Analysis of Canada's Economy situation under Pandemic, and the Bank of Canada's Response Policies

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Executive Summary:

1. Canada has an average level of Covid cases and a detailed response framework.
2. The stock market is experiencing a bull market.
3. The exchange rate keeps increasing since the pandemic.
4. US Unemployment rate skyrocketed and is recovering.
5. Crude oil price experimented shock from the pandemic and is recovering.
6. Outdoor required businesses experienced the most severe shock.
7. The business lending condition could further push the real estate's price level higher.
8. Unemployment in Canada has a similar pattern with the US during the pandemic.
9. Canada's industry-wide employment is shifting its focus to essential sectors.
10. The price level and inflation kept low.

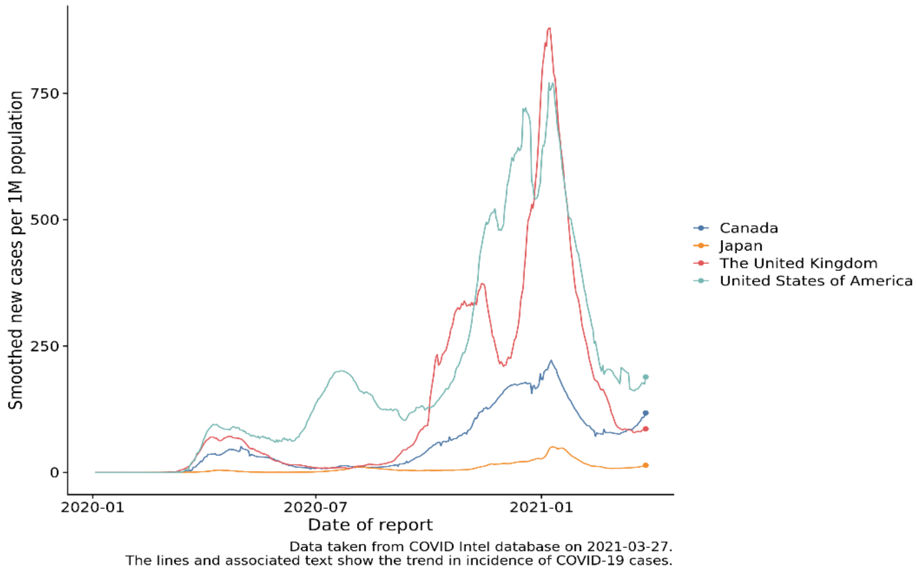
Introduction:

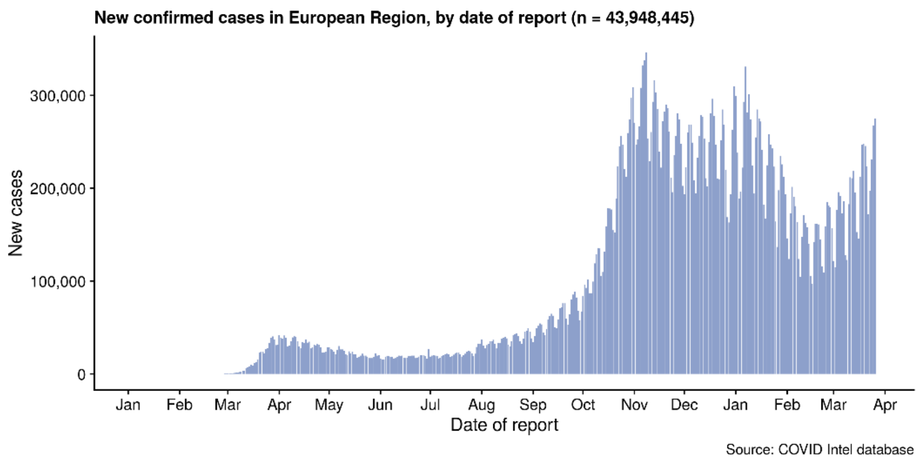
The first section of this paper will explore Canada's economy's current conditions under pandemic in several aspects such as unemployment, inflation, GDP, Covid Cases, equity price, commodity price, exchange rate and interest rate. And analyze the reason behind the phenomenon, as well as its outcome. In the meantime, it will compare Canada with one of its major economic partners, the US. The second section of this paper contains the policies implemented by the Bank of Canada recently on the interest rate, analyzing its effect and problems. Also, there is a comparison with the policies in the US by the Fed. The last section contains the recent Bank of Canada's action on the bond market, with analyzing the effect and problem of this action. This paper uses an amount of external data, such as the World Health Organization, Statistics Canada, Bloomberg, and Bank of Canada.

Current Economic Conditions：

Canada has an average level of Covid cases and a detailed response framework:

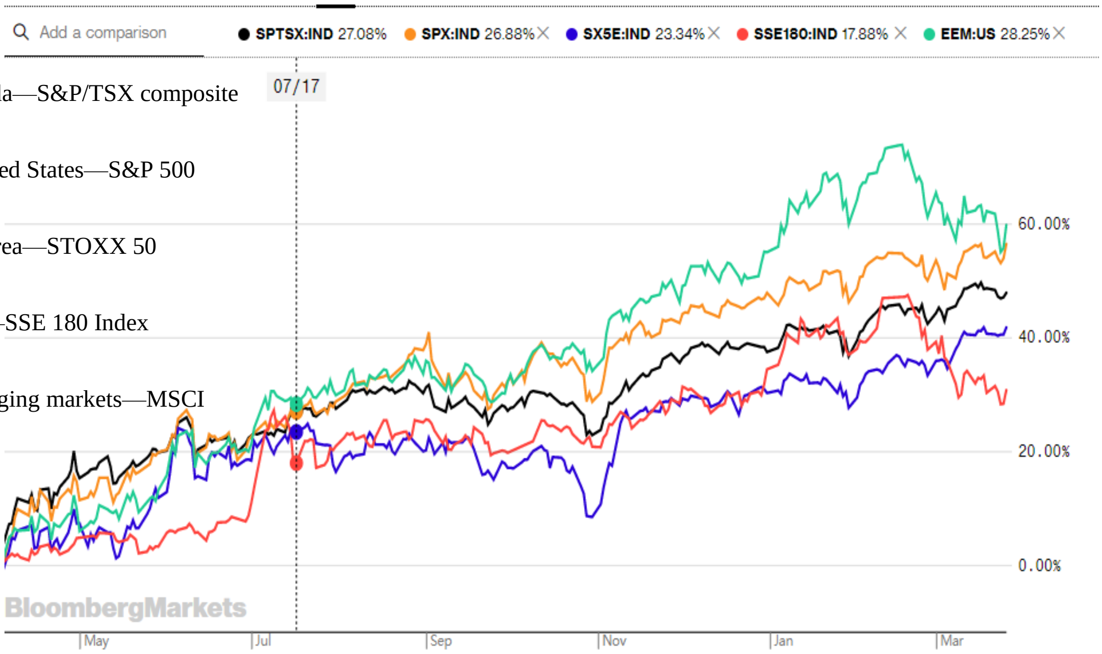
Since the outbreak of Covid-19, Canada shut down most of the business around the country, while only leaves essential business open. Under this situation, the unemployment rate across the country has rapidly raised, and the whole economy turned into a depressed status.





From the beginning of the pandemic, Canada's Covid cases had kept at a relatively low level among the advanced economies. From these two graphs, ranged from Jan-2020 to March-2021, it shows the daily new cases number for each of the advanced economies, including Canada, Japan, The United Kingdom, United States of America, and the European Union in the button graph. We can see that all the advanced economies have a similar pattern on newly cases number. Also, the number of cases reached the peak right after January 2021, which is the date of the last report, because this is after Christmas. The reason for the relatively low level in Canada is due to its relatively strict lockdown. Canada implemented a strict lockdown in the major cities to control the spread, and the rest area has less population, which could be better for social distancing. Since the lockdown requires the shutdown of the business, the stricter it is the more impact on the economy. The way that Canada responds to this is that making a detailed reopen plan, a responsive framework, which could bring the economy back as quickly as possible, while not bringing back the pandemic. (Ontario Government, 2021)

The stock market is experiencing a bull market:



Black: Canada—S&P/TSX composite

Orange: United States—S&P 500

Blue: Euro area—STOXX 50

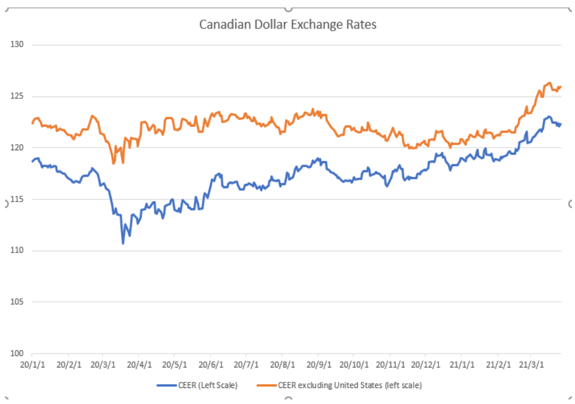
Red: China—SSE 180 Index

Green: Emerging markets—MSCI

By analyzing the equity prices around the major economies from May 2020 to

March 2021, we can identify that all the major economies keep recovering from the shock of the pandemic, while China has a decreasing trend around March 2021. Canada stays in the middle of these economies. Since these indexes are the composite of major stock in the country, we could see that investors are spending more on stocks, and keeps going up. It means the stock market is experiencing a bull market. This movement could bring up the investment sect of GDP for the country. Since pandemic has affected Canada's economy, it is on an average way of recovering now. And, this is important for the country's financial system, as well as for the whole economy.

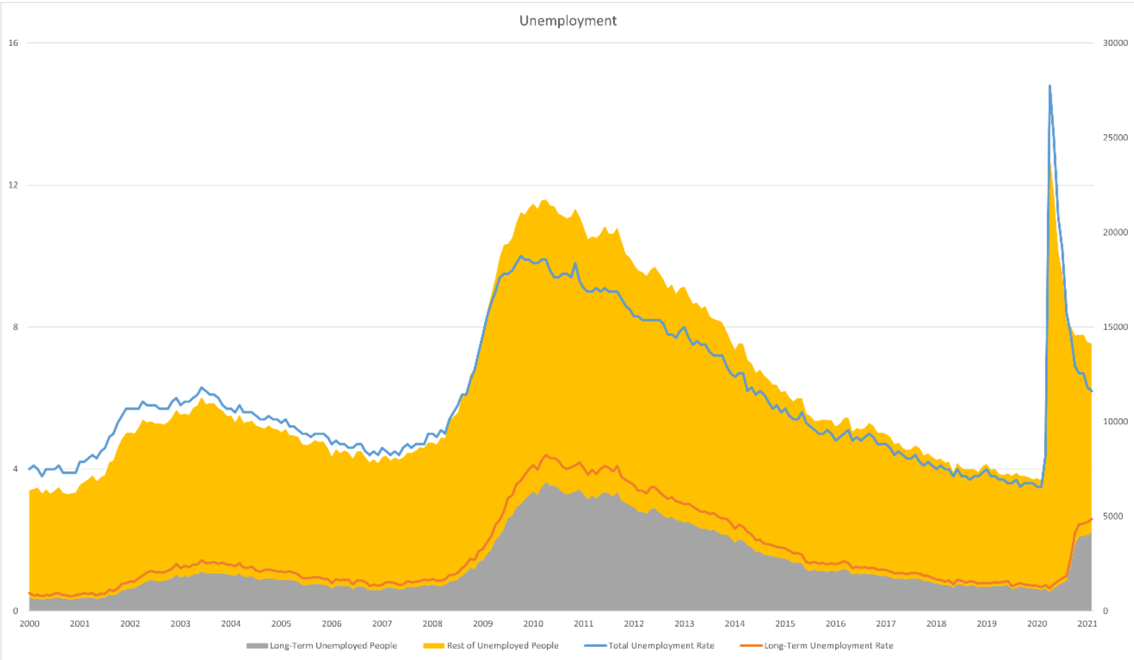
Exchange Rate keeps increasing since pandemic:



The Canadian dollar exchange rate on the US dollar keeps going up since May of the last year, which is shown in the left image above. This indicates that one Canadian dollar worth more US dollars now. This movement could encourage imports from the US since the imported product from the US becomes relatively cheaper now, but it could lead to a shock on domestic product demand. Because this is a reduction of net export, the GDP of Canada could be lower by this. Also, from the right image above, the CEER index, which is a weighted average of the exchange rate between Canada and its major trade partners, including the US, China, and European countries.

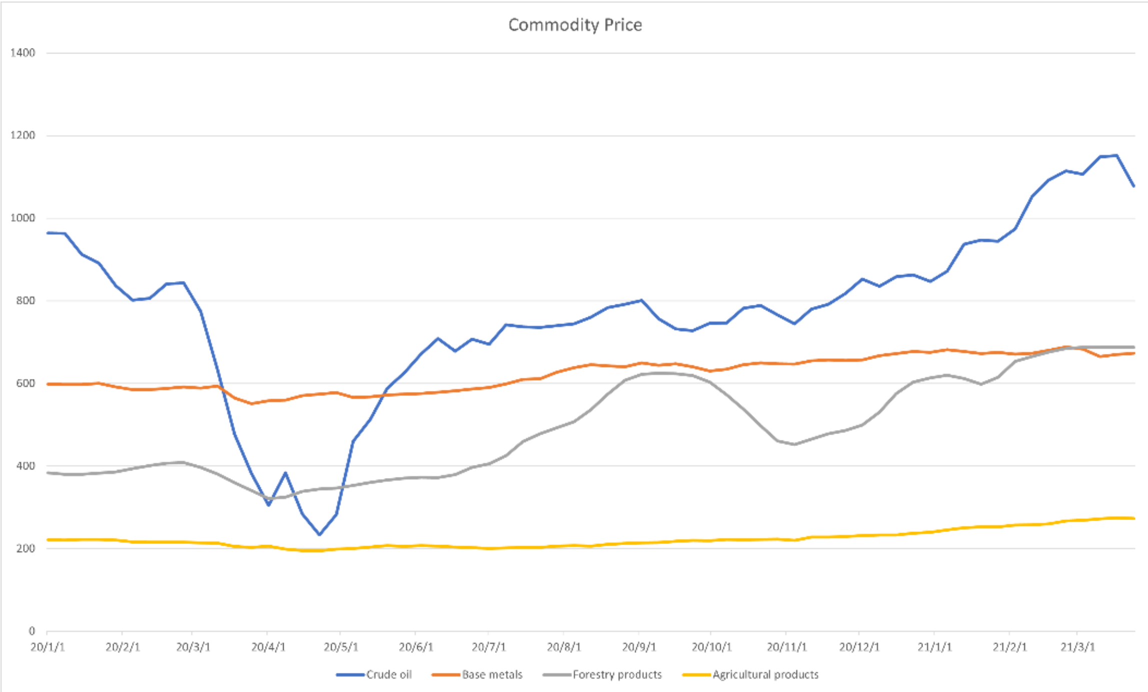
Since January of 2021, the CEER index kept steady during the pandemic, but it is increasing afterward. This phenomenon also supports the opinion, leading net export reduced further. Since the Canadian dollar is appreciating, it would encourage Canada's trade partners to export goods to Canada as well.

US Unemployment rate skyrocketed and is recovering:



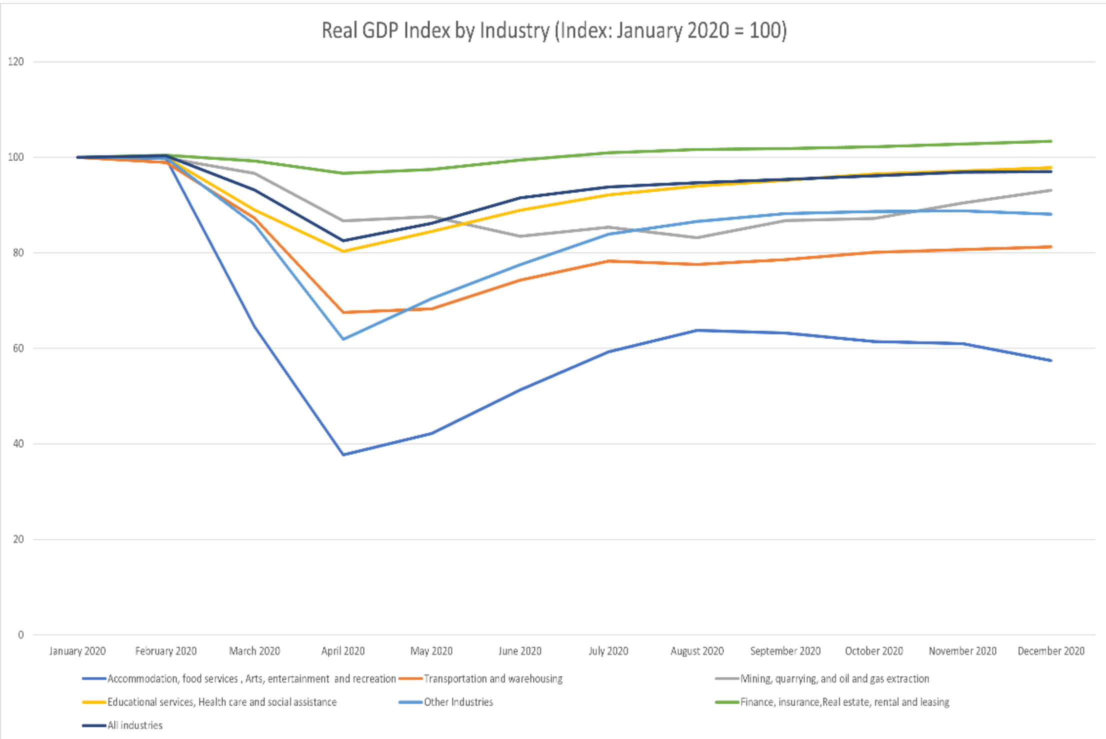
From the unemployment graph, which is as of March 2021, the US's unemployment rate had its peak around 2021. As mentioned before, this could be due to the pandemic. The pandemic killed most of the businesses, largely increasing the unemployment rate for the US, which is the highest among 20 years. This unemployment peak has even more impact than the financial crisis in the year 2008. The unemployment rate nearly reached 16 percent at its peak, including less than 4 percent long-term unemployment rate or natural rate of unemployment. This means most of the unemployment is short-term, which explicitly indicates the reason, pandemic. After the peak, unemployment dropped quickly, which is due to the systematically reopening framework. This is similar to the Great Depression that happened in the year 1929. In beginning, the real investment drops rapidly, and the unemployment rate skyrockets, and thereafter, the real investment gradually raises back, and the unemployment rate reduces.

Crude oil price experimented shock from the pandemic and is recovering:



From the commodity price chart ranged from the beginning of the year 2020 to March of 2021, the crude oil price is gained from the energy index price, since the majority of the energy index is crude oil. This chart expresses that crude oil is affected mostly by the pandemic since April of 2020. This is the time of the beginning of the pandemic. The rest parts of commodity, including base metals, forestry products and agricultural products, remains a steady fluctuation. This phenomenon indicates that crude oil is affected most heavily under the pandemic, which is reasonable because people have little opportunity to consume oil such as travel and driving. The crude oil price went as low as the agricultural products in May 2020, which is usual. Also, the other factor pushing oil prices down is the shutdown of the business. The less demand for air travelling and sea transporting drove the oil price further down. One example is that Air Canada implemented a policy to freely cancel tickets to credits, which significantly lowers the earning from operation in their annual report, as well as their stock price. As the usual asset price’s trend, the price reached its minimum in May 2020, and this price is far lower than its actual value. So, there are arbitrage opportunities. But because of the efficient market hypothesis, investors will push the price onto its actual value through arbitrage. We can see that the crude oil price has back to the price before the pandemic in March 2021, and even higher.

Outdoor required businesses experienced the most severe shock:

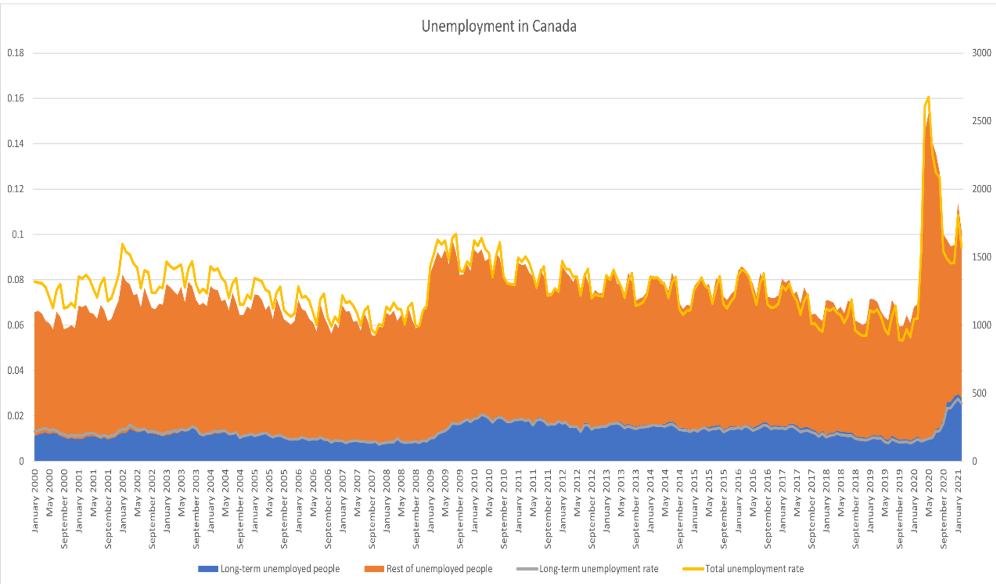


We can see that the GDP change from the year 2020 from each industry. The finance, insurance, real estate, rental, and leasing sector experienced the least shock from the pandemic and now is back to the level in 2020. This sector represents investors' risk aversion since it contains not only finance but also real estate and insurance. Real estate is always considered a tool to deal with inflation since the government is sending out the stimulus. Investors used real estate to avoid the risk of inflation, and this pulls the real estate price level higher. This would influence the rental and leasing market as well. The industry that experienced the most shock is Accommodation, food services, arts, entertainment, and recreation. The common thing in this industry is that most activities require people to go outside, while the lockdown prohibits people to do so, thus this sector experienced the most demand shock. Also, lockdown closes most businesses for entertainment and recreation, which is a supply shock as well. We can see that even the economy is recovering, this industry is still the lowest portion among other sectors since the pandemic is continuing.

The business lending condition could further push the real estate's price level higher:

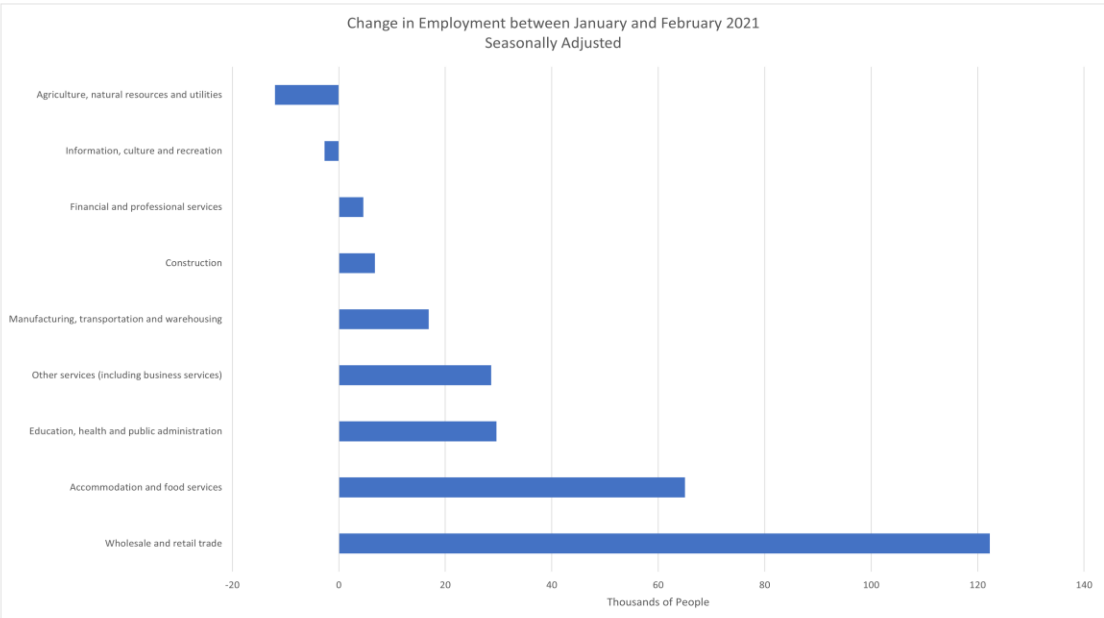
From the graph, both the price and non-price lending is still within a favourable condition, while too high is leading to a tightening condition, and too low will be easing. The lending condition keeps a steady way around 0, which is a relatively favourable situation for investors. As discussed before, the investors' desire for real estate is increasing. A favourable business lending condition could further push the real estate’s price level higher because of the low borrowing rate and the more disposable income from the stimulus. Since the trend of increasing the real estate's price level is strong, a bubble will appear in the future. From the efficient market hypothesis, we could expect investors to push the price level down to its actual value eventually, and this is called the break of the bubble. A low borrowing rate will lead to the cost of equity low as well, which would encourage investors to put their money into markets, which could lead to a bull market. As studied above, the bull market will last longer under this situation.

Unemployment in Canada has a similar pattern with the US during the pandemic:



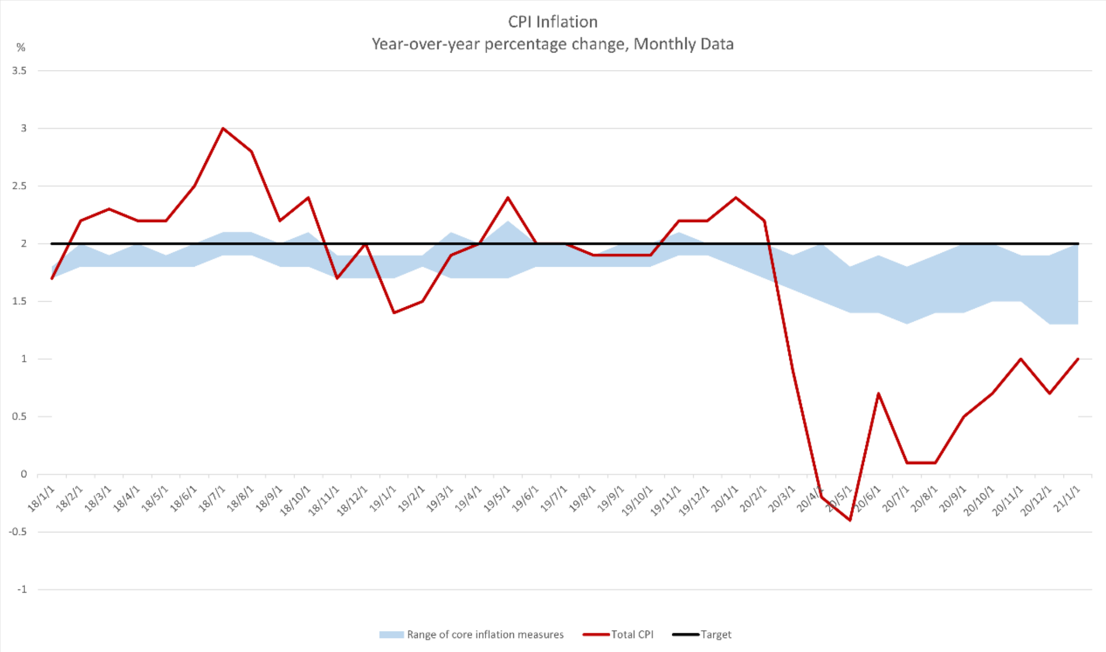
Before the year 2020, Canada's unemployment rate was steady around 8 percent, with a long-term unemployment rate of less than 2 percent. During the year 2020, which is the year of pandemic, Canada's unemployment rate behaved similarly with the US, reaching maximum in May of 2020 closed to 16 percent. The number of long-term unemployed people surpassed 500 thousand at the time, and the total unemployment reached 2500 thousand people. There is one thing different that after recovering from the peak, there was a small peak during January of 2021 which is around Christmas. The reason behind this is another round of lockdown started around that time. Around May 2020, there was the first lockdown for Canada. We can observe that lockdown could bring unemployment higher, which could deteriorate the economic situation. Until now, Canada has ended its lockdown recently, but there is also a sign of another outbreak. A longer period of lockdown could significantly shock the whole economy, but a shorter lockdown could make the pandemic last longer, which is also terrible for the economy. This is a dilemma for the country, and it is like performing a stress test if policymakers decide to implement a longer lockdown.

Canada's industry-wide employment is shifting its focus to essential sectors:



From January to February in 2021, Canada just experienced a small peak of unemployment. We can see that the agriculture, natural resources and utilities industry lost around 10 thousand people in a month, while the wholesale and retail trade sector gained more than 120 thousand people. We can identify that most gains are from essential industries such as wholesale, food services, education, and health industries. Since Canada implemented another lockdown on November 20th, 2020, people tend to get a job in the industries which could still open during the lockdown. The two industries that experience a loss also include the information, culture, and recreation industry. Since most activities in this industry are also prohibited under lockdown, it is normal to see that people are quitting this industry. This situation reflects the normalcy under pandemic, which is people are transferring themselves into an industry that could still make earnings during the pandemic. Since the demand for food and wholesale is unchanged in the pandemic, the whole country's labour force structure is shifting to the essential industries.

The price level and inflation kept low:



One thing that is not included here comparing with the Bank of Canada report is the adjusted price index since it will be released on 12th April. The price kept a steady level, and the inflation was even below 0 at the beginning of the pandemic. Even though the inflation was slowly increasing thereafter, it is still far below the target rate. Since the government is offering stimulus, more money supply will bring the inflation level back eventually. Since the money velocity and the money supply will both increase, the nominal GDP will increase to a larger extent than the money supply, which could bring the economy back to normal eventually. As the side effect of increasing inflation, we could expect the housing price to be higher as well, and we should expect a higher price level equilibrium afterward.

Latest Interest rate announcement:

From the latest press of Bank of Canada about the overnight rate, they promised to keep the current interest rate level and quantitative easing policy. (Bank of Canada, 2021) In this case, the Bank of Canada is working on bringing the inflation level back to the normal level. Since the interest rate level is low now, this event will be positive news for equity markets. Investors could expect a low level of the interest rate for a longer period. A low interest could encourage people to spend their money rather than deposit them since the cost of money is low. This event will accelerate the velocity of money since people are more likely to spend the money out. Also, by implementing the quantitative easing policy, the Bank of Canada could supply more money into the market, which is a method to pull the inflation level up. Since both money supply and velocity increase, the nominal GDP will increase more rapidly than these by the quantity theory of money. This method is similar to the method in the financial crisis, which is that the government offer more money supply such as buying bonds and sending stimulus, to bring back the economy. Around March 5th, 2021, the US Treasury Bond yield increases to near 1.5 percent and was targeting 2 percent. (John Ainger, Ruth Carson, 2021) Since the bull market lasts for nearly a year, the demand for bonds decreases, leading to the price of bonds decreases. This is what caused bond yields to rise.

Since the treasury market was mild as well, it accelerates investors' potential rapid selling for treasuries, which could make the yield higher. Since the cost of money increases, the stock market experienced a shock during the bull market which lasted for a year. The government is implementing a quantitative easing policy, we could expect the yield growth to be slowed to some extent. The goal of the Federal Reserve is to prevent deflation and can be trapped by the zero-lower bound. (Brian Chappatta, 2021) The Fed's goal is to use the higher yield rate to constrain economic growth, and increasing the employment rate, which is a self-correction mechanism. The increasing yield rate is that investors are becoming more confident in the lower unemployment and higher inflation rate.

Recent developments:

The Bank of Canada announced an update on SRO (Security Repo Operation), which involves increasing the maximum bidding amount across all securities in the SRO will increase to $2,000 million for each eligible participant effective Monday, March 15, 2021. (Bank of Canada, 2021) Now, Canada is experiencing a low inflation rate and low GDP due to pandemic, which is below the Bank of Canada’s target. The Bank of Canada decided to implement a quantitative easing policy in response to this usual event. This action is a part of the quantitative easing policy, which is offering more money supply through buying back more treasuries and other bonds. Since the Bank of Canada is buying more back, the demand for bonds is increasing, then the price of bonds will go higher. This event could lead to the interest rate lower and increasing the bond yield. Thus, the stock will suffer a shock since the alternative investment has a higher yield now, which increases the opportunity cost. This idea is a way to accelerate the velocity of money, by lowering the interest rate. And it will increase the amount of money supplied into the market. By the quantity theory of money, it will increase the nominal GDP and the inflation rate, which could constrain economic growth. The goal of the Bank of Canada is to target a 2 percent inflation rate, while now is around 1 percent. This response is a usual way of reviving the economy, which happened in the financial crisis as well. This idea will also force the employment rate to raise, and the aggregate supply as well. Since both, the aggregate supply and demand will increase, the economy will reach a new equilibrium, with more employment. If the labour force fails to catch, then it will result in a higher price level equilibrium as well. Importantly, this will cause bond yields to rise, which may withdraw funds from other financial markets. This event would make the financial system less efficient for a period since lots of money is trapped into the bond market, which might slow the recovery of the economy. But more demand will lead the yield to decrease to a normal level eventually. This happens to be the common way for the central banks to deal with the financial crisis similar events.

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Appendix:

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