FARM STUDENT ASSOCIATION

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Canada's Worrying Trend of Growing Consumer Debt

By Jason Zhou, Market Research Analyst

Debt has plagued university students for decades, and we have all heard about horror stories of mounting student debt that lasts well into students' adult lives. Snowballing debt payments, however, are not limited to students. For most Canadians, debt is a necessary tool for people to smooth out spending throughout their life. When used correctly, debt can divide large investments into bite-size chunks which allow people to purchase better goods over a long period. Properly financing debt will elevate people's lifestyles and give more opportunities to earn extra sources of income and obtain a better living standard. Household debt can be measured and analyzed to determine the health of the economy.

Household debt is debt that is leveraged by the consumer.

Comparison to the U.S. Economy

Up until recently, Canada's economy has predominantly been considered as financially sound given that we were largely unscathed in the 2008 Financial Crisis largely due to the strength of our banks and banking system [1]. The Canadian consumer, by contrast, is not as sound given that household debt levels have continued to rise with limited recovery since 2008. This trend is the opposite of the U.S. where debt levels spiked to record highs in 2008, but have been on a healthy decline ever since. The U.S. has been in one of the longest economic expansions in American history, and with state-by-state increases in the minimum wage, wages in the U.S. are now growing the fastest among the lowest-wage industries [2].

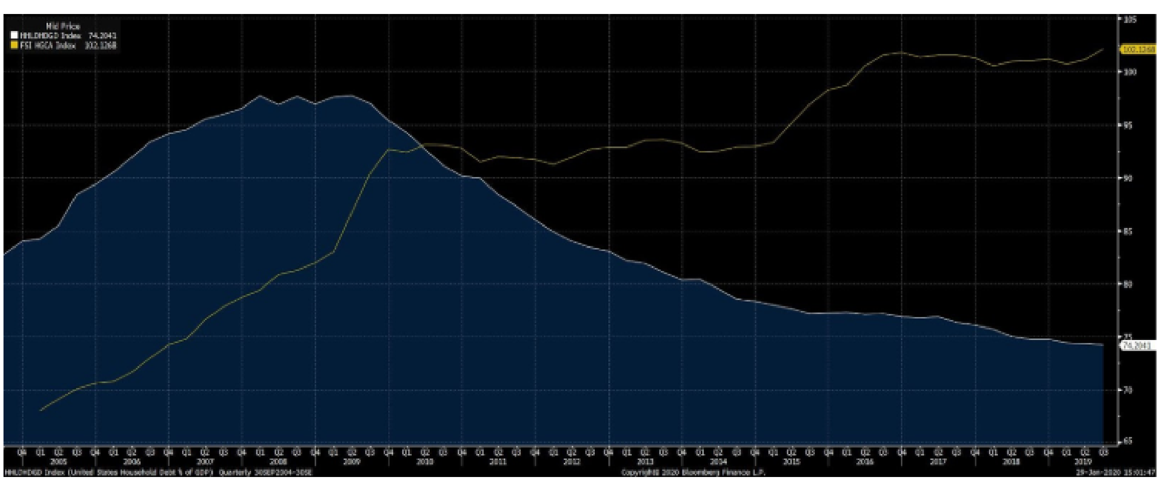

Figure 1. Canada vs US Household Debt to GDP ratio *Retrieved from Bloomberg Terminal*

This steady decrease in household debt to GDP has coincided with job growth for 106 consecutive months, resulting in the longest job growth on record and unemployment rate staying at 4% or less for 16 consecutive months, the longest streak on record [2]. These stunning statistics are most likely caused by recent tax cuts and fiscal economic stimulus in an already growing economy [2]. Fiscal policy such as President Trump's federal tax cuts helped the economy to continue its growth as government spending increased and businesses and households increased spending as a result of lower taxes, which contributed to accelerating growth [2]. All this growth is at the expense of a higher government deficit; Trump's fiscal experiment in an already growing economy.

Government budget deficit is when the government spends more than it taxes in it's federal budget.

Some may say Trump's policies will only be a short-term solution and an economic gamble. President Trump, however, may be onto something. In this period of economic uncertainty and tension, many developed nations such as Canada are experiencing slower economic progress and consumer debt mounting at higher rates than in the United States.

The Weaker Canadian Economy

In comparison to the U.S., Canada's recent economic condition lags far behind. As shown in the figure above, household debt has been increasing steadily. Currently, the Canadian household debt remains near record-high levels with the average Canadian owing close to $1.78 per dollar of income despite the fact that Canadians are borrowing less than usual [3].

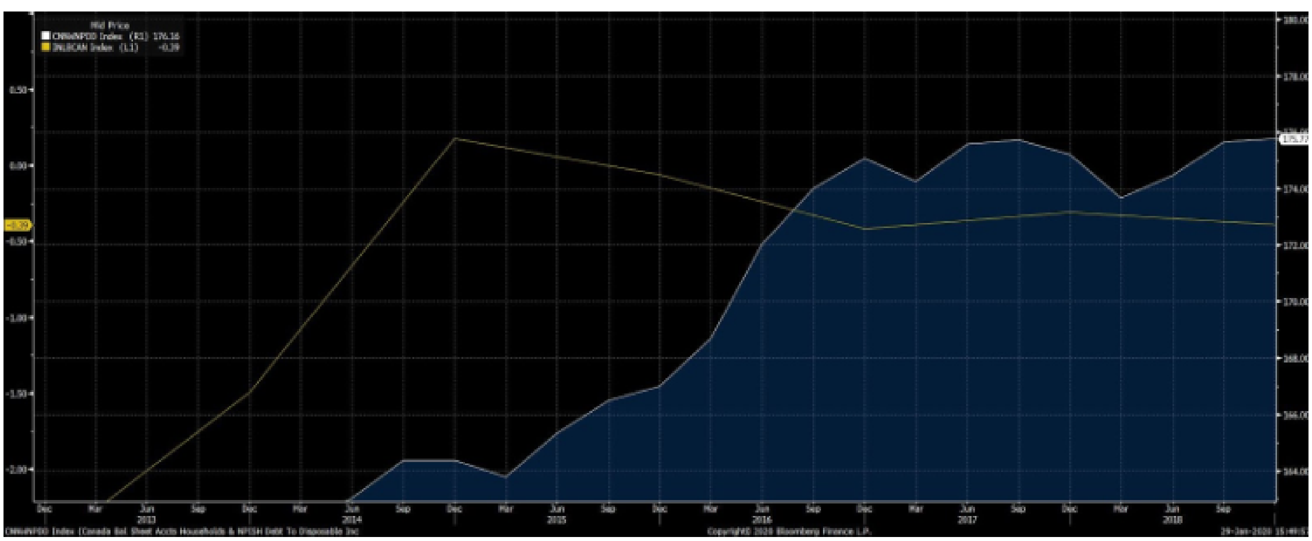

Figure 2. Household debt to income vs Household Net borrowing *Retrieved from Bloomberg Terminal*

A severe debt burden can cripple economic output. Debt servicing cost combined with lackluster wage growth adds to Canadians' debt burdens.

Debt servicing cost is the cost of paying back debt plus interest incurred.

When Canadian households are spending 14.9% of income on debt servicing, the cost hinders consumers' ability to spend, lowering inflation below a healthy level and limiting economic growth [3]. Some possible causes for such spikes in consumer debt levels could be the increasing demand for mortgage loans. With a low interest rate environment and housing booms, the housing market seems appealing for the Canadian investor. This low-interest rate leveraging, however, has not lead to investing momentum, but has led to an over-leveraged consumer. Therefore, the Bank of Canada has taken preventative steps to decrease leveraging by hiking interest rates 5 times since mid-2017 as depicted by Figure 3.

Figure 3. Historical representation of Bank of Canada overnight lending rate

Preventing borrowing, however, comes at a cost. Raising interest rates despite poor economic performance can be detrimental to the economy in the short term. This is reflected in Canada's slower GDP growth rates in Q4 of 2017 and Q1 of 2018, after a series of initial rate hikes [4]. It now seems like the Canadian economy requires some sort of stimulus to jumpstart itself to keep pace with its American counterpart.

Possible Solution to Jump start the Economy

Finance Minister Bill Morneau has proposed a tax cut of $6 billion per year to relieve pressure on the Canadian consumer [4]. Morneau, however, may struggle to keep his promise of shrinking the considerable debt to GDP rate in Canada [4]. An intelligent solution that can stimulate the economy without incurring an increase in government expenditure or tempting households to take on more debt may be possible. Deregulating inter-provincial trade could change the Canadian economic outlook for the better.

It is astonishing, for example, that a wine vineyard in Ontario is allowed to freely export their product overseas but is legally prohibited to sell directly in Manitoba [5]. A small winery in the U.S. generates 4 times more revenue as a result of direct-to-consumer selling, and eliminating trade barriers allows for faster growth among small businesses which accelerates the economy. Small businesses represents 97.9% of all businesses in Canada and accounts for 69.7% of all employees working in the private sector[6].

Small businesses are businesses that contain 1-99 employees.

The wellbeing of small businesses is linked directly to the wellbeing of the Canadian economy. Establishing free trade between provinces seems long overdue and relaxing these policies can create new growth opportunities. As the International Monetary Fund (IMF) estimates, free trade within Canada can increase GDP by 4% [4].

Conclusion

Although Canada has been experiencing a retracted, slower economic growth period, there are multiple strategies to change Canada's dry economic situation and consumer's mounting debt. The economy needs a jumpstart to keep up with its American counterpart. The Canadian government needs to correctly assess the situation and execute calculated policies to stimulate the economy and instill consumer confidence.

[1] https://www.bloomberg.com/news/articles/2019-03-26/canadians-are-feeling-the-debt-burn
[2].https://www.theatlantic.com/ideas/archive/2019/08/whys-it-so-awkward-to-say-the-economy-is-great/595408/
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The U.S. 20-Year Treasury Issuance and its Impact on Financial Markets

By Madeleine Pollock, Market Research Analyst

Earlier this month, U.S. Treasury Secretary Steve Mnuchin announced that the U.S. Treasury would issue 20-year U.S. government bonds [1]. This is likely to take place in the first half of 2020 and will be the first issuance of its kind since 1986 [2]. There are many impacts of this decision that can be considered: “How will this affect the supply of debt with other maturities?”, “How will this impact the yield curve?”. Yield Curve: A line that plots the interest rates of bonds across different maturities. The interest rates indicate the coupon yield received on investment. Note: this is for bonds with the same credit quality.We should also consider why the Federal Reserve (Fed) has made this decision: “Why now?”, and “What impact does the current government deficit have on this decision?”.

Offsetting Current Federal Deficit and the Impact on Existing Treasurys:

Let’s consider why the U.S. government is looking to issue more debt, particularly debt maturing in 20 years. The U.S. government is seeking to fund a federal deficit that is expected to reach $1 trillion sometime in 2020. [3]. The U.S. Congress and the President rely on deficit spending to stimulate economic growth, however, despite the economy performing well, deficit spending continues to increase.

This new issuance means that the federal government can borrow at lower rates, and spread their loans and risk over a longer period [4]. The average maturity of outstanding debt is currently just under 70 months, whereas in 1980, it was around 60 months [2]. The 20-year bond is anticipated to lengthen the average maturity of issued debt given current demand for the security[4].

Jon Hill, Interest Rate Strategist at BMO Capital Markets, suggests, “One of the reasons they are targeting the 20-year sector is that it is a natural source of expanding demand, particularly from some of the liability-driven investor community” [2]. Liability-Driven Investor: an investor focused on acquiring enough assets to cover all liabilities (both current and future) and managing liability risk. Examples include Pension Plans and Insurance companies. The 20 year Treasury bond will populate this section in the yield curve, as there is currently only $303.8 billion in U.S. Treasurys maturing in the next 10-20 years, which represents only 2% of total outstanding government Treasurys as of the end of 2019 [2] . This gap represents uncharted waters for the U.S. financial system given the lack of an adequate benchmark for demand.

Bond dealers are currently uncertain about where the 20-year bond will be priced, as well as the effect it will have on existing maturities. Bloomberg contributors suggest that the bond offering will debut with a size of $17 billion, with a $14 billion reopening. There is speculation that the Treasury Department could reduce the nominal coupon auction of its existing maturities by $1 billion per bond to make room for the 20 year [5]. The yield of the 20-year U.S. Treasury bond in relation to current issuances is displayed in Figure 1.

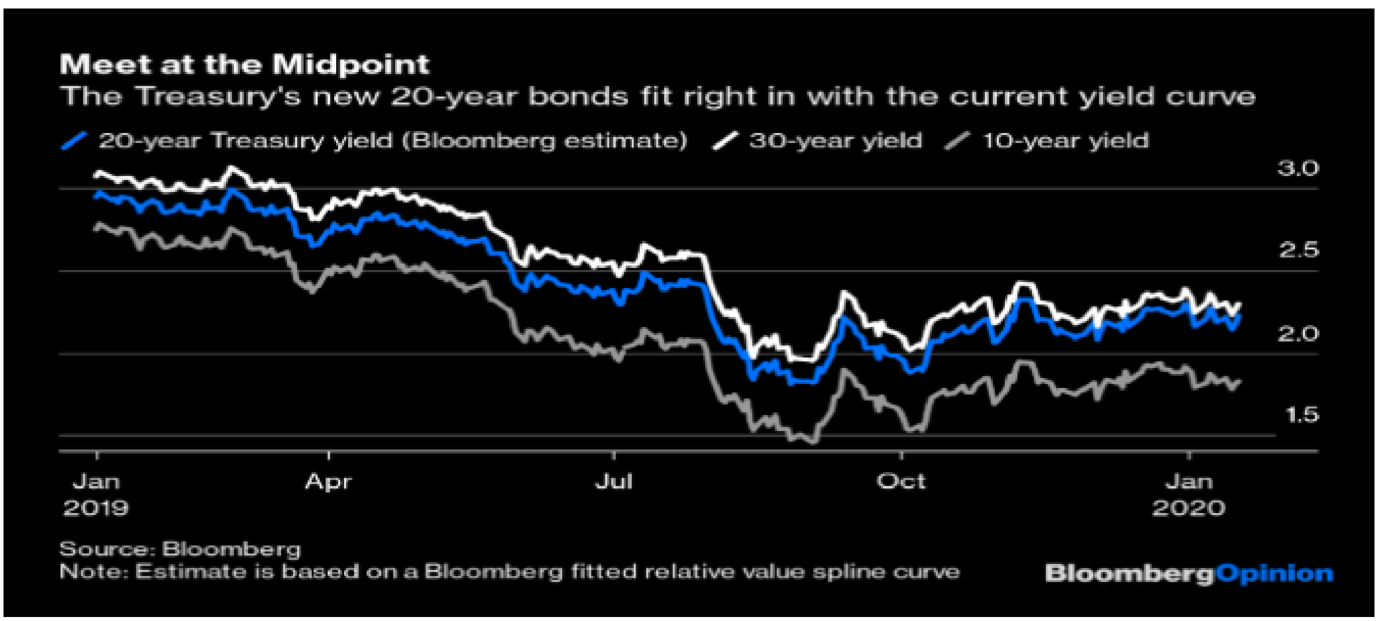

Figure 1: Projected 20-year bond yield comparison with 10-year and 30-year

Why Now? The Impact of Low Interest Rates:

Current expectations are that the new Treasurys will be issued in the first half of this year, with further information to be announced in the next Federal Open Market Committee (FOMC) meeting.

Federal Open Market Committee (FOMC): A Federal Reserve System committee that oversees open market decisions, including those regarding interest rates.

Market demand and federal budget constraints have pressured the Fed to consider a 20-year Treasury issuance this year. While some may be skeptical of this timing, now is an opportune time for new government debt issuance given the current low interest rate environment. Interest rates are relatively low historically with the current Federal Reserve policy rate set at 1.50-1.75%. This is the lowest the Fed rate has been since June 2018, as depicted in Figure 2. Consequently, this is an opportunity for the U.S. government to borrow at lower rates as it is unlikely that the FOMC will raise rates prior to issuance of the first 20-year Treasurys.

Figure 2: Federal funds rate over 20-year period

The Potential Impact to the U.S. Yield Curve:

After Mnuchin's announcement of the issuance of 20-year bonds, the Treasury yield curve flattened between the 5-year and the 30-year portion of the curve [4].

Flattened Yield Curve: Typically indicates a shift from a period of economic growth or expansion to a period of declining economic growth or recession (or vice versa). This is also the case for an Inverted Yield Curve.

It remains to be seen, however, as to how the yield curve will be impacted when a new 20-year maturity issuance enters the market. In this case, a likely scenario is that the demand for the 10-year bond will fall as demand shifts to the 20-year, driving down the price of the 10-year bond respectively, and raising its yield. Consequently, this could result in a steepening of the 5-year to 10-year portion of the yield curve and a potential flattening of the 10-year to 30-year section of the yield curve.

Will Canada Follow Suit?

Traditionally when it comes to interest rates, Canada often follows a similar path to that of our neighbours in the U.S. Theoretically, it could make sense for Canada to issue 20-year government debt, given the current low domestic policy rate of 1.75%. According to Bloomberg, rates could still move lower, however, given that the futures market is pricing in a 79.3% probability of a Bank of Canada (BoC) rate-cut at the October 2020 BoC meeting. Therefore, there may be a more opportune time for Canada to issue a 20-year government bond in the near future. Canada previously issued 20-year bonds like our southern counterparts, but abandoned them in 1990 [6]. Researchers, however, do not agree that Canada will or should follow suit on this latest development. Mark Chandler, Head of Fixed Income Research at Royal Bank of Canada suggests that instead Canada should increase the frequency of its 10 and 30 year bonds instead [6].

What Does All This Mean for an Investor?

For a retail or institutional investor, the 20-year U.S. Treasury allows for increased optionality when exploring risk-free, long-duration securities. The implied yield for the 20-year Treasury is only a few single-digit base points lower than that of the 30-year Treasury, with a lower time to maturity, offering better time-value. Liability-driven investment firms like pension plans and insurance companies will likely benefit from this increased optionality given their need to match maturity duration with the income needs of their clients. For a risk averse retail investor, this change may be welcomed, but it is unlikely to weigh on the investment decision-making of a more risk tolerant or aggressive investor.

[1] https://www.bloomberg.com/news/articles/2020-01-16/u-s-to-issue-20-year-bond-in-early-2020-to-finance-rising-debt
[2] https://uk.reuters.com/article/us-usa-bonds-twenty/investors-expect-strong-demand-for-20-year-treasuries-idUKKBN1ZG200
[3] https://thebalance.com/current-u-s-federal-government-spending-3305763
[4] https://www.bloomberg.com/news/articles/2020-01-24/mnuchin-sees-20-year-bonds-extending-average-treasury-maturity
[5] https://www.bloomberg.com/news/articles/2020-01-22/treasury-s-20-year-bond-opens-a-chasm-in-supply-outlooks
[6] https://www.bloomberg.com/news/articles/2020-01-22/canada-should-follow-u-s-plans-to-issue-20-year-bonds-slc-says

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The Canadian/United States Market Valuation is worrisome, but not cause for panic

By Matthew Unrau, Market Research Analyst

The recent surge in the U.S. equities market has investors swarming to get their share of the upswing. Not only is the S&P 500 up 15% in the last 3 months, but this is just a small part of the 10-year bull run that has nearly quadrupled the index. After this unprecedented streak, however, the index seems highly overvalued, which might warrant a retraction in the near future. Canada's market is somewhat overvalued as well, while developing markets look more promising in 2020.

What is a Market Valuation?

The price of indices representing equity markets are controlled by many different factors. Each stock in the index is individually priced and all together they form the index. Stocks are influenced by many factors: corporate earnings, equity research recommendations, momentum, takeover rumours and speculation, changing economic factors (GDP, inflation rates, unemployment rates, interest rates), and geopolitics to name a few. The bottom line is that a stock's market price is not the same as its intrinsic value.

Intrinsic Value: A measure of how much a share in a company is worth based on expected future cash flows for the company and comparison to peers.

One can compare the market value of the stock to the intrinsic value to determine if the stock is overvalued, undervalued or fairly valued. The same can be done for indices, and this practice is an important tool in predicting future market movements. When an index is priced higher than it is intrinsically worth, it is considered overvalued and could lead to a market correction or a bear market. When an index is priced lower than its intrinsic value, it is considered undervalued and could lead to a bull market in the future.

Bull Market: The condition of a financial market of a group of securities in which prices are rising or are expected to rise. Bear Market: A condition in which securities prices fall 20% or more from recent highs amid widespread pessimism and negative investor sentiment." [1]

Valuing the Global Market – Buffett Indicator

The first question you may have is 'How does someone evaluate a market and determine if it is priced too high or low?' One metric many professionals use is the 'Buffett Indicator' named after investor mogul Warren Buffett. He describes this as *"probably the best single measure of where valuations stand at any given moment."* [2] The Buffett Indicator is the ratio of the Total Market Capitalization (TMC) of a country's equity markets over the country's Gross Domestic Product (GDP).

TMC: The total market value of all outstanding stocks in a country. GDP: The total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. [3]

The analysis of the Buffett Indicator goes as follows; a market with a ratio of TMC/GDP of 50% or less is listed as significantly undervalued. A market with a ratio between 50% and 75% is modestly undervalued. A market with a ratio between 75% and 90% is fairly valued. A market with a ratio between 90% and 115% is modestly overvalued. Finally, any market with a ratio above 115% is significantly overvalued. [4]

Buffett Indicator	Market Valuation
< 50%	Significantly Undervalued
50% - 75%	Modestly Undervalued
75% - 90%	Fairly Valued
90% - 115%	Modestly Overvalued
> 115%	Significantly Overvalued

Figure 1: Buffett Indicator vs Market Valuation

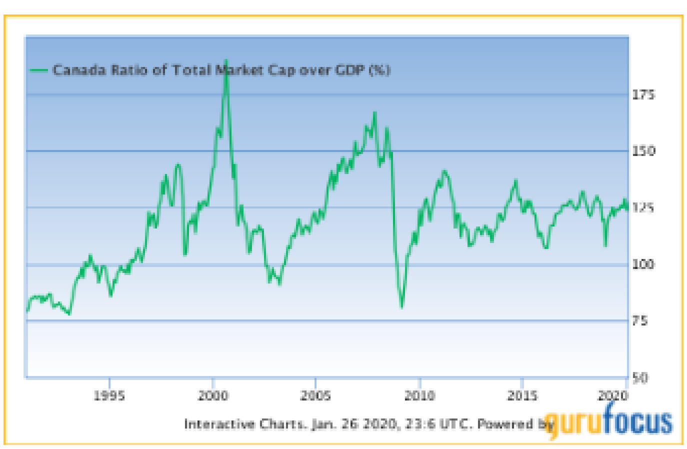
The Total Market Capitalization of the United States is represented by the Wilshire 5000 Total Market Index or Wilshire 5000 for short. The chart below on the left shows the relationship between U.S. GDP and the Wilshire 5000 over the last 40 years. The chart on the right shows the Buffett Indicator for the United States as a ratio of the Wilshire 5000 and U.S. GDP over the same period of time. [5]

Sources: GuruFocus

Clearly, the growth of the Wilshire Total Market Index outpaces the growth of the U.S. GDP significantly in the last 5 years creating a significantly overvalued market. Moreover, looking at historical values, the last time the U.S. Buffett Indicator eclipsed 150% was the 2000 Dot.com bubble when equity markets experienced considerable pullbacks from their highs.

Domestically, Canada’s Buffett Indicator has remained relatively stable over the last 10 years. The current ratio of 126%, however, still suggests the market is moderately overvalued. This raises moderate concern for a market pullback but is not as severe as the figure in the United States. [6]

Looking at a developing market, China’s Buffett Indicator signifies that the Chinese market is highly undervalued. The current TMC/GDP ratio of 40% could indicate that there is room for future outperformance in the Chinese equity market. [7]



Sources: GuruFocus

Valuing the Market – Price Ratios

The value of a stock rises and falls in large part due to the performance of a company. Suppose Company A releases a surprise increase in its quarterly or annual earnings. Often times, the stock price will follow accordingly by reflecting a higher intrinsic and or market value. On the contrary, if the earnings deteriorate, the company's stock price will likely fall in-step to reflect the new fundamentals of the business. These fundamentals are calculated and analyzed in a variety of ways, but most commonly using the Price to Earnings ratio (P/E).

Price to Earnings ratio: Calculated by taking the price of a company's stock and dividing by the Earnings per share. Earnings per share is the net income of a company divided by the number of outstanding shares. A high P/E ratio could mean that the stock is overvalued and a low P/E ratio could mean that the stock is undervalued. The historical average of the P/E ratio in the S&P 500 index is 15.

In the case of the recent market melt-up, the price movement in the S&P 500 index is not completely justified by the forward earnings per share (EPS) this past year.

Forward EPS: Estimated EPS for a company's next four quarters, taken as an aggregate consensus figure from the forecasts of top equity research analysts.

Melt-up: A dramatic unexpected improvement in an investment, driven by investors with FOMO (fear of missing out), rather than economic growth.

Looking at the graph below, a clear dislocation is most prominent at the start of 2019. The forward EPS has only increased slightly this past year, but the forward P/E ratio has increased from below 15x to over 18x (Figure 4). Since the earnings remain unchanged but the P/E ratio increased, share prices were not driven up by an improvement in earnings or outlook, rather, the index has become more expensive through P/E multiple expansion. The current price-to-earnings ratio is at 18.4x, which is hitting a level the S&P 500 index has not seen since 2002. [8] Evidently, the U.S. Equity Market is overvalued without any real justification for the recent growth in the price of the index.

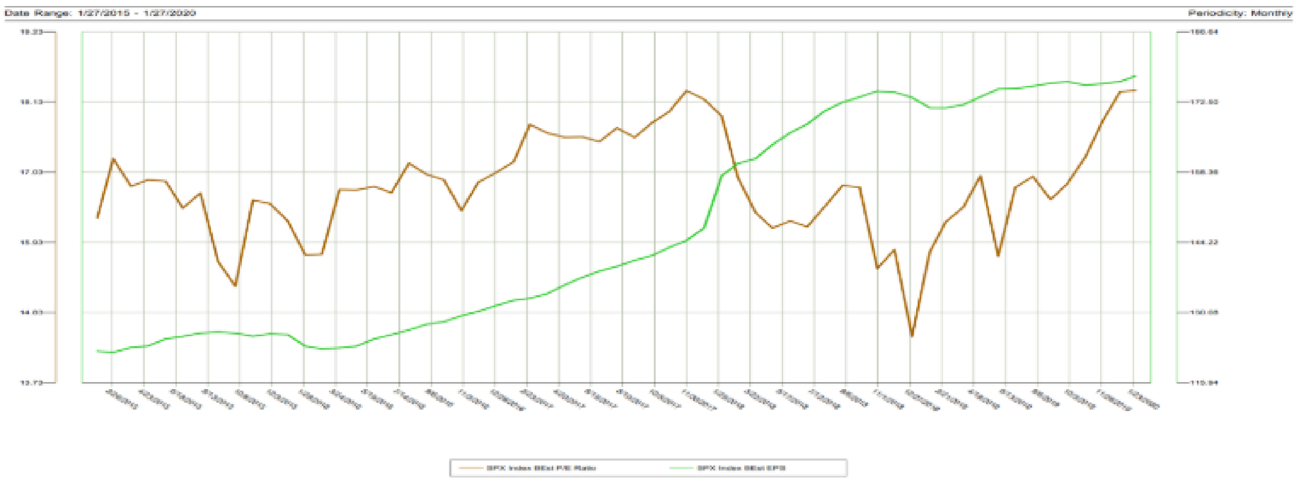


Figure 4: S&P 500 Index Forward P/E (red line) vs Forward EPS (green line)   Sources: GuruFocus

The graph below is of the S&P/TSX Composite Index comparison between its forward P/E ratio and forward EPS. Since 2019, the P/E ratio has expanded from 13x to 15x, which is below the rate of expansion seen in the U.S. market. It should also be noted that this is the largest discount between the S&P/TSX Composite and the S&P 500 since the 2001 U.S. Recession. [9] A more concerning fact, however, is that forward EPS is indicating signs of an economic slowdown as recent earnings growth has been subdued. The current forward P/E multiple of 15x compares to a 10 year average of 14.8x for the S&P/TSX Composite Index, which indicates that our equity market is closer to fair value than our American counterparts.

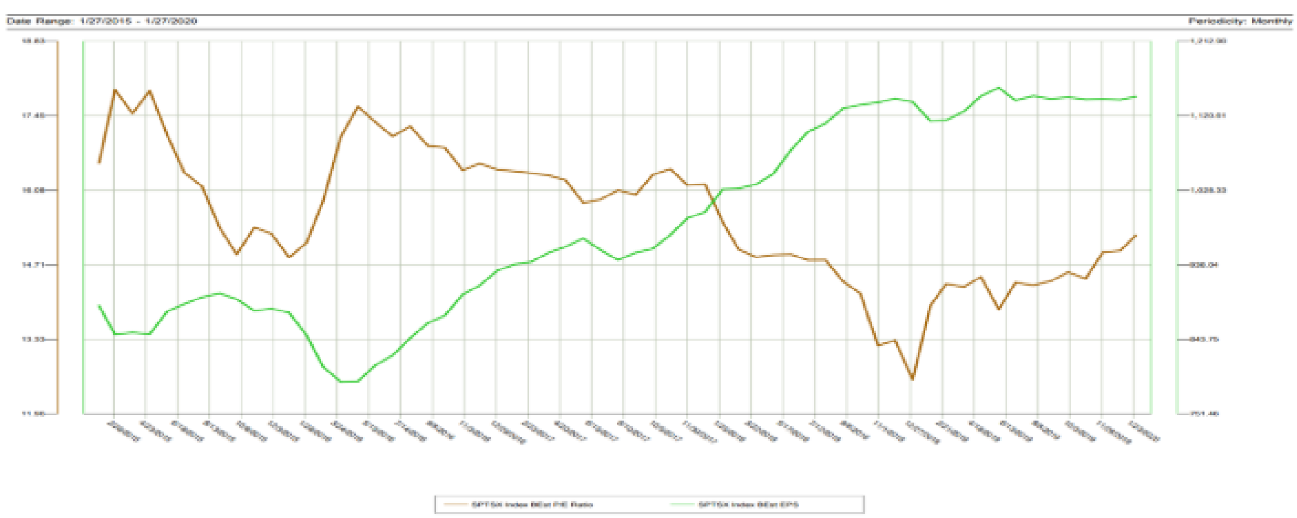


Figure 5: S&P/TSX Composite Index Forward P/E (red line) vs Forward EPS (green line)   Sources: GuruFocus

Developing Markets Indices could be primed for immense performance in 2020. One of these markets is China, represented by the Shanghai Stock Exchange (SSE). Over the past year, its Forward EPS rose faster than the price of the market, evident in the rising EPS and falling P/E ratios of the graph below. The current forward P/E ratio is only 10.6x, significantly under the historical average of 16x. This is attractive to investors, as a reversion to the mean P/E ratio of 16x will increase the price of the index.

Overall, rising earnings and an undervalued index are two promising signs for the Chinese market going forward. The National Bank of Canada predicts that the strongest EPS growth over the next 12 months will come from Developing Markets such as China, at 14.8%. [10]

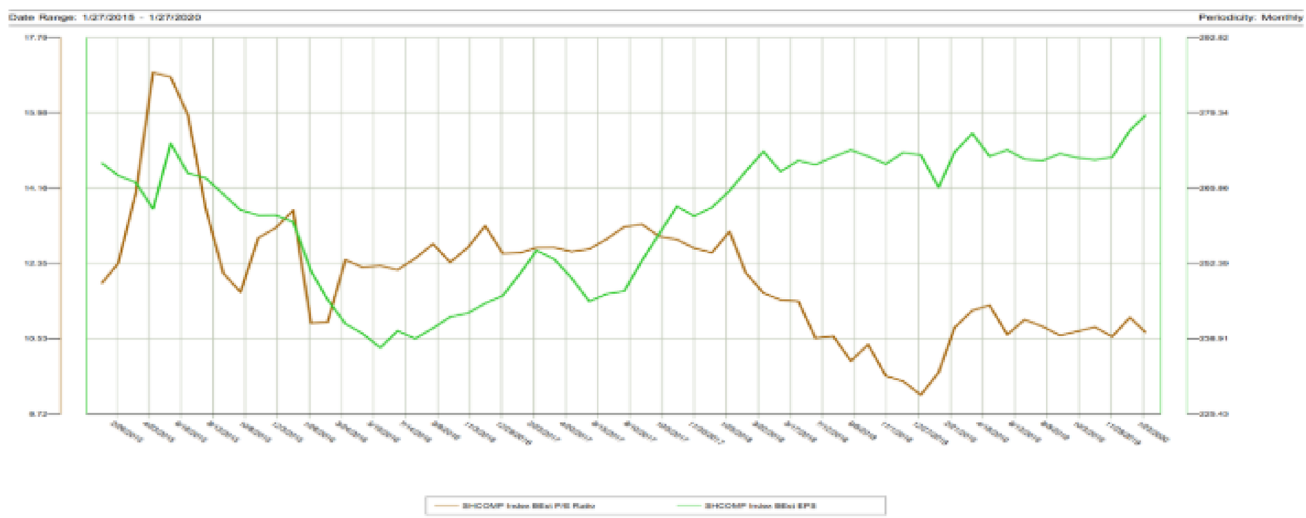


Figure 6: Shanghai Composite Index Forward P/E (red line) vs Forward EPS (green line)   Sources: GuruFocus

What does this mean for the U.S., Canadian and other Markets?

The United States is experiencing an equity market melt-up similar to the one that occurred at the start of the millennium. The equity market seems to be in a euphoric state with the recent signing of USMCA and the completion of a Phase 1 trade deal with China. Amid an economic slowdown, however, it is hard to justify the significant price performance of the market.

Long-time bear David Rosenberg believes a recession is coming despite decreasing unemployment rates, easing trade tensions and record-breaking stock markets in North America. During an interview at Bloomberg's Toronto office Rosenberg stated, "If things are so great, why did the Federal Reserve (Fed) have to cut rates last year? If things are so great, why did the Fed have to embark on QE4. That we're not supposed to call QE4?" [11]. What Rosenberg refers to as QE4, is the fourth round of quantitative easing established by the Federal Reserve Bank. This is when the Fed injected $400 billion into the money markets to alleviate the overnight lending rates spike in October 2019. [12]

Quantitative Easing: An expansion of the open market conditions of a country's central bank. The country's central bank buys back mortgage-backed securities and treasuries from its banks to increase liquidity in the market. The purpose is to inject money into the market lowering interest rates and sparking economic spending.

The melt-up is a "bull market in financial engineering," says Rosenberg, produced through the repurchasing of Treasury bills in October, interest rate cuts, corporate buybacks, and a tax overhaul. While most economists see only a 30% of a 2020 recession in the United States, Rosenberg says the retreat in consumer spending on restaurants, movies, and other luxuries are signs of the slowdown and could spark a recession soon. [13]

In the Canadian market, a recession is not expected to occur in 2020 despite the earnings slowdown and some uncertainty in the U.S. market. Brett House, Vice President & Deputy Chief Economist at Scotiabank says, "Going into 2020, we think it's going to be another year where the Canadian Economy performs in kind of a 'meh' sort of way. On the other hand, it's not going to be the long-feared recession that a lot of headlines have pointed to either." [14]

The central bank continues to keep its interest rate at 1.75%, but Bank of Canada Governor, Stephen Poloz, says the door is open for interest cuts in the near future if the economic slowdown persists. [15]

Emerging Markets are primed for growth in 2020. Central banks in Malaysia, Indonesia and Nigeria have kept their benchmark interest rates unchanged, showing signals of a strong economy that is ready to grow.

Jim McCormick of NatWest Markets recently stated that, "Emerging Markets, in particular currencies and equities, are in a sweet spot. We've got stabilization in manufacturing, stabilization in China and global central banks pre-committing to never raising rates again." [16] The wake of the U.S.-China trade agreement has lifted some of the damper on China's economy, allowing for a more optimistic 2020.

Where to go in the market?

In conclusion, even though the U.S. market is showing red flags, there is no certainty that it will retrace anytime soon. The truth is, overvalued markets can last longer than they are expected to and timing the market is extremely difficult, if not impossible. An equity market retracement or a recession is not guaranteed to happen anytime soon, however, eventually a reversion to the mean is likely to take place. I will finish with two investing possibilities for 2020; emerging markets and gold.

Equity market valuation in emerging and developing markets compared to the United States or Canada is highly attractive and difficult to ignore. The central banks of these markets are showing a willingness to provide accommodating monetary policy, and the projected EPS growth is very attractive for investors.

Gold had a great bounce back year in 2019 rising 20%. Gold prices have typically had a weak inverse correlation with interest rates fluctuations. With economic slowdown occurring in the United States, Canada and many EU countries, gold is what Rosenberg describes as the closest thing to a no-brainer. [17] In addition, during a press conference in Davos, U.S. President Donald Trump spoke highly of negative interest rates, consequently pushing the Fed to adopt a similar policy. [18] This is a bullish signal for gold, as if interest rates are cut, gold could rise. This scenario is far from certain, however, as the Fed has a mandate of independence from political interference.

[1] https://www.investopedia.com/terms/b/bearmarket.asp
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The Canadian Energy Sector: Examining past and present developments and the road ahead

By Simon Wei and Nawazish Piracha, Market Research Analyst

Energy's importance to the Canadian economy

Energy has been a pillar to growth in Canada's economy since the early 1900s. In 2018, the Canadian energy sector's nominal GDP contribution was 11.1% of our total, or about $230 billion [1]. Alberta itself contributed a third ($71.5 million) of their GDP to Canada's nominal GDP solely in the energy industry. In addition, Canada is ranked 6th in the world for energy production [2]. Looking back at the past 10 years, the amount of primary energy produced by Canada has grown by 18% - in rhythm with the world average of 19% [2]. With substantial growth in production, there should generally be equivalent growth in employment to support production capacity. In fact, as of 2018, Canada's energy sector employed 820,000 individuals from the labour force, which represents about 4.4% of the country's total[2]. As shown, the energy sector plays an important role in Canada's economy and accounts for a sizeable contribution to the GDP.

Dependence on the U.S. for exporting crude oil and natural gas

Canada has a deep dependence on the United States for exporting energy products - specifically crude oil and natural gas. Canada exports approximately 84% of our crude oil and 46% of our natural gas production respectively [2].

Crude Oil: A naturally occurring, unrefined form of fossil fuel. It is an essential raw material that can be further refined to jet fuel, diesel and gasoline.

Natural Gas: A natural resource that is found deep inside the earth like crude oil. Throughout the processing of natural gas, propane, butane, methane, nitrogen can all be extracted.

With an average of 65% of oil and gas exports going to the U.S., it is evident that the Canadian energy sector is highly dependent on the United States.

Crude Oil Crash

The price of crude oil drastically plummeted in 2014 and 2015 as seen on Figure 1. This crash was partly a result of OPEC’s (Organization of Petroleum Exporting Countries) refusal to decrease crude oil production, causing an excess supply of oil in global markets.

OPEC: A group containing 14 of the world's major oil exporting nations, where their aim is to regulate the supply of oil and set the price on the world market.

The increase supply of crude by OPEC nations had immense repercussions for the price of crude oil, where the price per barrel during 2014 to 2016 fell from $95 to $26 in a short span of 2 years [3].

Figure 1: Price of Canadian Oil per Barrel

Another pressing reason as to why crude oil prices decreased in 2014/2015 was the strength of the U.S. dollar. Historically, the price of the U.S. dollar has had a moderate inverse correlation to the price of oil. This relation can be seen by the price of an oil barrel being denominated in USD around the world; thus, with an increase in the price of the dollar, you are able to buy additional barrels of oil - simply due to the appreciation of the U.S. dollar.

Ultimately, continued strength in USD results in a decrease in the demand in oil - causing a drop in the price. This inverse relationship occurred in 2014/2015 and can be seen in Figure 2.

Figure 2: Relationship Between US Dollar and Price of Crude Oil

The Issue Now

Following the crash of crude oil prices, the Canadian energy sector's market capitalization weakened considerably as the fundamentals of companies deteriorated (seen on Figure 3). The road to recovery for the sector can be seen on Figure 3 where we compare the TSX Composite Index with TSX Composite energy sector Index.

TSX Composite Index: Comprises of 70% of the total market capitalization in the Toronto Stock Exchange and is seen as the main Canadian benchmark index.

We can see that the TSX energy sector has lagged the TSX Composite since the decrease in oil prices in 2015. Looking at Figure 3, throughout the past 4 years, TSX energy sector has underperformed the TSX Composite by a low of 7% to a high of 25%. We have never seen the TSX energy sector perform this poorly on a decade basis other than the 1980s, which is due to energy companies exhibiting poor fundamentals and negative outlooks for growth.

It is also the first time since the 1950s that the Canadian energy sector has underperformed the broader index for four consecutive years (2016- 2020). This poor equity performance is reflected via the TSX energy sector annual equity return over the past 10 years to be averaged at a mere 3%, which is only about a third of that of the TSX [4].

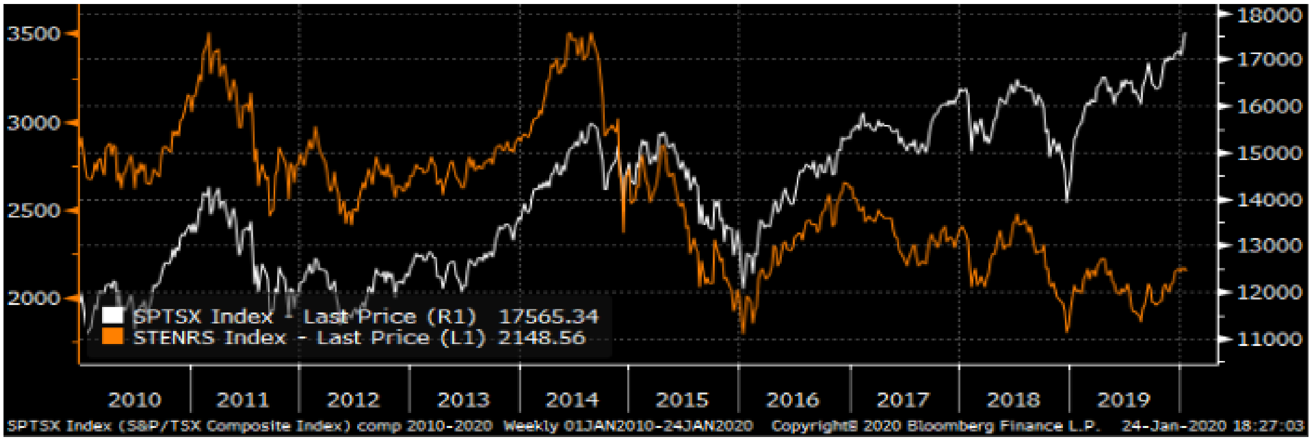

Figure 3: Comparison between broader TSX and TSX Energy Sector

The current issue with Canadian oil production is the lack of capacity to transport oil to consumers. With Canada being the world's third-largest reserves of crude oil, we lack the capacity to ship all of our production to oil refineries in the U.S. Midwest and Gulf Coast [5].

Oil Refineries: Production facilities focused on converting raw crude oil into products of value (gasoline and diesel).

With three major pipeline projects having been stalled for various reasons (Trans-Mountain Pipeline, Keystone XL, Line 3), producers are looking at more costly alternative transportation - like rail shipments - to move their products when storage tanks throughout Alberta are close to full [6]. Currently, Alberta is facing an artic blast bringing temperatures down to -30 degrees Celsius. As a result of the cold spell, producers have been required to blend in a lighter crude, thereby decreasing the density that can be shipped by pipelines. Furthermore, trains that are shipping crude oil out of Alberta are forced to move slower due to the cold weather [6]. The current situation of stalled pipelines and near max capacity in storage tanks will not likely ease itself in the near future. From oil spills, to legal battles, to the price of crude oil, Canadian oil producers will be prone to various kinds of shocks.

Affected Members

Husky Energy (HSE) is a Canadian energy company mainly focusing on the refinery of crude oil. Following the crash of the global oil market in 2014/2015 Husky Energy's earnings never fully recovered, which is reflected in their share price. Their share price performance is shown in Figure 4 where we see Husky Energy at an all time low in the past decade due to lower oil prices that have resulted in the company having a weaker free cash flow profile in the past few years [14].

In comparison, we can look at another Canadian energy company called Enbridge (ENB). Enbridge focuses mainly on the production and transportation of oil through pipelines. We can see that Enbridge share price have stabilized and rebounded from the oil crash in 2015 by looking at Figure 4.

Figure 4: Comparison between Husky Energy and Enbridge

While both Husky and Enbridge are members of the Canadian energy sector, the roles they play within the market and their exposure to the price of oil is quite different. With Enbridge's financials tied to the construction of energy infrastructure and the transportation of oil, they are less exposed to the price of oil in comparison to Husky, who focuses on the exploration and refining of crude oil. Transportation capacity challenges impact refineries more due to their need to export raw materials to facilities for processing.

With the current challenges of exporting oil out of Alberta, Husky has not been able to refine crude oil at an optimal rate. In contrast, Enbridge is an energy service provider specifically focused on the construction of pipelines, thus, when crude oil storage tanks are nearing full capacity, Enbridge's services are in full demand.

By comparing Husky and Enbridge, we can see that even though the energy sector has performed poorly in aggregate, there are still some companies benefiting from recent developments.

Effects on the Canadian Economy:

In Terms of GDP

Being an export-based economy that has prominent reserves of natural resources, the energy sector plays an important role in the Canadian economy with mineral fuels including oil accounting for around 22% of total exports [8].

A significant measure of the contribution of crude oil to the country's GDP is the "oil-rent" value.

Oil-rent value: The ratio of the market value of oil produced net of the costs of production to the country's GDP.

Canada's oil-rent value is close to 4%, meaning only 4% of Canada's total GDP is tied to oil production. This is quite low compared to other oil exporting nations like Saudi Arabia, whose oil-rent value is 43.1% [9].

This indicates that despite being one of the largest oil producers globally, a drastic increase or decrease in the price of oil will not translate into an equally intense effect on GDP.

This also means that the weakness in the energy sector, although harmful for the economy, does not pose a serious threat.

In Terms of Currency

The price of oil is strongly correlated with the value of the Canadian dollar. The drastic downturn in crude oil prices that occurred in 2014/2015 resulted in a decrease in the supply of U.S. dollars flowing into the country. Hence, this means that the value of the Canadian dollar fell in comparison to the U.S. dollar by 15% [10].

The Bank of Canada (BoC) then intervened by lowering interest rates to support the economy, which also contributed to weakness in the loonie.

In Terms of Employment

The previous oil price fluctuations also resulted in employment changes in primary oil producing regions such as Alberta. Over the five-year period of 2014 to 2019 the Canadian oil & gas sector saw a 23% drop in employment with workers either removed or transferred to other industries [11].

While Alberta's unemployment rate (7.0%) seems to have stabilized from a high of 9.1% in 2016, employment in natural resources industries continues to feel the repercussions of a post-2014 oil market as seen in Figure 5 [12].

Figure 5: Changes in Alberta's natural resources industries employment vs overall employment [13]

[1] https://www.ceicdata.com/en/indicator/canada/crude-oil-exports
[2] https://www.nrcan.gc.ca/science-data/data-analysis/energy-data-analysis/energy-facts/energy-and-economy/20062
[3] https://www.thebalance.com/what-makes-oil-prices-so-high-3305654
[4] https://www.bnnbloomberg.ca/bmo-s-belski-humbled-after-nailing-forecast-for-canada-stocks-1.1367589
[5] https://www.bloomberg.com/news/articles/2020-01-10/canada-oil-sands-threatened-with-prices-reaching-grim-milestone
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