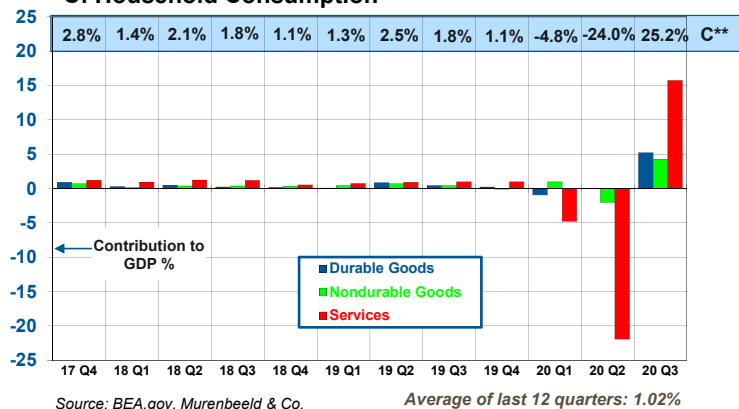
US – Economic Indicators

Household Consumption added 25.2% to GDP in Q3, the majority of this increase was in the *Service* sector. *Business Investment* added 11.8%, *Inventories* accounted for 6.6% of this increase however. *Government Consumption* subtracted 0.8% and *Net Exports* subtracted 3.2%.

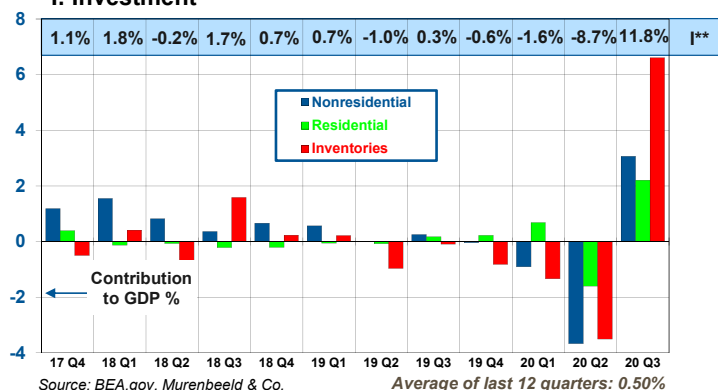
Contribution to GDP in Recent Quarters



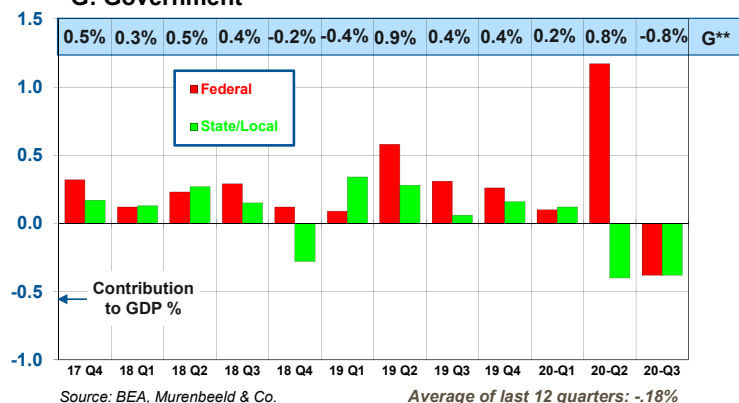
C: Household Consumption



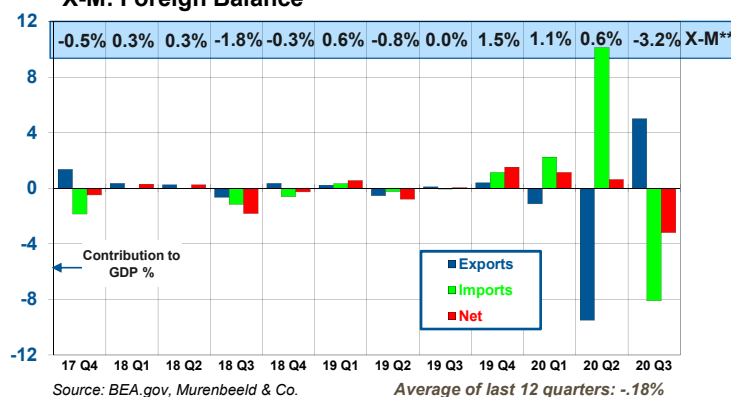
I: Investment



G: Government



X-M: Foreign Balance

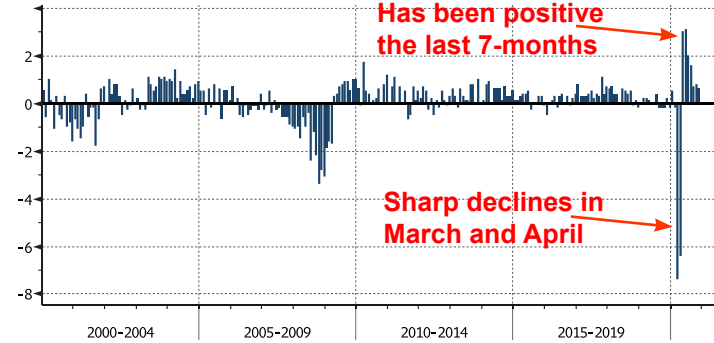


Quarter Average	GDP	C	I	G	X-M
Since 2010-Q1	2.06	1.46	0.82	-0.01	-0.21
Last 12 Quarters	1.66	1.02	0.50	0.32	-0.18
Last Four Quarters	-0.23	-0.62	0.20	0.16	0.02

United States – Other Economic Indicators

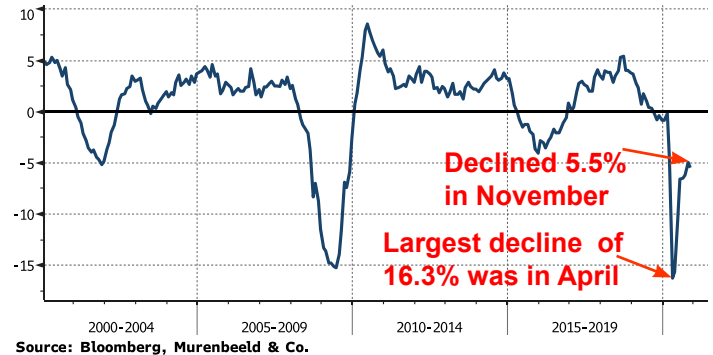
US Leading Indicator

Percent change month-to-month



US Industrial Production

Percent change year-over-year



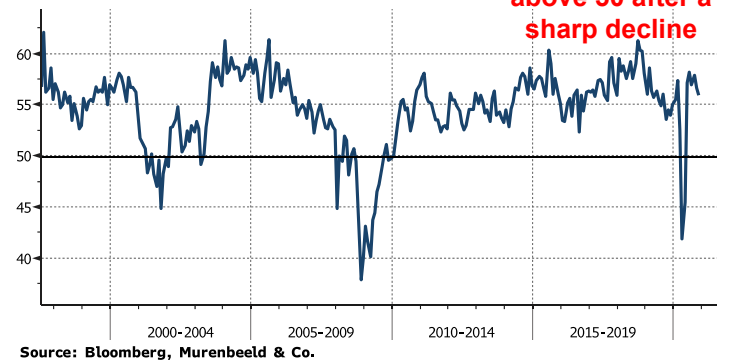
US ISM Manufacturing Index

Below 50 indicates contraction



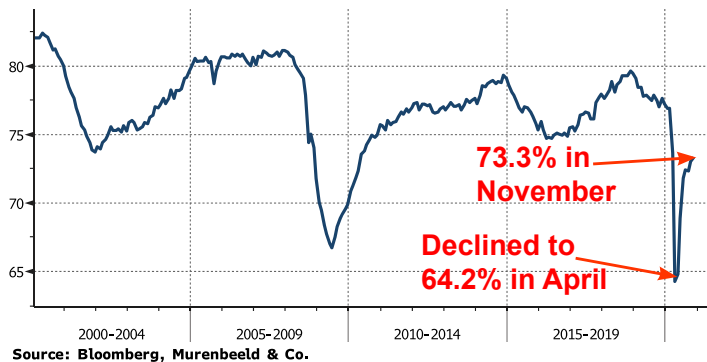
US ISM Service Sector Index

Below 50 indicates contraction



US Industrial Capacity Utilization

Percent of Total



US Retail Sales

Percent change year-over-year

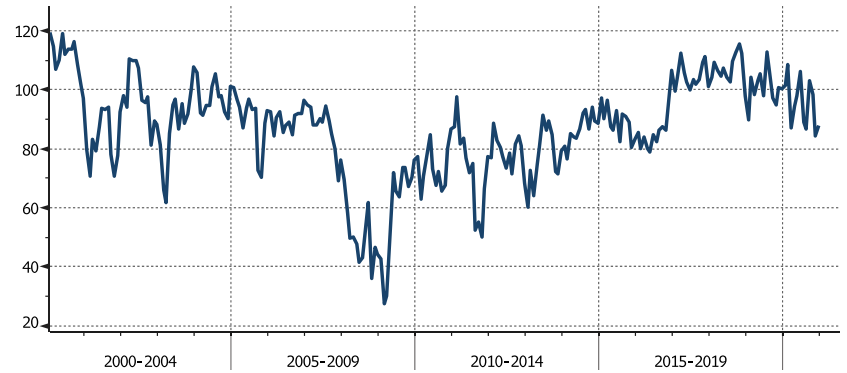


The leading indicator remains positive month-to-month. Industrial Production remains below 2019 levels but other indicators including ISM manufacturing and service indices, Industrial Capacity Utilization and Retail sales have all recovered to above pre-coronavirus levels.

United States – Other Economic Indicators

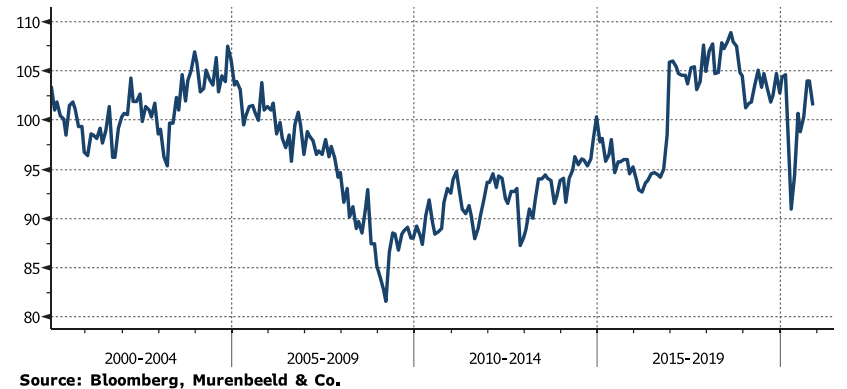
The US Consumer Confidence Index has remained surprisingly buoyant throughout the lockdown ...

US Consumer Confidence Index
1985 = 100



... the Small Business Optimism Index has rebounded to pre-lockdown levels ...

Small Business Optimism Index
National Federation of Independent Business Survey



... and the Home Builders Optimism Index has rebounded to new highs.

Home Builder Optimism Index
National Association of Home Builders Market Index



United States – Housing Data

US Housing Starts have rebounded strongly ...

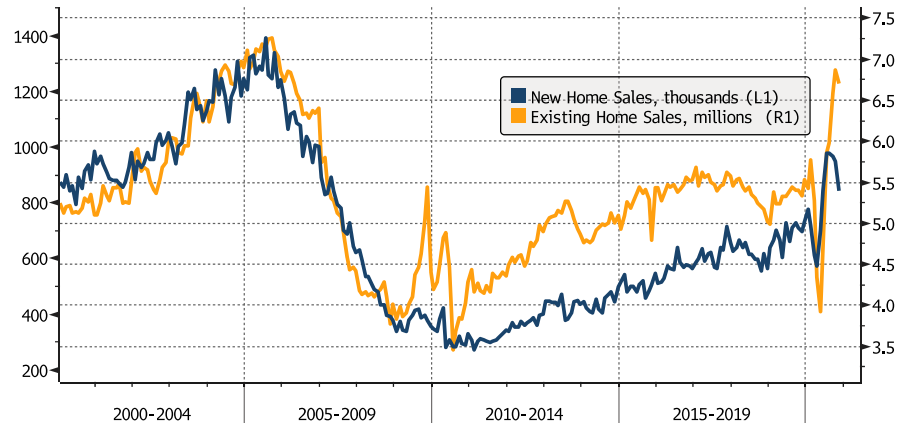
US Housing Starts
Thousands of dwelling units



Source: Bloomberg, Murenbeeld & Co.

... as have Existing Home Sales and New Home Sales ...

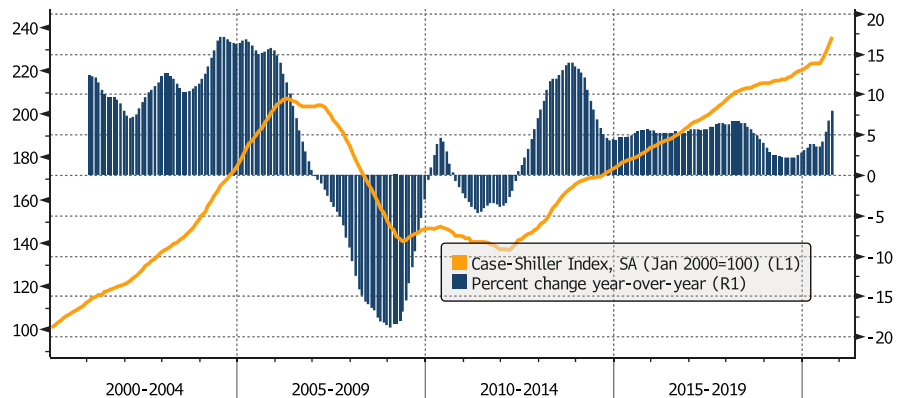
US New and Existing Single Family Home Sales



Source: Bloomberg, Murenbeeld & Co.

... The Case-Shiller Home Price Index is also increasing at a strong rate.

Case-Shiller Home Price Index
20-city Composite



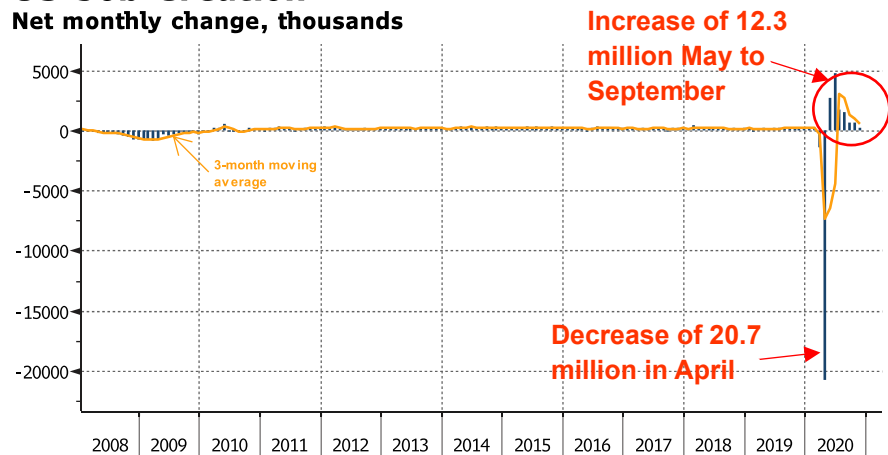
Source: Bloomberg, Murenbeeld & Co.

US – Employment Data

The Employment report stated: *Total nonfarm payroll employment rose by 245,000 in November, and the unemployment rate edged down to 6.7 percent, the U.S. Bureau of Labor Statistics reported today. These improvements in the labor market reflect the continued resumption of economic activity that had been curtailed due to the coronavirus (COVID-19) pandemic and efforts to contain it. However, the pace of improvement in the labor market has moderated in recent months. In November, notable job gains occurred in transportation and warehousing, professional and business services, and health care. Employment declined in government and retail trade.*

US Job Creation

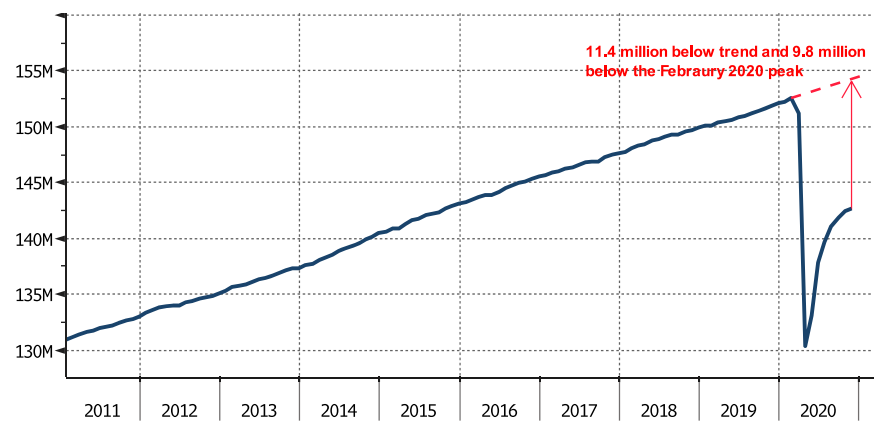
Net monthly change, thousands



Source: Bloomberg, Murenbeeld & Co.

Total Nonfarm Payrolls

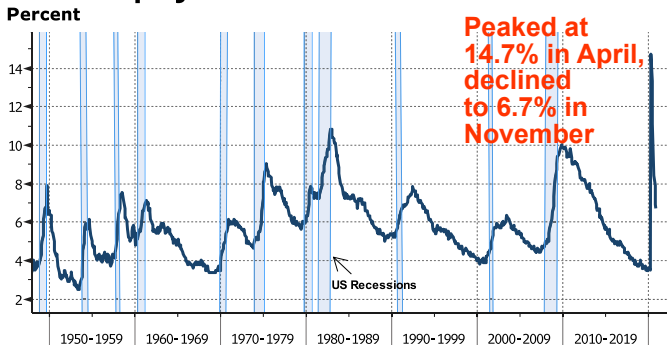
Millions



Source: BLS, Bloomberg, Murenbeeld & Co.

US Unemployment Rate

Percent



Source: Bloomberg, Murenbeeld & Co.

US Broader Unemployment Rate

Percent

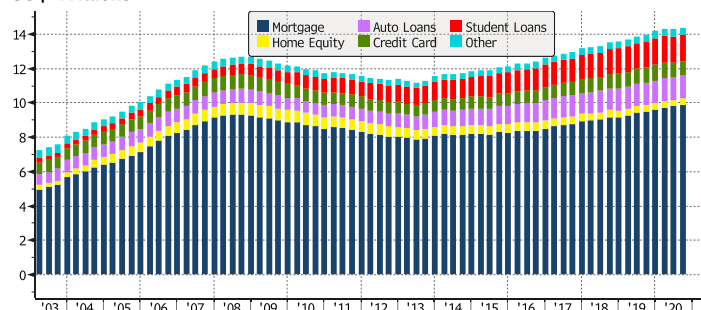


Source: Bloomberg, Murenbeeld & Co.

US – Household Debt

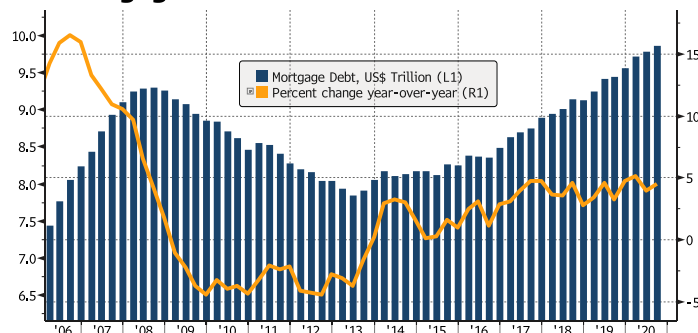
Credit card debt declined 8.4%(y-o-y) in Q3. However, mortgage (4.5%), auto loan (3.4%), and student loan (3.2%) debt continued to expand.

US Household Debt
US\$ Trillions



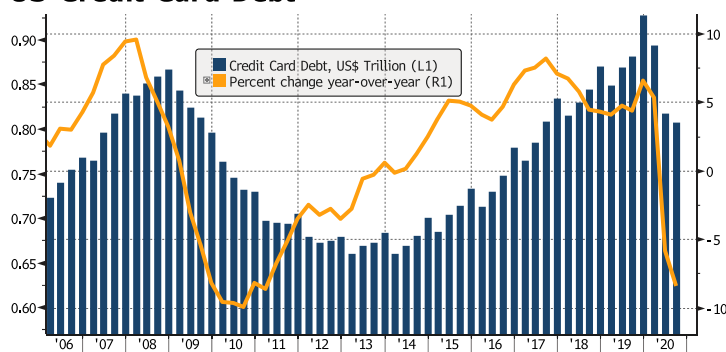
Source: Bloomberg, Murenbeeld & Co.

US Mortgage Debt



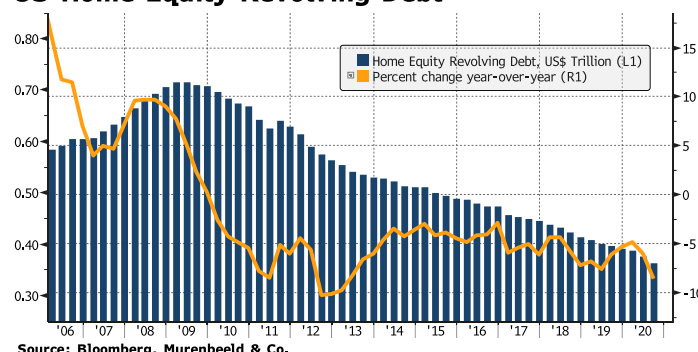
Source: Bloomberg, Murenbeeld & Co.

US Credit Card Debt



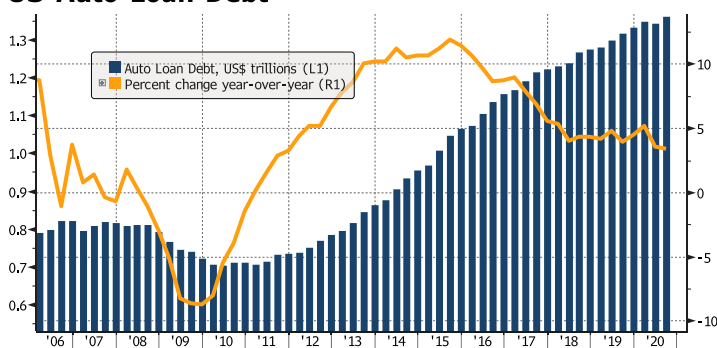
Source: Bloomberg, Murenbeeld & Co.

US Home Equity Revolving Debt



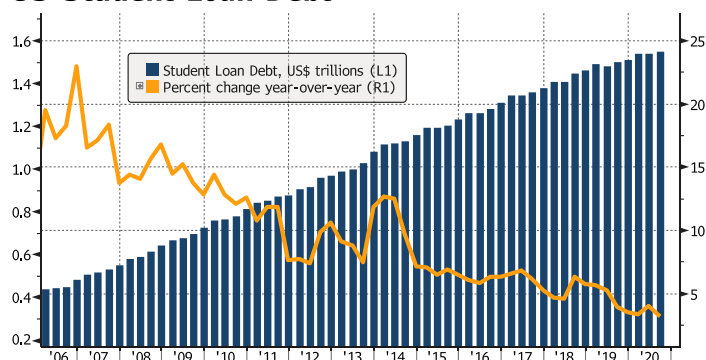
Source: Bloomberg, Murenbeeld & Co.

US Auto Loan Debt



Source: Bloomberg, Murenbeeld & Co.

US Student Loan Debt



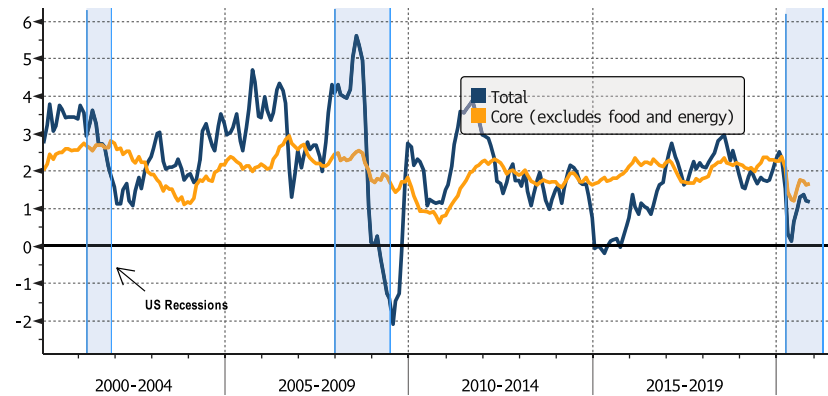
Source: Bloomberg, Murenbeeld & Co.

US – Inflation

US Headline CPI increased 1.2% and core CPI 1.2% in November, both up from recent lows.

US Consumer Price Inflation

Percent change year-over-year

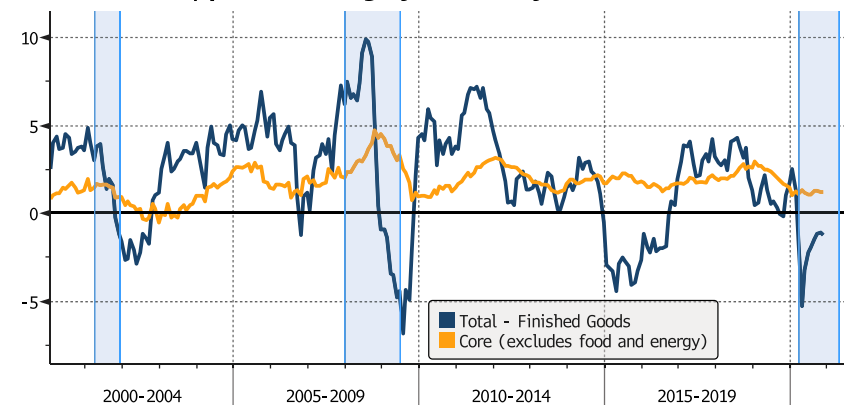


Source: Bloomberg, Murenbeeld & Co.

US Producer Price Inflation has been negative since March.

US Producer Price Inflation

Finished Goods, percent change year-over-year

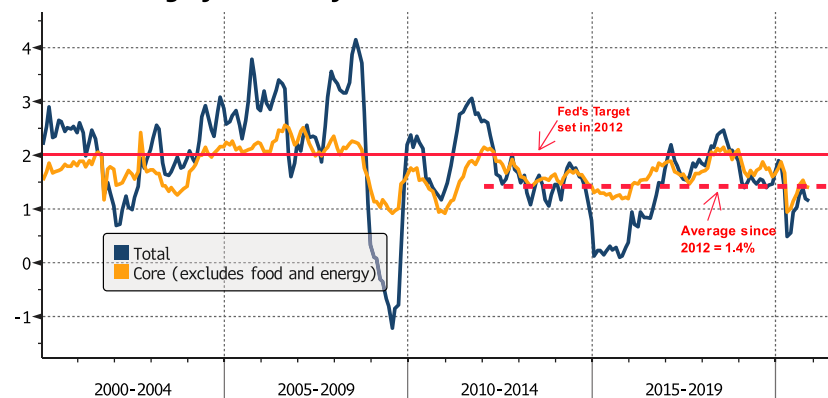


Source: Bloomberg, Murenbeeld & Co.

PCE Inflation (the Fed's favourite inflation indicator) is well below the Fed's 2% target – the Fed's revised policy is to let inflation run moderately above 2%, so that the average over time is around 2%.

US Personal Consumption Expenditure Inflation

Percent change year-over-year



Source: Bloomberg, Murenbeeld & Co.

US – Monetary Policy

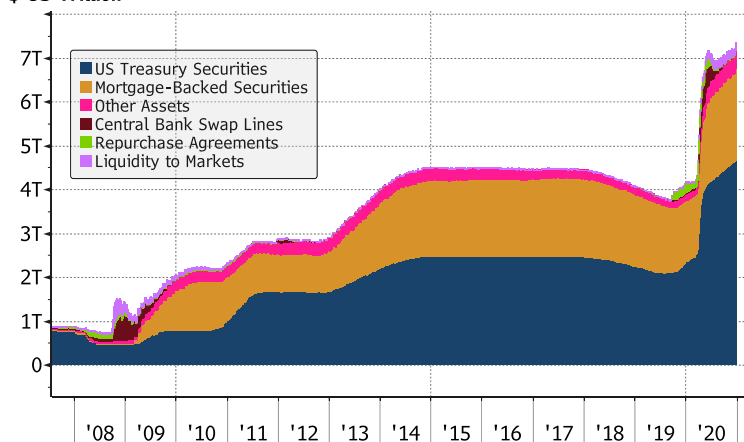
The statement following the Fed's December 16 meeting was not significantly different from the previous statement, but it notably stressed that: *The Committee decided to keep the target range for the federal funds rate at 0 to 1/4 percent and expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with the Committee's assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time. ... the Federal Reserve will continue to increase its holdings of Treasury securities by at least \$80 billion per month and of agency mortgage-backed securities by at least \$40 billion per month until substantial further progress has been made toward the Committee's maximum employment and price stability goals...* (bolding added).

The statement and Powell's press conference following the meeting were widely interpreted to be quite dovish, particularly so in light of the fact that vaccines are now being

distributed and that the economic outlook for 2021-H2 has accordingly improved.

The dot-plot spreadsheet we use to track Fed participants' FF-rate projections is included below. It shows, see the December 2020 panel, that the weighted-average of the FF-rate projections (i.e., of what each participant believes to be the appropriate FF-rate for year-end) is essentially unchanged through 2022, and is no more than 13 basis points higher at the end of 2023.

Federal Reserve Assets
\$ US Trillion



	FOMC Projections for Federal Funds Rate																
Target FF Year-end	June 2020					September 2020						December 2020					
	Target FF Year-end	2020	2021	2022	Long Run	Target FF Year-end	2020	2021	2022	2023	Long Run	Target FF Year-end	2020	2021	2022	2023	Long Run
0.00	0.00					0.00						0.00					
0.25	0.25	17	17	15		0.25	17	17	16	13		0.25	17	17	16	12	
0.50	0.50			1		0.50				2		0.50			1	3	
0.75	0.75					0.75			1	1		0.75				1	
1.00	1.00					1.00						1.00					
1.25	1.25			1		1.25						1.25				1	
1.50	1.50					1.50				1		1.50					
1.75	1.75					1.75						1.75					
2.00	2.00				1	2.00					1	2.00					1
2.25	2.25				3	2.25					3	2.25					3
2.50	2.50				9	2.50					9	2.50					9
2.75	2.75				1	2.75					1	2.75					1
3.00	3.00				2	3.00					2	3.00					2
3.25	3.25					3.25						3.25					
3.50	3.50					3.50						3.50					
3.75	3.75					3.75						3.75					
FOMC	FOMC	17	17	17	16	FOMC	17	17	17	17	16	FOMC	17	17	17	17	16
FF-Rate	FF-Rate					FF-Rate						FF-Rate					
W-Ave	W-Ave	0.25	0.25	0.32	2.50	W-Ave	0.25	0.25	0.28	0.38	2.50	W-Ave	0.25	0.25	0.26	0.38	2.50
Median	Median	0.10	0.10	0.10	2.50	Median	0.10	0.10	0.10	0.10	2.50	Median	0.10	0.10	0.10	0.10	2.50
Headline PCE	Headline PCE	0.80	1.60	1.70	2.00	Headline PCE	1.20	1.70	1.80	2.00	2.00	Headline PCE	1.20	1.80	1.90	2.00	2.00
Core PCE	Core PCE	1.00	1.50	1.70	-	Core PCE	1.50	1.70	1.80	2.00	-	Core PCE	1.40	1.80	1.90	2.00	-
Real FF	Real FF	-0.55	-1.35	-1.38	0.50	Real FF	-0.95	-1.45	-1.52	-1.62	0.50	Real FF	-0.95	-1.55	-1.64	-1.62	0.50

Source: Federal Reserve, Murenbeeld & Co.

(How to read the table: Each column indicates the number of Fed participants who feel the accompanying FF-rate (upper bound) is the appropriate rate for year-end.

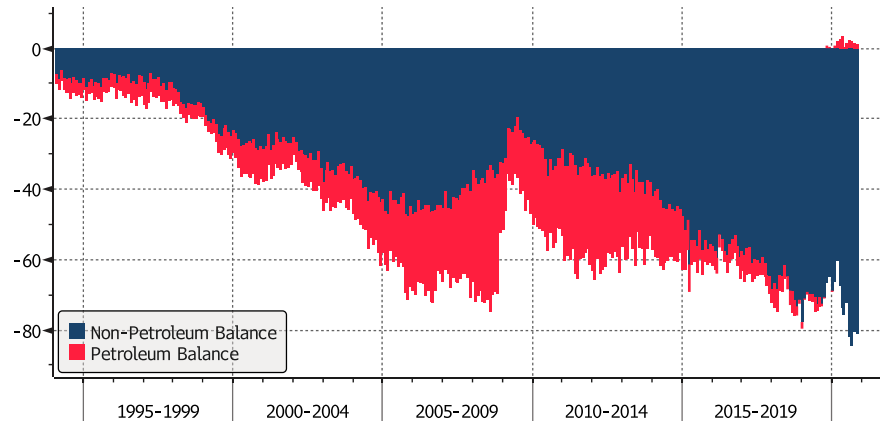
For example, at the December 2020 meeting all 17 participants deemed 0.25% to be the appropriate FF-rate at year-end 2020, and year-end 2021.

A similar analysis holds for 2022 year-end, 2023 year-end, and the Long Run.

US – Trade Balance

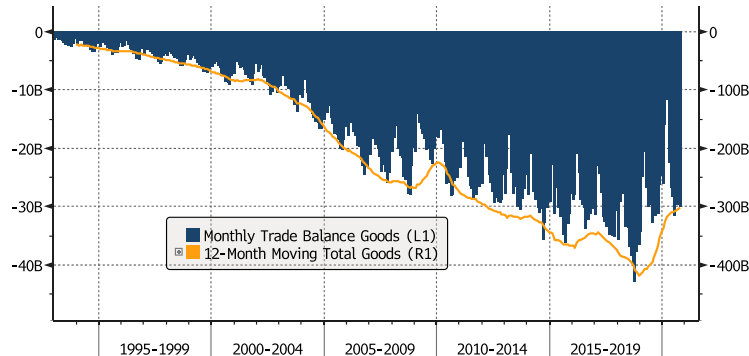
The US Trade Deficit Is near record highs. It has declined against China and Japan however..

US Trade Balance With World US\$ Billions



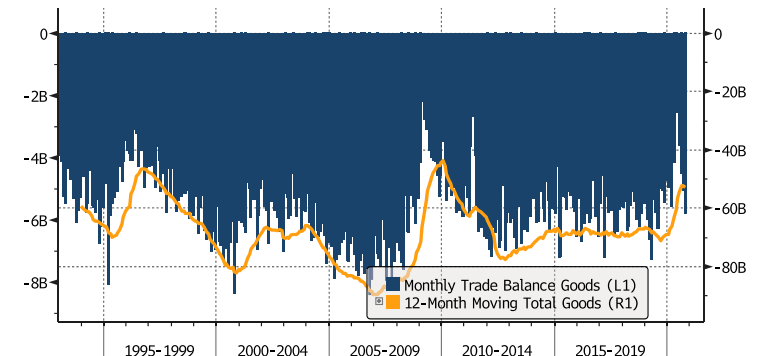
Source: Bloomberg, Murenbeeld & Co.

US Trade Balance With China US\$ Billions



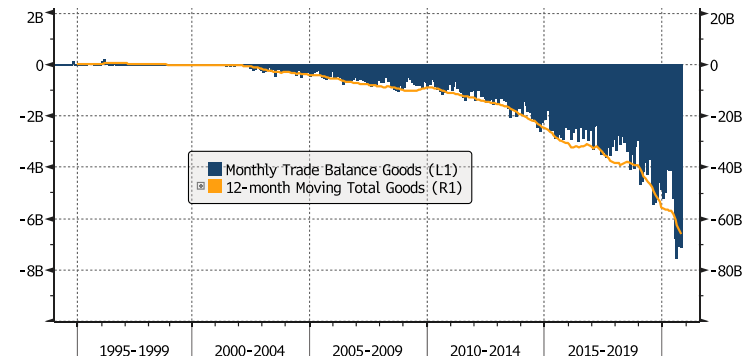
Source: Bloomberg, Murenbeeld & Co.

US Trade Balance With Japan US\$ Billions



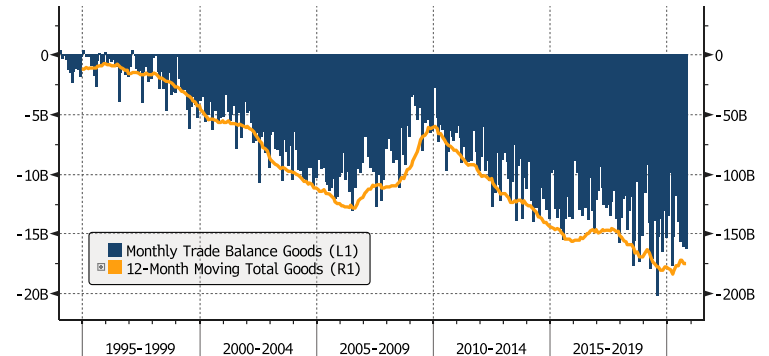
Source: Bloomberg, Murenbeeld & Co.

US Trade Balance With Vietnam US\$ Billions



Source: Bloomberg, Murenbeeld & Co.

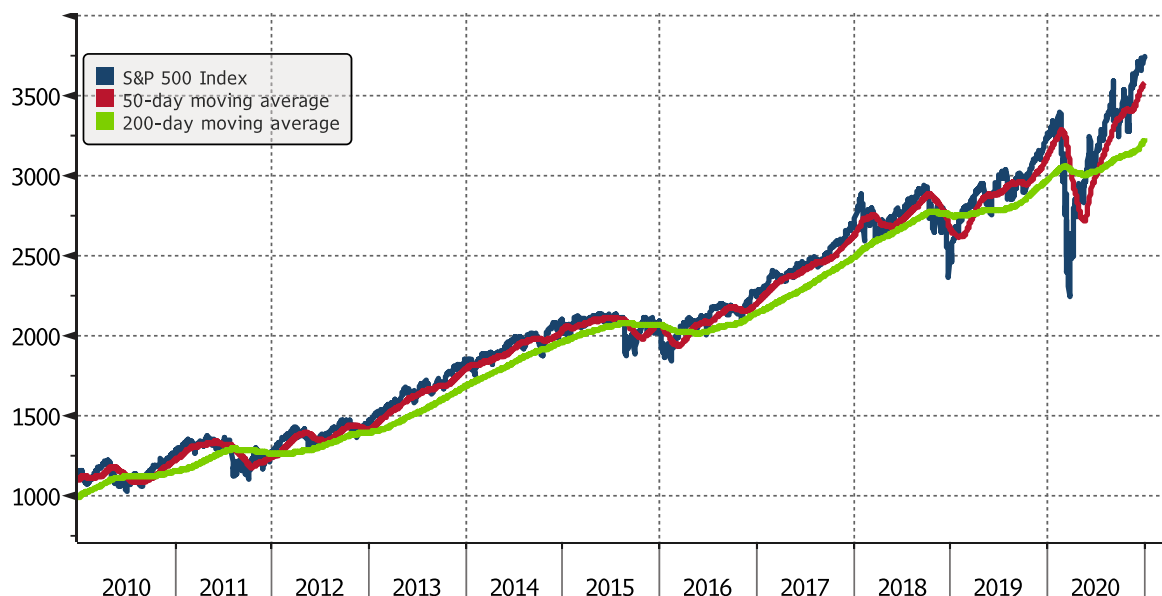
US Trade Balance With European Union US\$ Billions



Source: Bloomberg, Murenbeeld & Co.

US – Equity Markets

S&P 500 Index



Source: Bloomberg, Murenbeeld & Co.

S&P 500 GICS Sectors (percent change)

	Value on 12/29/20	Year to Date	1-Month	3-Month	6-Month	1-Year	5-Year
S&P 500	3727.04	15.36	2.91	10.82	20.22	15.70	80.63
Energy	283.93	-37.80	3.47	24.81	-1.23	-37.38	-36.47
Materials	447.88	16.08	0.55	11.97	26.22	16.95	62.40
Industrials	740.08	7.63	-0.16	13.74	27.38	7.66	58.60
Cons Disc	1298.86	31.69	2.16	7.55	23.53	31.89	107.11
Cons Stap	691.64	6.91	0.77	4.93	15.02	6.97	31.94
Health Care	1309.07	10.17	2.57	6.34	12.10	10.50	55.70
Financials	482.11	-5.73	4.25	20.44	25.06	-5.45	48.49
Info Tech	2284.97	41.82	5.39	11.21	24.18	42.35	212.18
Telecom	221.42	21.90	2.84	13.26	23.09	22.14	46.25
Utilities	312.61	-4.80	-1.61	3.56	8.94	-4.31	40.60

Data as of December 29, 2020

Source: Bloomberg, Murenbeeld & Co.

The S&P 500 is at new highs, led by the Information Technology, Consumer Discretionary, Telecom, and Materials sector.

United States – S&P 500 GICS Sectors

S&P 500 Energy Index



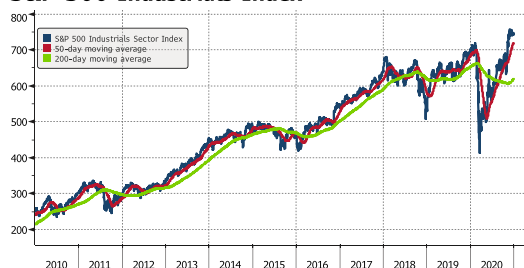
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Materials Index



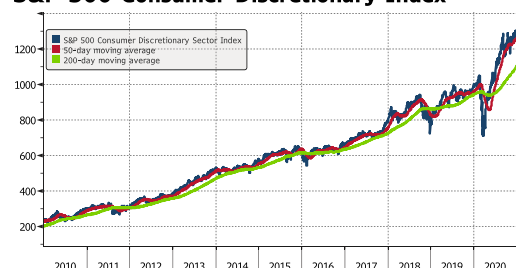
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Industrials Index



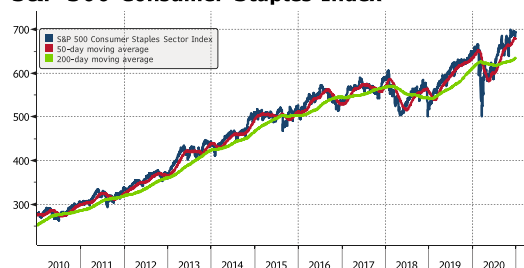
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Consumer Discretionary Index



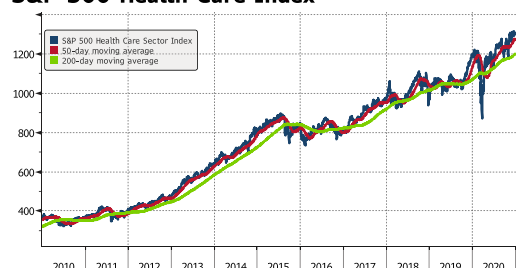
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Consumer Staples Index



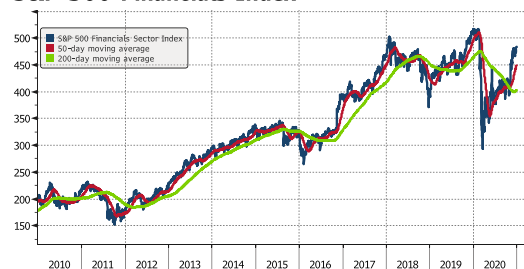
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Health Care Index



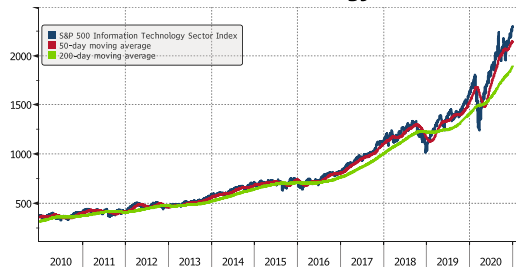
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Financials Index



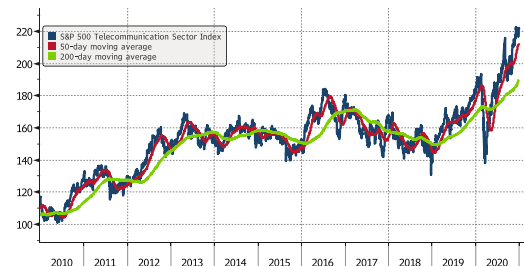
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Information Technology Index



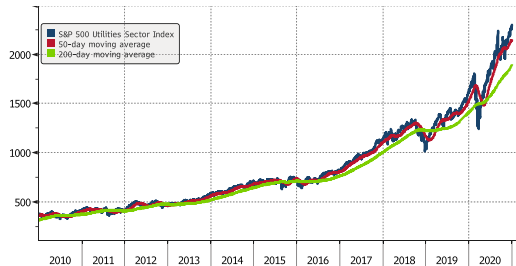
Source: Bloomberg, Murenbeeld & Co.

S&P 500 Telecommunication Index



Source: Bloomberg, Murenbeeld & Co.

S&P 500 Utilities Index

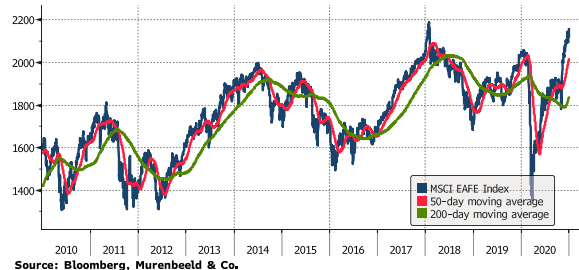


Source: Bloomberg, Murenbeeld & Co.

International – Equity Markets

Most international equity markets are also close to (or at) new highs.

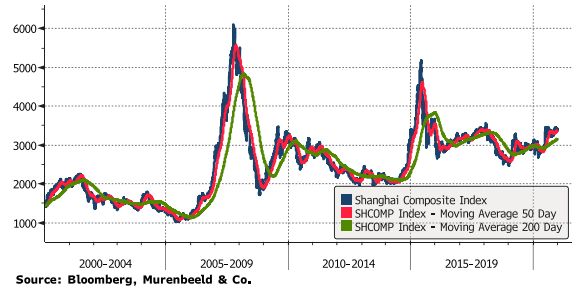
MSCI EAFE Index Developing Market Index



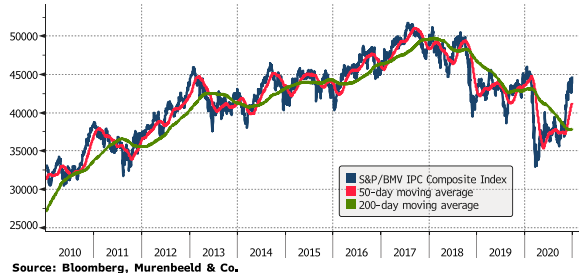
DAX Index Germany



Shanghai Composite Index China



S&P/BMV IPC Index Mexico



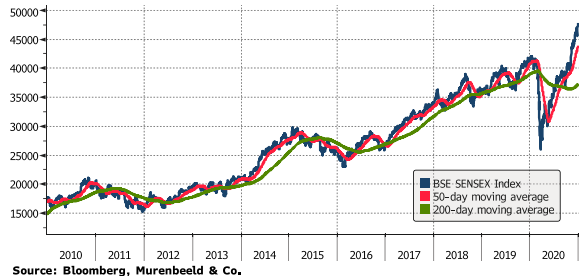
MSCI World Index Developed World Market Index



Nikkei Index Japan



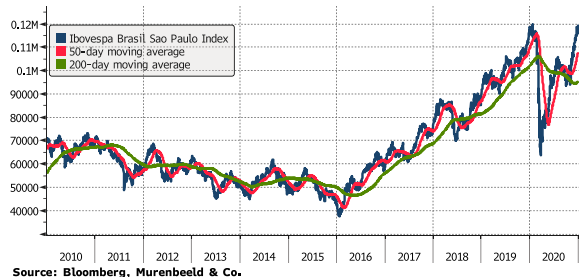
BSE SENSEX Index India



RTS Index Russia



IBOVESPA Index Brazil



Exchange Rates

The US Dollar has declined in recent weeks – a trend we expect to continue in 2021.

DX US Dollar Index

Euro, Yen, Pound, CA Dollar, Krona, Franc



Source: Bloomberg, Murenbeeld & Co.

Canadian Dollar

US\$/CDN\$



Source: Bloomberg, Murenbeeld & Co.

Indian Rupee

Rupee/\$US



Source: Bloomberg, Murenbeeld & Co.

Japanese Yen

Yen/US\$ (Axis Inverted)



Source: Bloomberg, Murenbeeld & Co.

Chinese Renminbi (Yuan)

RMB/US\$ (Axis inverted)



Source: Bloomberg, Murenbeeld & Co.

UK Pound Sterling

US\$/Pound



Source: Bloomberg, Murenbeeld & Co.

Euro

US\$/Euro



Source: Bloomberg, Murenbeeld & Co.

Government 10-year Bond Yields

Low Central bank interest rates and bond purchases are pushing government bond yields lower. 10-year yields in Germany and France are negative.

Canada Government 10-year Bond
Percent



Source: Bloomberg, Murenbeeld & Co.

US 10-year Treasury Securities Yield
Percent



Source: Bloomberg, Murenbeeld & Co.

UK 10-Year Bond Yield



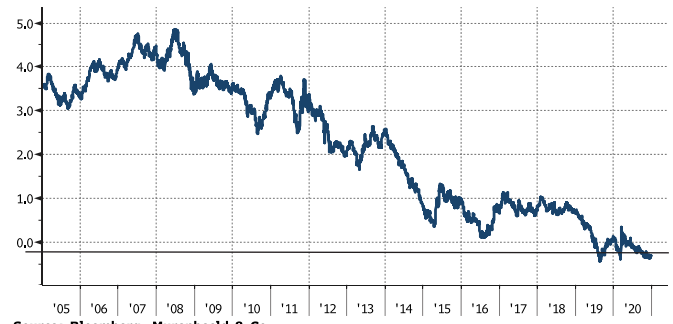
Source: Bloomberg, Murenbeeld & Co.

Germany 10-Year Bond Yield



Source: Bloomberg, Murenbeeld & Co.

France 10-Year Bond Yield



Source: Bloomberg, Murenbeeld & Co.

Japan 10-Year Bond Yield



Source: Bloomberg, Murenbeeld & Co.

China 10-Year Bond Yield



Source: Bloomberg, Murenbeeld & Co.

Commodity Prices

1. BANK OF CANADA COMMODITY PRICE INDICES

Commodity prices have generally moved higher, notably precious and base metal prices.

BoC Total Commodity Index
20 commodities produced in Canada



BoC Total Commodity Less Energy Index



BoC Energy Commodity Index



BoC Agriculture Commodity Index



BoC Metals Commodity Index



2. OTHER INDICES

S&P GSCI Commodity



CRB Commodity Index
Thomson Reuters/ Core Commodity



Commodity Prices (continued)

3. METALS

Copper Price

US cents/lb



Source: Bloomberg, Murenbeeld & Co.

Nickel Price

US\$/Tonne



Source: Bloomberg, Murenbeeld & Co.

Aluminum Price

US\$/tonne



Source: Bloomberg, Murenbeeld & Co.

Lead Price

US\$/tonne



Source: Bloomberg, Murenbeeld & Co.

Zinc Price

US\$/tonne



Source: Bloomberg, Murenbeeld & Co.

Gold Price

US\$/oz



Source: Bloomberg, Murenbeeld & Co.

Silver Price

US\$/oz



Source: Bloomberg, Murenbeeld & Co.

Platinum Price

US\$/oz



Source: Bloomberg, Murenbeeld & Co.

Commodity Prices (continued)

4. ENERGY

Oil Price

US\$/bbl



Natural Gas Price

Henry Hub, US\$/million BTU



2. OTHER COMMODITY PRICES

Wheat Price

US\$/bu



Corn Price

US\$/bu



Lumber Price

US\$/1000 board feet



Live Cattle Price

US\$/ lb.

