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# The Rapid Growth of the Global Gold Industry

By Corinne Li; Kritnoor Singh, Market Research Analysts

## Introduction

Gold has always been one of the most outperforming assets in the commodities sector.[1] It's been a valuable commodity for centuries and can be used for a variety of things such as jewelry, electronics, dentistry, etc. It is usually regarded as a safe investment and is often used by investors as a hedge against inflation.[2] Recently, we have seen a sharp rise in the price of gold. After a slide in March 2021, gold prices have recovered more than half the decline. The article is focused on assessing how long can this rise continue.

In the year 2020, the global market for gold was estimated to be 4.4 thousand tonnes and is set to reach 5.2 thousand tonnes by 2027. The U.S gold market was estimated at 1.2 thousand tonnes in 2020. China, Germany, Japan, and Canada are some of the countries where the gold market is growing at an extremely rapid pace.[3]

From an investment point of view, SPDR Gold Shares ETF(GLD), Goldman Sachs physical gold ETFs(AMAU), iShares gold trust(IAU) are the most common ETFs and also the most common way to make an investment in gold. Apart from that, Barrick Gold(ABX), Newmont Mining(NEM), Goldcorp(GG), and AngloGold Ashanti(AU) are some of the most famous gold mining companies. [2]

The recent increase in the price of gold in the second quarter of 2021 has helped it recover from the decline it faced in March 2021. Prices went from \$1683 an ounce in March to almost \$1900 an ounce by the start of June. Rising inflation in the economy has caused investors to once again turn to Gold as a hedge against inflation. [4]. Despite the dramatic increase in prices, the Federal Reserve System believes the increase in gold prices to be a temporary rise. [5]



Figure 1: the stock of SPDR Gold shares



Figure 2: the stock of Goldman ETF

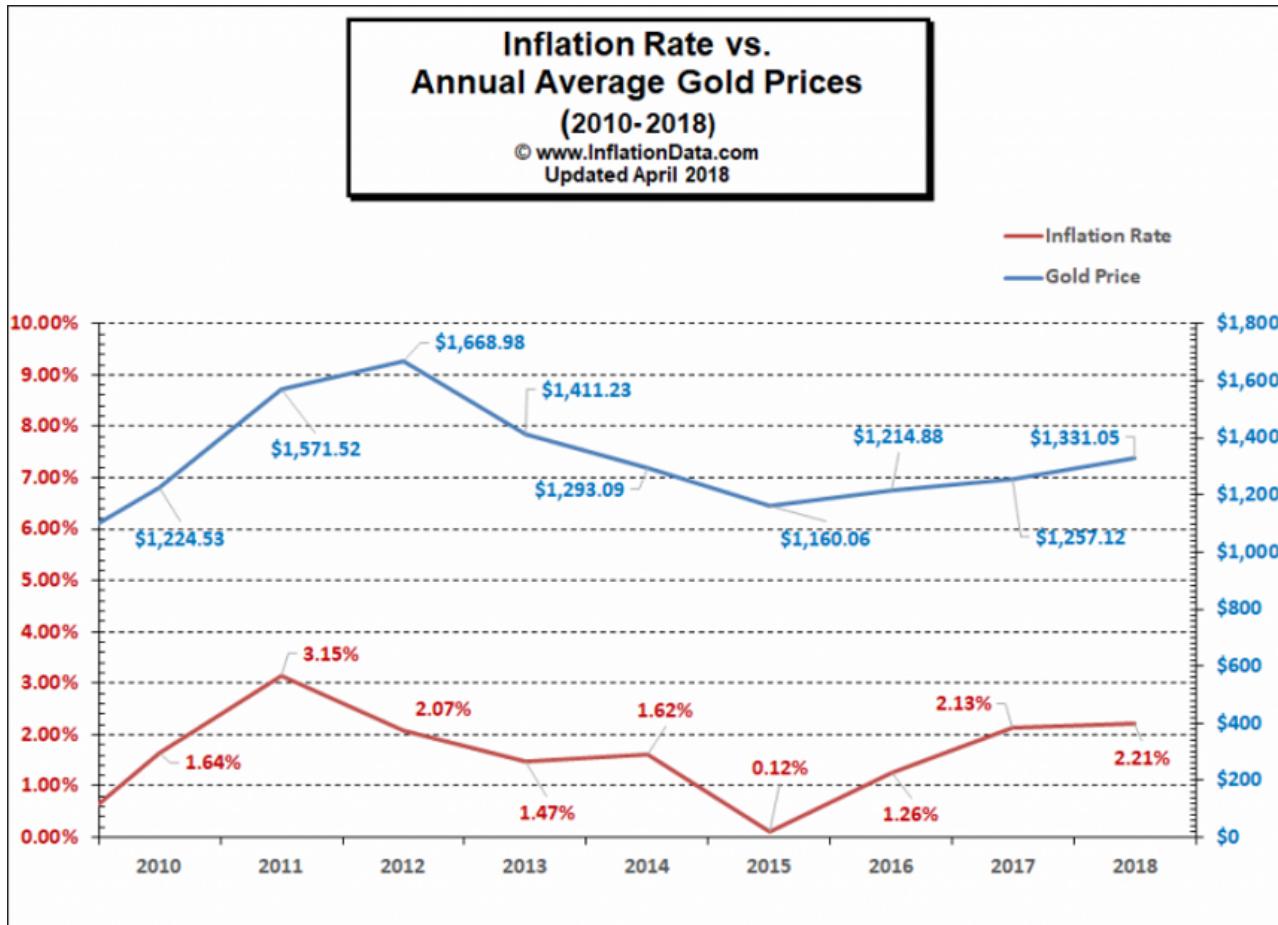


Figure 3: ishares

# Analysis

## The Rise of Gold Price and Inflation Rate

The recent rise in the gold price which almost erases its early 2021 loss [9] is repeatedly reported with the high U.S. inflation rate, suggesting that people are using gold as a hedging tool to eliminate the risk of increasing inflation rate [10]. A general trend after 1971's termination of gold-USD convertibility shows that the price of gold tends to increase when the inflation rate in the U.S. economy increases, but there are outliers. Looking at the recent 10-year comparison of the U.S. Inflation Rate vs. Annual Average Gold Prices, we can see that there are times (e.g. 2011-2012) when the U.S. inflation rate decreases, the price of gold still increases [11]. We want to emphasize that there is no direct evidence that supports or against that the high inflation rate causes a rise in the gold price. Instead of exploring the correlation between inflation rate and gold price, we want to see what is causing the current high inflation rate, and how the same factor is affecting the gold price.

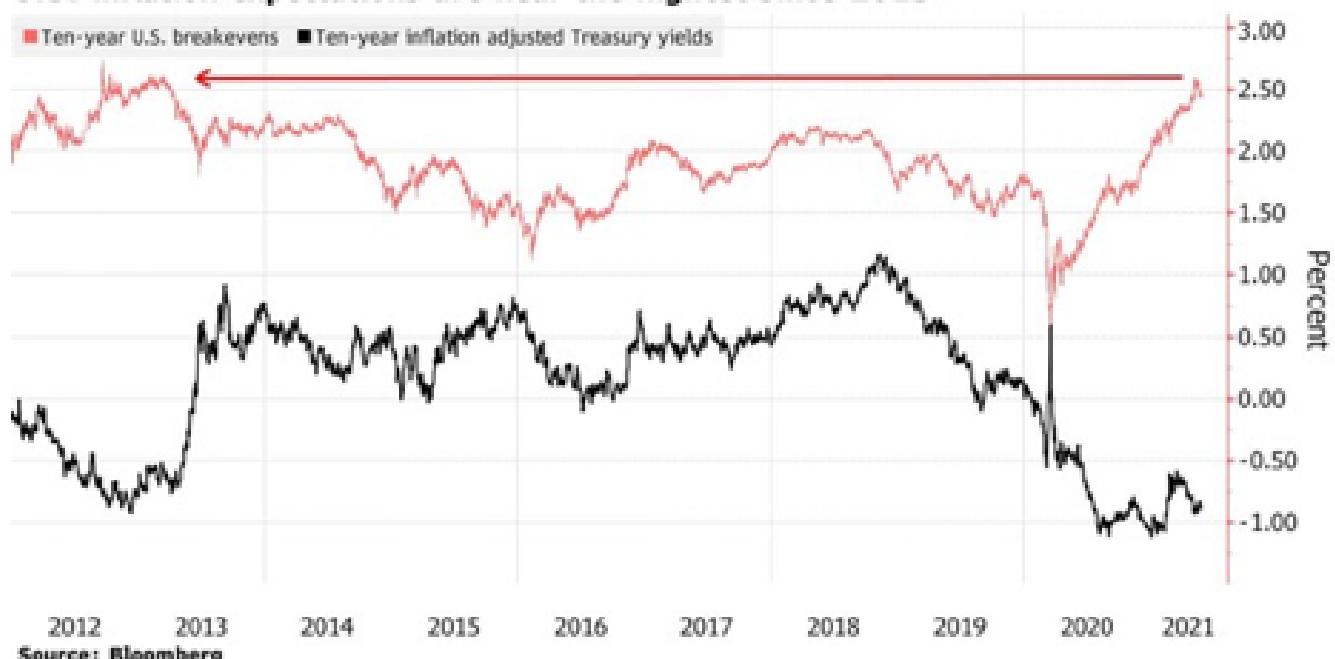


Source: InflationData.com

What is believed to be the main contributor to the current rising inflation rate is the U.S.'s loose monetary policy. Many U.S. dollars have been printed out and infused into the market recently and the Fed claims that the current inflationary pressure is temporary [9][5]. Some analysts and part of the Bond market, however, do not agree that the inflationary pressure is temporary. Diego Parrilla from Quadrige Igneo fund interprets the Fed's claim as that "the [US] central bank won't risk increasing interest rates to combat inflation for fear of pricking the enormous bubbles they created." [5] Part of the bond market also disagrees, as the long-term inflation expectations have risen to the highest since 2013 (chart shown below) [5]. When interest rate is low while the inflation rate is high, investors will likely not choose to invest their money in the Bond market, as the yields will be low. In a low-bond-yield environment, investors turn to alternatives like gold [12].

## Price Pressures

**U.S. inflation expectations are near the highest since 2013**



Source: Bloomberg.com

Other countries' central banks seem to worry about the U.S.'s loosen monetary policy too. Traditionally, central banks increase their holds on gold when they sense the inflationary pressures created by massive U.S. government spending. Several central banks (like Bank of Thailand, the central bank of Hungary and the central bank of India) have increased the amount of gold they hold [13], hence help the recent increase of gold price.

We may not be able to conclude that the high inflation rate is causing the rise of gold price, but the fear of persistent high inflation creates a good environment for gold investment.

## Observation on Bitcoin

An interesting chart (shown below) from Bloomberg shows that starting this year, the price of Bitcoin and the price of gold forms an inverse relationship. We may not attribute gold's initial loss to the sharp increase of Bitcoin price, but from a "safe haven" perspective, the sharp drop of Bitcoin price should have something to do with the rise of gold price. For some reason, people were treating Bitcoin as the new "safe haven" to hedge inflation [14]. Before inflation cools down, the price of Bitcoin cools down. Combining the fear of the continued high volatility of the cryptocurrency market with the fear of hyperinflation, gold again becomes the best investment to hedge risk (and fear). An anecdote here may explain this well: "fear of almost anything triggers gold [price] to rise." [15]

Currently, there is no empirical evidence that supports or against the statement that there exists a correlation between the price of Bitcoin and the price of gold. Bitcoin and gold are like different ends of a spectrum. Unlike commodities, Bitcoin does not have an intrinsic value and is affected too much by external factors such as public figures' opinions. To a certain degree, Bitcoin is not very friendly to non-institutional investors as it fluctuates too much in a short period. Gold, as a precious metal, has an intrinsic value due to its rareness and can always be used as a last resort to trade. In this sense, gold should be much better for investors who want to have a stable return in a long period, or for investors who just want to hedge the risk and fear of an unprecedented time.

## Different Drivers

Gold and bitcoin have moved almost inversely in 2021



Source: Bloomberg.com

# Conclusion

Not everyone agrees that the FED won't raise the interest rate anytime soon. Morgan Stanley's CEO predicts that the FED will raise the interest rate in early 2022 for signs of rising inflation [16]. When the interest rate is raised to fight inflation, more money will be put in the bank and less money will be spent in the gold market. The ever-changing situation of COVID-19 also casts uncertainty to the gold market. With more vaccines available globally, optimistic analysts think that the economy will rebound fast and fully. Money will then be diversified to different markets (like oil that relates to the travel industry). However, based on the factors we have mentioned above, we believe that gold price will stay at least stable if not rising. At an uncertain time, or even just for long-term investment, gold should always be considered as part of a diversified portfolio to hedge risk, and fear.

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# The Development of the Renewable Energy Adoption

By Philip Wardell; Ivan He; Market Research Analysts

Throughout the United States, there is a wide scale push to tackle the issue of climate change. One of the most talked about initiatives to combat climate change has been the desire to power the United States using renewable electricity. In fact, according to a 2020 Pew Research study, 77% of Americans believe it is important to develop alternative energy sources rather than producing more coal, oil and other fossil fuels. But can this be done by only building more renewable generation? At Berkshire Hathaway's 2020 Annual Meeting on May 1, 2021, Warren Buffett stressed the fact that "you can't close coal plants until you can get the electricity from where it is generated to the customer" [1]. This places electricity transmission infrastructure at the forefront of renewable energy adoption. This article will discuss the importance of U.S. transmission infrastructure in connecting remote renewable generation to population-dense cities, in addressing the intermittent nature of renewable energy, and in the adoption of electric vehicles (EVs). Additionally, President Biden's newly proposed Infrastructure Bill, which attempts to increase investment into electricity transmission infrastructure, as well as two stocks that have the potential to be strong plays in electricity transmission infrastructure will be discussed.

**Transmission Infrastructure Can Address Remoteness of Renewable Energy Generation**

Electricity transmission infrastructure operates at the center of the electrical grid, between generation and distribution. In order for electricity to be transported from where it is generated to the distribution facilities, powerful transmission infrastructure must be built. Historically, carbon-emitting electricity generation like coal have been built near high-density populations, requiring less transmission infrastructure to connect generation with distribution due to close proximity, and requiring relatively less land to operate [2]. In contrast, renewable energy is located most prevalently in specific areas across the U.S. (i.e. those with the hottest and longest exposure to the sun and the strongest wind patterns). Furthermore, both solar and wind generation require substantial land to generate large amounts of electricity (approximately 10 times as much land as coal-fired power plants) [3]. These two factors place a substantial amount of renewable generation away from high-density populations (i.e. cities in California and New York).

According to a recently published paper by WIRES, a transmission advocacy group, and London Economics International, an energy consulting firm, a contrast between existing transmission infrastructure and areas with dense renewable resources uncovered the need for substantial investment in infrastructure to be able to connect renewable resources with population-dense cities [4]. As seen in the figures below, there is inadequate transmission infrastructure where wind and solar resources are most abundant (mainly in the central U.S. and southwestern U.S.).

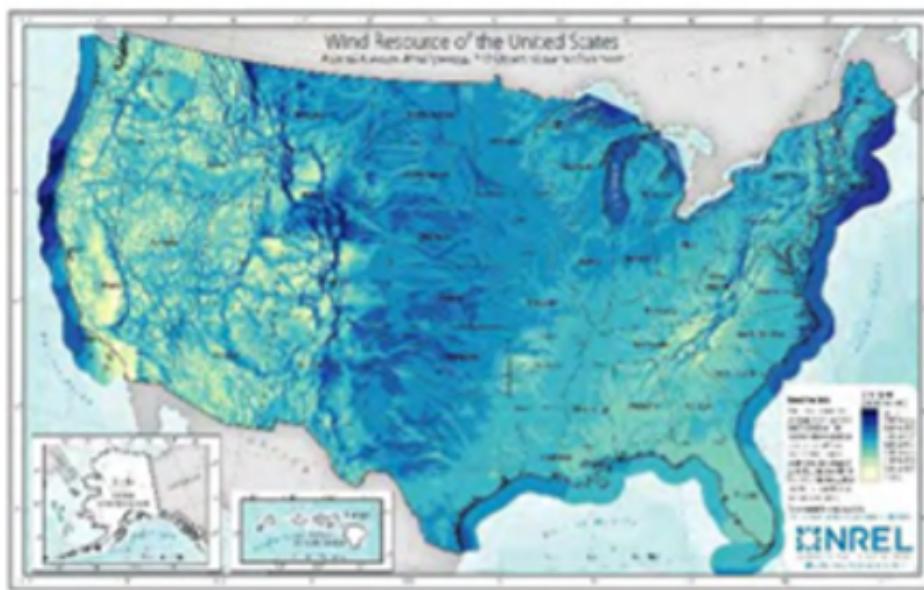
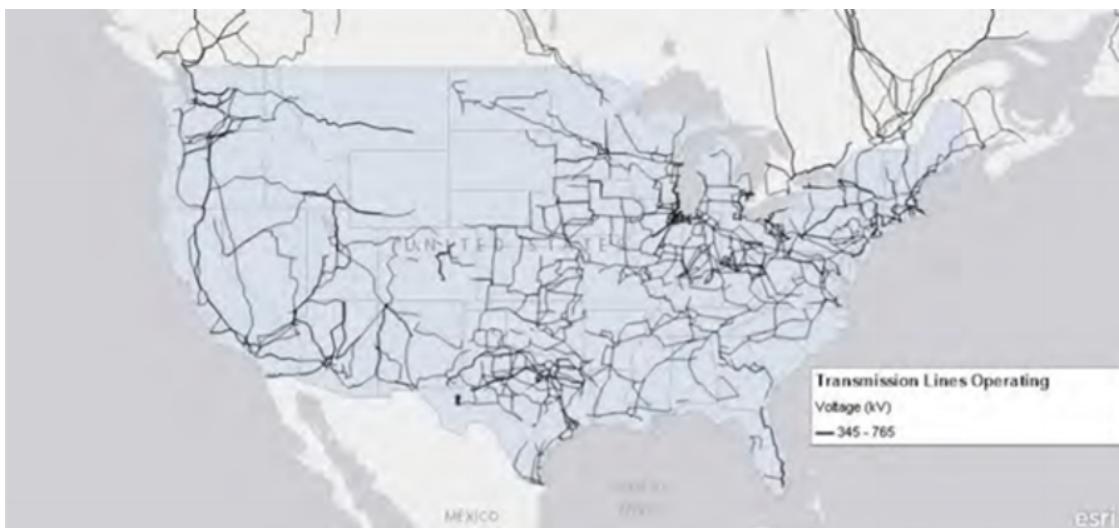


Figure 1: U.S. wind resources by wind speed [5]



Figure 2: U.S. solar resources by UV [6]



*Figure 3: U.S. Operating Transmission lines (345kV-765kV) [7]*

Several projects are either proposed or underway to try to address the remoteness issue of renewable energy. One such project is the Silverado Renewables Connection Project. The US\$1.5 billion Silverado Renewables Connections project was proposed in March 2021 by NextEra Energy's (NYSE:NEE) subsidiary GridLiance GP LLC to unlock 1,250 MW of renewable capacity by connecting existing transmission infrastructure to the geothermal rich areas of Nevada [8]. Another group of projects are expected to be proposed by Berkshire Hathaway Energy Inc., a subsidiary of Warren Buffet's Berkshire Hathaway (NYSE:BRK.B), which owns large utility companies such as PacifiCorp and Rocky Mountain Power. At Berkshire Hathaway Energy's 2021 Fixed Income Investor Update, it announced an investment of US\$13 billion in transmission infrastructure over the next 10 years, up from US\$5 billion invested over the prior 15 years with the purpose of providing "a conduit for increased renewable energy to be delivered" [9]. The recognition of the importance of transmission infrastructure is clearly evident to one of Wall Street's greatest investors.

## Intermittent Nature Renewable Energy

One of the major hindrances to renewable energy adoption is that renewable energy is intermittent in nature. Solar energy can only be generated when the sun is shining, while wind energy can only be generated if the wind is blowing. For example, passing clouds can reduce solar capacity by up to 70% [10]. Also, renewable energy generates power at differing levels throughout the day, depending on the time and weather conditions. This often results in curtailment of energy. That is, energy that is generated but that must be offloaded from the electrical grid due to insufficient transmission capacity. Increases in transmission infrastructure can help address this issue as it allows for more renewable energy to be transported from generation to distribution and helps alleviate significant losses of renewable energy that could have been used to offset the use of carbon-emitting generation.

The success of using transmission to combat the intermittent nature of renewable energy was seen most prevalently in Texas between 2007 to 2014 where wind curtailment rates went from 17% in 2009 to 0.5% in 2014 as a result of approximately US\$6.8 billion in transmission infrastructure investment [11].

## Transmission Infrastructure is Crucial for Electric Vehicles

Electrification is the process of transitioning from fossil fuel-based energy, such as natural gas, to electricity. One of the prime examples of electrification are EVs. The transition towards EVs is a crucial component in the fight against climate change and reducing emissions. Currently, less than 1% of vehicles on U.S. roads are electric [12]. However, there have been countless efforts from huge players like Tesla, GM, and Ford to move away from gasoline-powered vehicles and into EVs. With consumer attitudes evolving as well, the global EV market has geared towards tremendous growth in the next few years with an expected CAGR of 29% from 2021 to 2026 [13]. However, this increase in the demand of EVs could result in a 38% (1,782 TWh) increase in electricity consumption by 2050 [14]. In order to keep up with this consumption, a strong foundation of transmission infrastructure is required to transport renewable energy, which are located far away from the city, to charging stations in the city. However, the current state of transmission infrastructure in the United States makes it very difficult to satisfy future demand. Many transmission lines were built in the 1950s and 1960s with lifespans of 50 - 75 years [15]. The old infrastructure may not be able to handle the consumption requirements from EVs. Thus, investments into transmission infrastructure is crucial in overseeing the transition towards EVs.

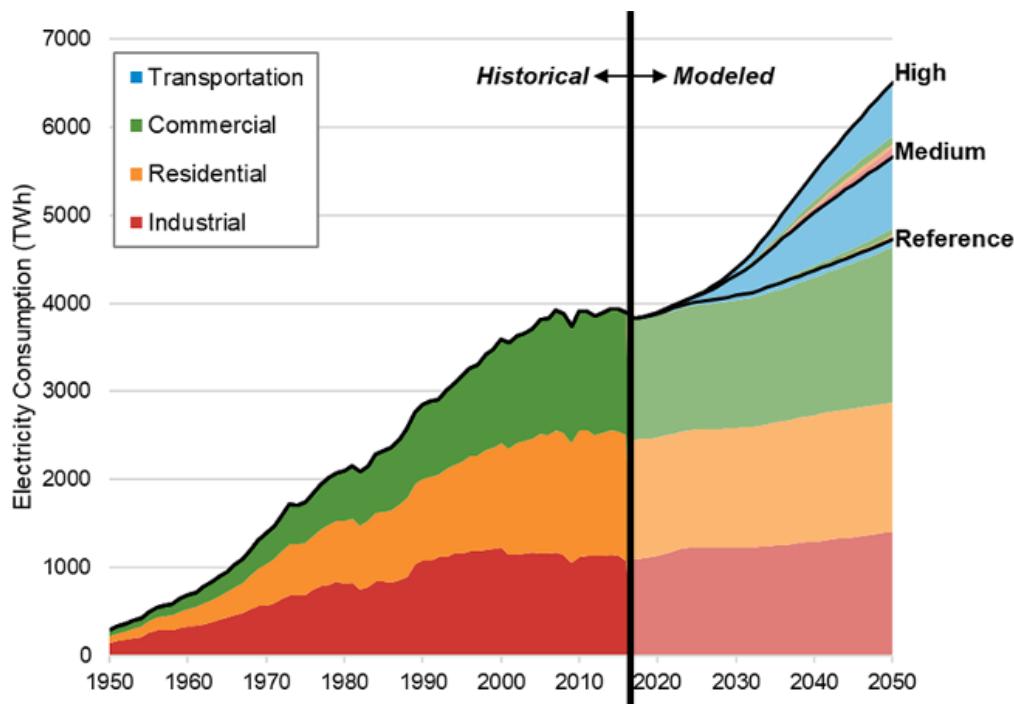


Figure 5: NREL Energy Consumption by Category [16]

# How Biden is Addressing the Issue with His Infrastructure Plan

On March 31, 2021, President Biden proposed his US\$2.3 trillion infrastructure plan that aims to improve aging infrastructure in the United States. This infrastructure plan would cost US\$2.3 trillion over 8 years and is expected to be funded by raising corporate taxes from 21% to 28% [17]. The plan is expected to take 15 years to be paid in full. Within the proposal, there are calls to invest US\$100 billion to replace and improve the electricity transmission infrastructure, which is an essential component in the widespread adoption of renewable energy. Furthermore, a study conducted by the Department of Energy found that power outages cost the United States up to US\$70 billion annually [18]. With this new investment, the U.S. is expected to be able to achieve reliability and resiliency within their electricity grid. This could prevent future outages, like the one that occurred in Texas in February 2021. Moreover, Biden's proposed plan includes a tax credit that incentivizes the construction of at least 20 GW transmission lines. Overall, these provisions from the Biden administration would encourage the advancement of a strong foundation, in preparation for the future of renewable energy.

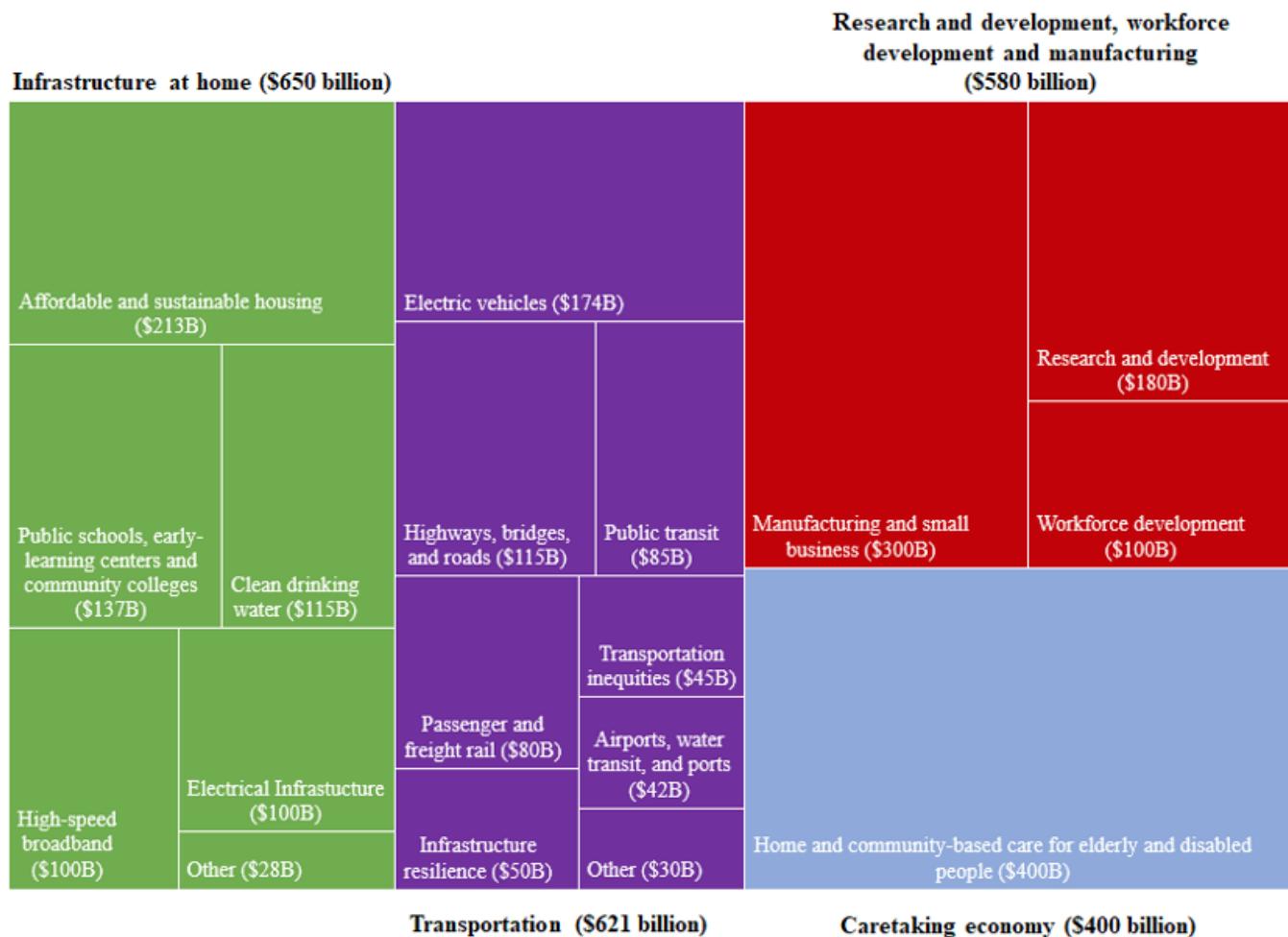


Figure 6: President Biden's proposed infrastructure plan [19]

# Potential Stocks to Benefit from Transmission Investment

Fortis (NYSE: FTS) is one of the largest regulated gas and electric utility companies in North America that will benefit from transmission infrastructure investments. Their subsidiary, ITC Holdings Corp., is a major player in the electricity transmission market in the U.S., with US\$1.74 billion in revenues for 2020 [20]. In April of 2021, ITC Holdings Corp. and The Canada Infrastructure Bank signed a deal to invest US\$1.7 billion in a transmission line under Lake Erie that connects Ontario to Pennsylvania. This project would allow for easy access of energy within both markets and would result in over US\$3 billion in cost savings over 30 years [21]. Furthermore, the project could reduce Ontario's GHG emission by 2-3 million per year with more access to clean energy, which will help in the fight against climate change [22]. FTS currently trades at US\$45.61 and has a dividend yield of 3.66%. Furthermore, the lack of major fluctuations situates FTS as a dividend stock that is primed to capture the upcoming demand for more electric transmission infrastructure.

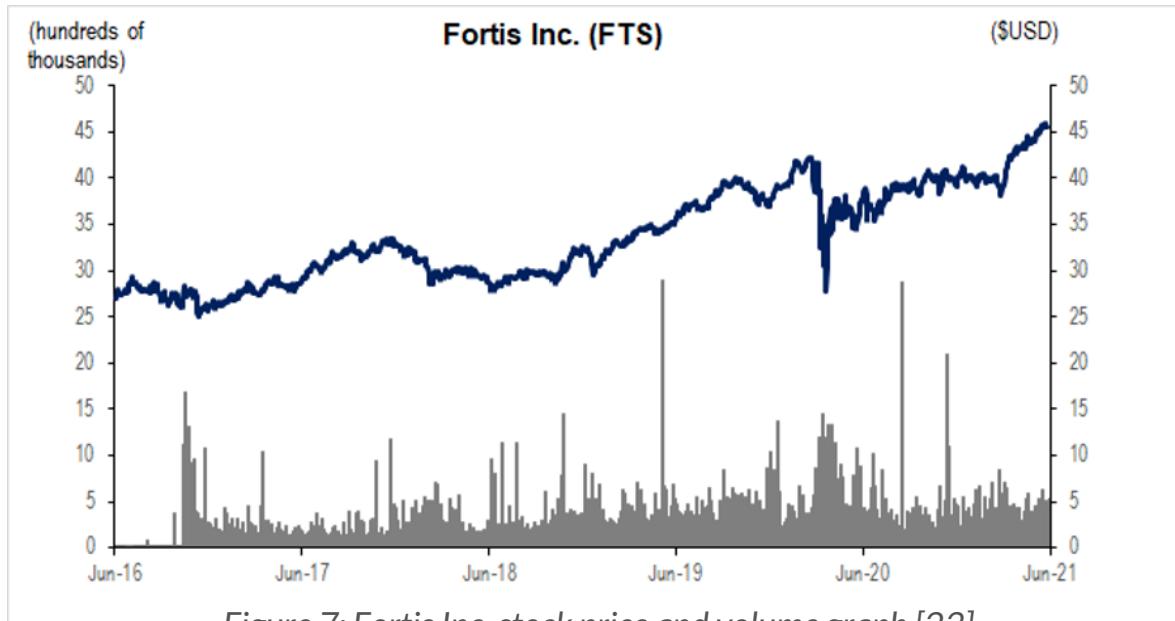
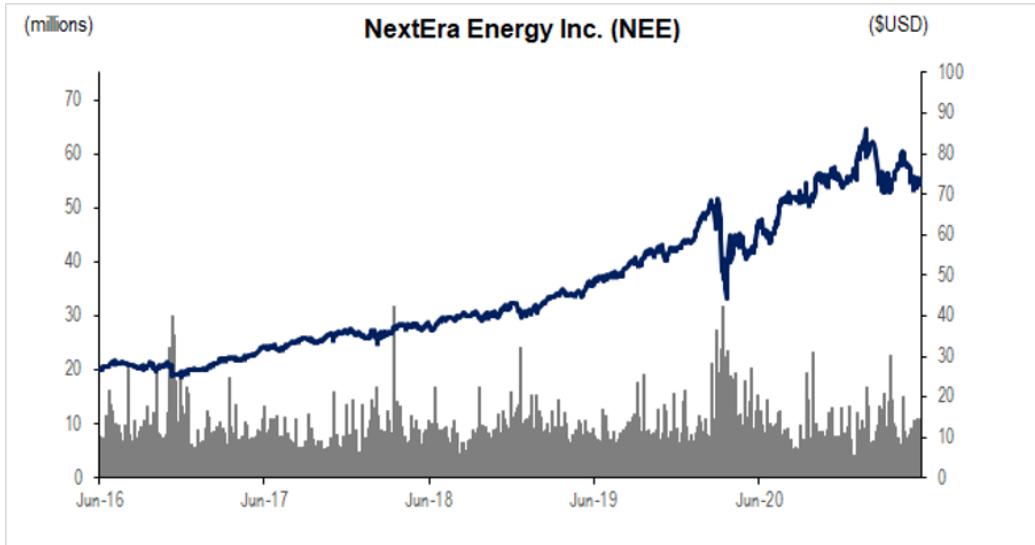


Figure 7: Fortis Inc. stock price and volume graph [23]

NextEra Energy (NYSE:NEE) is one of the largest electric power and energy infrastructure companies in North America and is a powerful player in the renewable energy industry. On September 29, 2020, NEE purchased GridLiance, which owns and operates three regulated transmission utilities, for US\$660 million, including assumption of US\$160 million of debt [24]. As mentioned earlier in the article, NEE, through the newly bought GridLiance, is already starting to propose large transmission projects to unlock renewable energy. NEE currently trades for US\$73.22 and has a dividend yield of 2.10%. Like FTS, NEE is situated strongly to capitalize on the transition towards renewable energy through electric transmission. Lastly, NEE's recent acquisition of GridLiance makes NEE an important player in the electric transmission industry.



*Figure 8: NextEra Energy stock price and volume graph [25]*

## Conclusion

As the popularity of renewable energy grows, pushed forward by environmental concerns and the adoption of EVs, there will be substantial need for transforming the transmission infrastructure in the U.S. Furthermore, recent major climate events such as the California wildfires and the Texas power outage are constant reminders of the essential role that electricity transmission plays in everyone's lives. The infrastructure package is only the first step in strengthening the U.S.'s transmission infrastructure to prepare for EVs. The next 10 years will be crucial for private investment to set up the infrastructure necessary for the great transition away from our traditional energy sources and towards more environmentally friendly sources of energy.

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# SPACs Investment

By Amisha Kaushal; Teresa Tan; Market Research Analysts

## SPAC Overview

Special Purpose Acquisition Companies (SPAC) have grown in popularity since 2020, despite being around for years. They are companies that are known as shell firms that provide an alternative way for a company to go public - compared to the traditional Initial Public Offering (IPO). SPAC's sole purpose is to acquire existing companies by raising capital. Since August 2020, more than 50 SPACs have been formed in the US raising \$21.5 billion [1]. If a SPAC is unable to complete the acquisition within two years, it is required to return the funds it had received from its investors [1]. SPAC is considered a preferred method for smaller firms as it has fewer restrictions involved in the process. According to SpacTrack.Net, the current most popular industries are Technology, FinTech, Cannabis and Energy, which are earning the most in revenue and are the largest in size [2].

With the push for economic growth and greater competition for companies, SPAC is one way that firms can remain competitive and go public. Going public allows the companies to raise capital, easily make acquisitions, further their growth and expansion, it provides liquidity for the shareholders, and greater prestige for the firms [1]. SPACs have had a moderate impact on the economy as they have allowed for greater competition, created more jobs, and are cheaper compared to the traditional IPO. They allow for more opportunities for smaller firms that cannot go through the timely process of going public or have insufficient funding to do so. The outlook on SPACs is viable and may continue to grow in the upcoming years due to its popularity, performance over time and demand.

## SPAC vs IPO vs PE Funds

Although SPAC is an IPO itself, it is slightly different from a traditional IPO. The traditional IPO takes a much longer time which ranges from "six to twelve months involving investment banks, underwriters and risk assessors" [3],

Alongside attracting potential investors, meetings with advisors and funding set aside. Compared to traditional IPOs, SPACs' process is much quicker and is under the guidance of the senior members of the SPAC management team who are experts in their field. The traditional IPO would involve a roadshow and the companies are aware of who they will be investing in unlike SPAC, where it is unknown until after the acquisition is complete [4]. Some companies will end up with high-quality investors while other companies will not; the companies rely solely on the sponsors to make the decision.

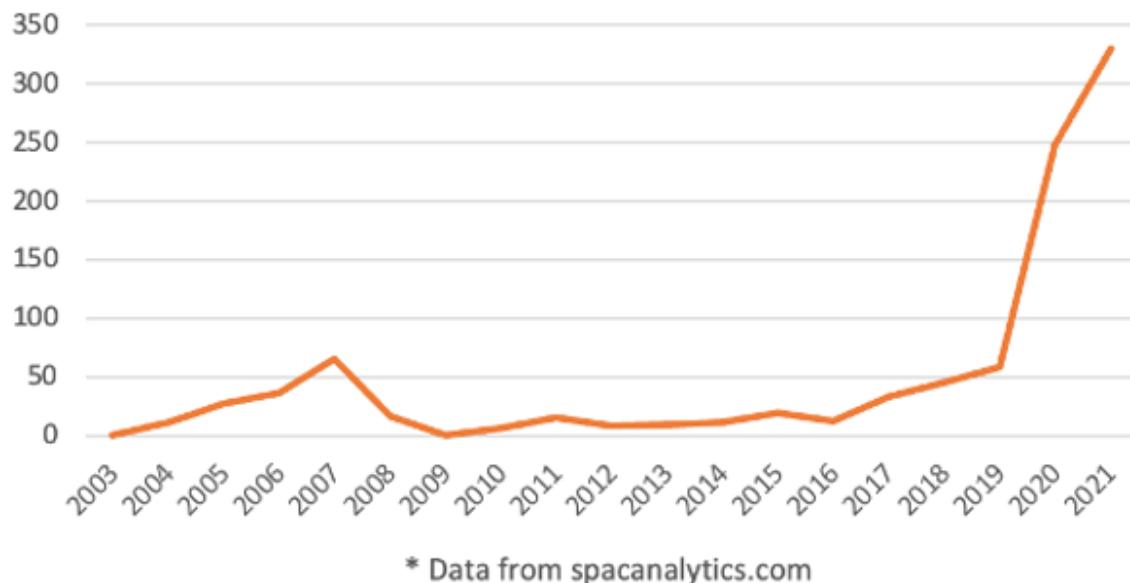
On the other hand, Private Equity (PE) funds are similar to SPACs as both investments are made without knowing who the target company will be [5]. However, there are differences between the two, especially in relation to the duration. PE funds' duration lasts for 7-8 years while SPACs are typically 2-3 years [5]; it is much easier for individuals to sell shares on the open market with SPACs as there are fewer restrictions involved compared to PE funds. Furthermore, the PE funds have a 2-3% fee associated with the committed capital, which SPACs do not [5]. However, once the merger is complete for SPACs, the sponsors typically receive 20% of the proceedings.

Choosing whether to invest in either of the three would ultimately be the decision of the investor pertaining to their objectives and what their risk tolerance is. It's also worthy to note that PE funds and pre-IPO shares typically require the investors to be accredited before they can begin investing. The traditional IPO is considered to be the least risky but can be quite costly, while SPACs and PE funds both have the uncertainty of not knowing the target company until the end. However, the decision comes down to the goals of the investors, the overall vision and risk tolerance.

## SPAC Activities

"SPACs were first introduced in 1993, when blank shell companies were prohibited in the United States" [6]. It's not until several years after the dot-com bubble that it first became popular. SPAC activities raised \$12.1 billion in 2007, and then largely disappeared in 2008 due to the economic recession [5]. They have shown tremendous growth since then, and made \$13.6 billion in revenue in 2019 [1]. Since its growth, it has attracted many big names and investors - some of which have gone on to sponsor their own SPACs. Social Capital Hedosophia V, Apex Technology Acquisition, Churchill Capital IV are just a few to name [7]; other companies have also started to hop onto this approach.

## Number of SPAC IPOs



In 2020, there were 248 SPAC IPOs, accounting for 55% of the total number of IPOs, and 46% in terms of total US IPO proceeds. It's the first time that the number of SPAC IPOs surpasses the total number of traditional IPOs in the US. Till now, there are 330 SPAC IPOs in 2021, more than 71% of the total IPOs according to SpacAnalytics.com.

However, the SPAC mania has been cooled down for a bit recently, with April 2021 being the first month that SPAC activities are significantly lower than regular IPOs in terms of dollar amount. According to JPMorgan, the decline in SPACs' activities can be attributed to 'the emergence of poor-quality players, waning hype by retail investors and regulatory concerns' [8].

Even though SPACs activities are down a lot since April, there're a few interesting mergers to take a look at:

- Grab, the Southeast Asia 'Uber' headquartered in Singapore, announced in April that it's going public with Altimeter Growth Corp (NASDAQ: AGCUU). It's the world's largest SPAC merger, valued at nearly \$40 billion [9]. Yet the percentage of Grab's SPAC shares outstanding being shorted is more than 30% as of May 27, indicating that investors are betting on further declines.
- Acorn, a fintech start-up based in Irvine, California, is going to merge with the SPAC company Pioneer Merger Corp. (NASDAQ: PACXU). The investing and savings app is valued at \$2.2 billion, almost tripling its valuation from two years ago [10] under this growing fintech euphoria.

# Performance

Ray Ritter, a finance professor from the University of Florida, calculates that SPACs have underperformed the market by about 3% annually in the first three years after their IPOs during the period of 2010 to 2017. Yet since then (before 2020), SPACs, especially the larger ones, have more closely tracked traditional IPO performance. [5]

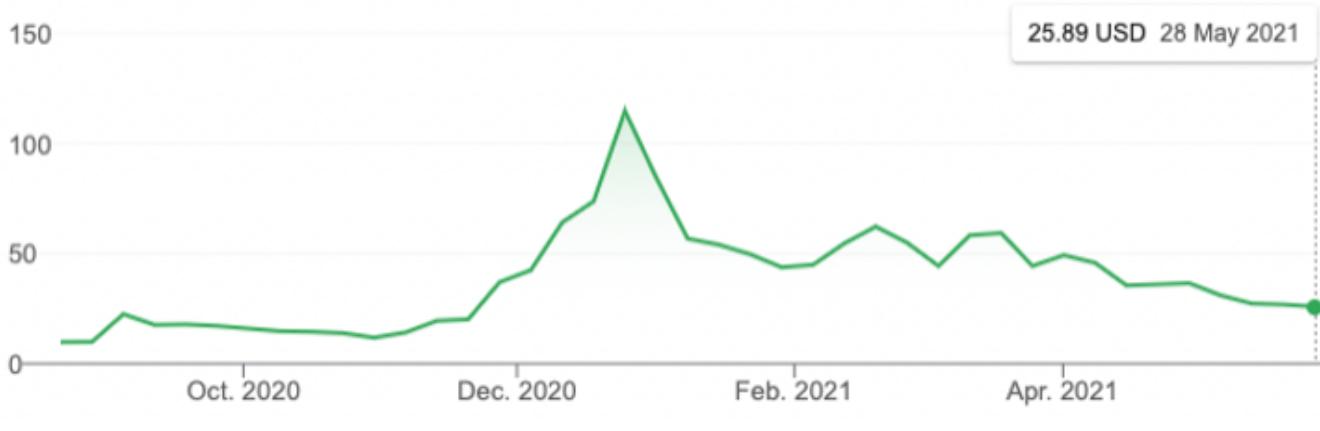
Investors are becoming more fascinated by SPACs as they are a few companies who have gone public and generated triple-digit returns:

- Betterware (NASDAQ: BWMX) is a Mexican direct-to-consumer selling company that focuses on home products. Since its merger with the SPAC company DD3 Acquisition Corp. in March 2020, its unit return reached 654%.
- DraftKing (NASDAQ: DKNG) is an American daily fantasy sports contest and sports betting operator [11] that merged with the SPAC shell company Diamond Eagle Acquisition Corp. Since early 2020, its unit return has mounted to 528%.
- Open Lending (NASDAQ: LPRO), a company that provides automated lending services to financial institutions, was acquired by the SPAC company Nebula Acquisition Corporation. Investors have earned a unit return of 376% since the Jun 2020 deal close. It indeed looks appealing by simply looking at the returns over those short periods. However, some SPAC companies, especially the ones that are still seeking their acquisition targets, are subject to tremendous volatility.
- Nikola Corporation (NASDAQ: NKLA) is an American based company that aims to produce zero-emission heavy-duty trucks powered by electricity and hydrogen. Its stock price peaked almost right after the merger was closed as investors bought into the EV idea. Yet soon, they realized that the company's goal was too ambitious to fulfill, and production fell behind schedules - the price continued to decline. Plus, the company misled the public by showing their model car driving, but it turned out to be rolled down from a hill. Its drawdown reached its maximum of -66% in April.



Nikola Stock Price from GoogleFinance

- Quantumscape Corp (NYSE: QS), an American company that manufactures solid-state metal batteries for electric cars. Investors lost confidence in themselves because of similar reasons as the stock decline of Nikola – with a great vision, the company is still in the research and development phase and generates no revenue [12].



*Quantumscape Stock Price from GoogleFinance*

Investors start to realize that companies going public through SPACs are generally not quite ready yet – they were still in the early stage of their business but went public earlier than they normally would [13]. Investors who make their investment decisions based on excitement or potential rather than solid fundamentals suffered quite a lot in recent months. Many SPAC companies went down by more than 20%, and their short interest has been up since March, where short sellers have been profiting from declining share prices. Currently, there are still 421 SPACs in the market seeking acquisitions; and some are approaching the two-year deadline, time is indeed ticking. It's foreseeable that SPAC investors will be subject to great uncertainty in 2021, and probably in the following years.

## Risk

“An investment in a SPAC merger is either a bet on the bubble, or a bet that the sponsor can create a lot of value for SPAC shareholders following the merger” [14]. SPACs are considered risky for their investors as there is a chance that the acquisition might fall through, and the shareholders are the ones who bear the costs of investing in the company. As we have discussed, investing in a SPAC can be a very profitable but risky choice. The following factors might cause great uncertainty to investors.

Going public through a SPAC may result in inflated company valuations, which is less likely in traditional IPOs [15]. Higher valuations will mislead retail investors about the actual value of the company and its perspectives. Investors who become overly optimistic about the company will drive up the price in a very short period of time after the merger is closed, but the price will soon decline when they take a deeper look into the company.

Small investors are more vulnerable than large investors [16]. Early investors like hedge funds typically sell their SPAC shares before the acquisitions are completed to limit their risks; SPAC creators generally get 20% of the shares ‘for free’. However, retail investors can only trade at market price when the deal is finished, hence are exposed to ‘the risk of a subpar deal’ [16]. Individual investors are not as profitable when the outcome has been less favourable compared to the stock market and it has been below market price. Small investors would have to be prepared for the outcome and research beforehand on the market to avoid facing this situation.

The Securities and Exchange Commission (SEC) is now considering new protections for investors in SPACs [16], meaning that going public through a SPAC will face more regulations and higher costs in the future. It’s good news for retail investors, yet the market is indeed reacting unfavourably towards this news. This is because more regulations might lead to higher costs of going public through a SPAC, and a greater chance of failure, which would both contribute to potential losses for the company and investors.

Moreover, since management only has two years to find a company for the acquisition, the money investors who have invested will sit in the trust until a target has been found [1]. If a target is not found the money will be returned however, investors will have to suffer from the opportunity cost.

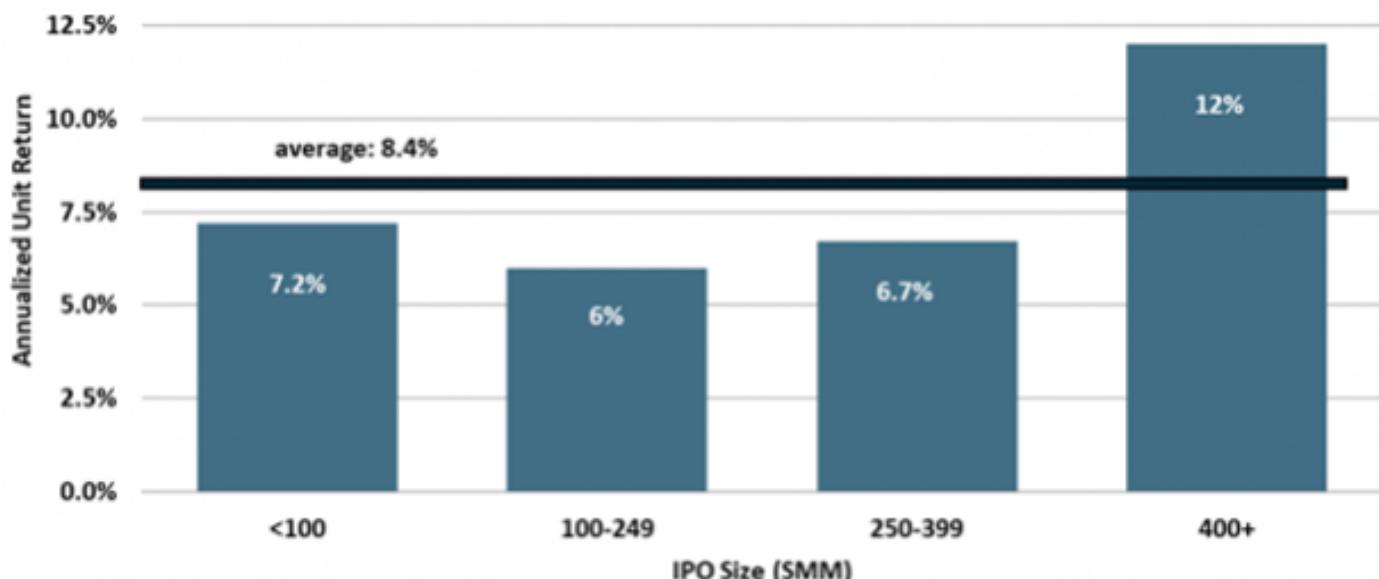
## Investment Basics

Investing before the deal is closed: (Note: Investing in SPACs at this time could be very risky.)

The initial unit price of a SPAC company is generally \$10 (one exception could be PTH trading at \$20 initially), with a unit containing one stock and one warrant. Generally, retail investors who don’t get in early before the share-price pop wouldn’t benefit much from buying in a SPAC at this stage. For people who invest early, their downside risk is limited as they can choose to get most of their money back when the merger is announced. [17]

To reduce potential poor-quality SPAC companies, the following criteria can be considered (but not a must):

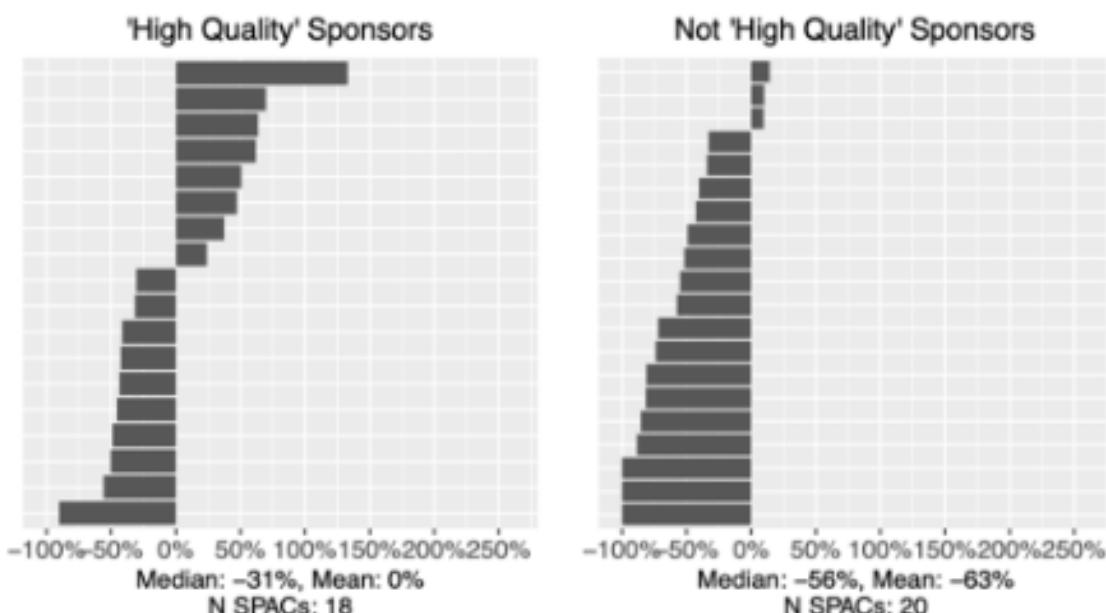
- Size of the SPAC: \$400+ million SPACs have better performance in general [5].



Source: SPAC Research, returns through 12/31/2019

*Annualized unit return by SPAC IPO size*

- Attributes of the creator & sponsor: professional-led SPACs perform better [5]. SPAC with creators or sponsors who have past success in SPAC mergers or who are the professionals in the industry tend to make wiser choices when selecting its target.



*Retrieved from ECGI A Sober Look into SPACs*

From the image [18] above we can see that SPACs that end up with high-quality sponsors have greater returns than those that do not. While the median is -31% for the higher quality sponsors it is -56% for those without. This is not a large difference and portrays the reality that not all SPACs will be successful; those investors need to perform their due diligence.

- Time left for the SPAC: avoid the SPACs with only a little time left

Investing after the deal is closed for a while:

Once the merger is complete, and the share price stabilizes from the (potential) initial up and down, investors can then use more of the fundamental or technical analysis to assist their investment decisions.

## Conclusion

With the growing popularity of SPACs, we continue to expect that more companies will utilize this method to go public. Despite the risks and obstacles that have occurred in the past, the SPACs offer many opportunities for growth. SPACs can be an advantage for smaller and lesser-known companies to go public as they can cost less and have a shorter duration. Successful mergers have led to high returns over time and been advantageous for the companies involved. With greater SEC regulation and guidance being provided this will allow for a more regulated industry and provide benefits for the investors and shareholders. Regulation will allow for greater control of fraud, beneficial terms negotiated for both parties and open communication, which will attract and lead the push for more SPACs. With more money flowing into the public markets and big names involved in the process of the mergers, it can be said that SPACs will continue to attract more firms. Once the mergers are complete, investors can simply look at the fundamentals and performance of the companies before deciding whether or not to invest. The investors would have more information before making a decision and this would ultimately reduce the risk associated with them.

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# Deeper Dive Behind the Telecommunication Sector

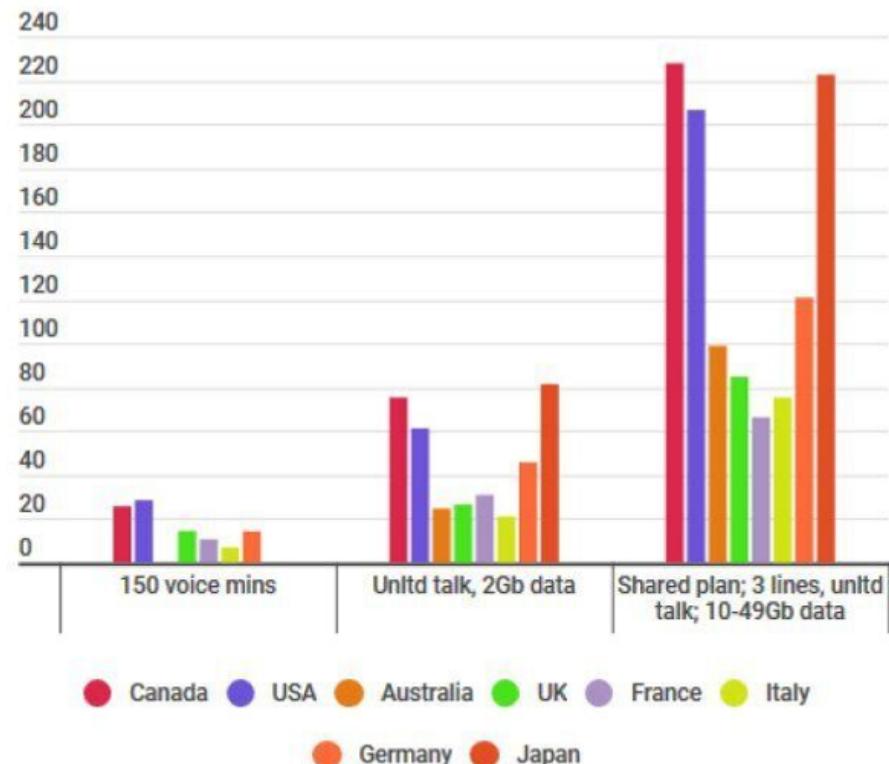
By Hadi Rasoul; Devansh Mehta; Market Research Analysts

The Canadian telecommunication sector is made of two main types of service providers. The first type is Telecommunication service providers which are your typical providers like Rogers who provide local services. Telecommunication service providers (TSP's) are some of the largest companies within the sector and are the ones who provide most cell phone coverage plans. The second type of service providers are alternative providers. Alternative providers are cable-based providers who provide service using other providers infrastructure. These are providers like Freedom Mobile who pay companies like Rogers to host their services. In 2018 TSP's accounted for over 57% of total telecommunication market revenue. While cable-based providers only accounted for 33.6% of market revenue [1]. One unique challenge the Canadian telecommunication sector faces is that fact that many parts of Canada have a low population density. A low population density makes it more difficult and expensive to connect customers [4]. Our American neighbours are able to enjoy cheaper service plans because American states are known to be high density populations. This makes it difficult for Canadian providers to offer prices that rival American providers. The chart below shows how expensive wireless service from Canada really is in Canada. Another factor that explains why Canadian prices are so high is because there is such little competition. There are only three household names when it comes to Canadian service providers, those being Telus, Rogers and Bell. With only three giants in an industry there is not much incentive to offer lower prices.

## Revenue Breakdown of The Sector

The telecommunication sector is a large market in Canada and in 2019 alone it amassed \$54.1 billion in revenue. \$24.8 billion of the revenue was made from wired services while the remaining \$28.3 billion was made from wireless services.

# Wireless price comparison



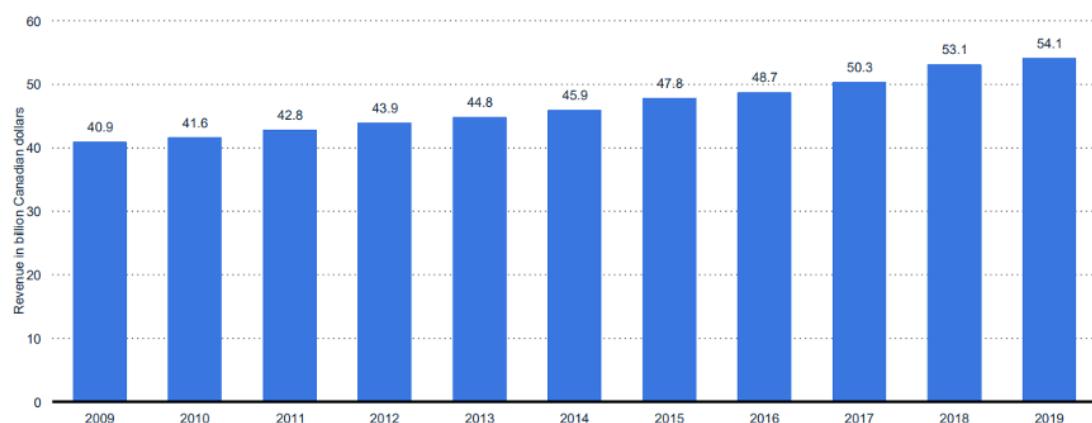
Canada still leads G7 countries on wireless costs in many categories, despite steadily decreasing prices.

Source: Innovation, Science and Economic Development Canada    Chart: HuffPost Canada

Wireless price comparison by HuffPost Canada

Revenues of the telecommunication services industry in Canada from 2009 to 2019 (in billion Canadian dollars)

Telecommunications services industry revenues Canada 2009-2019



Revenues of the telecommunication services industry in Canada from 2009 to 2019

# Key Players within The Sector

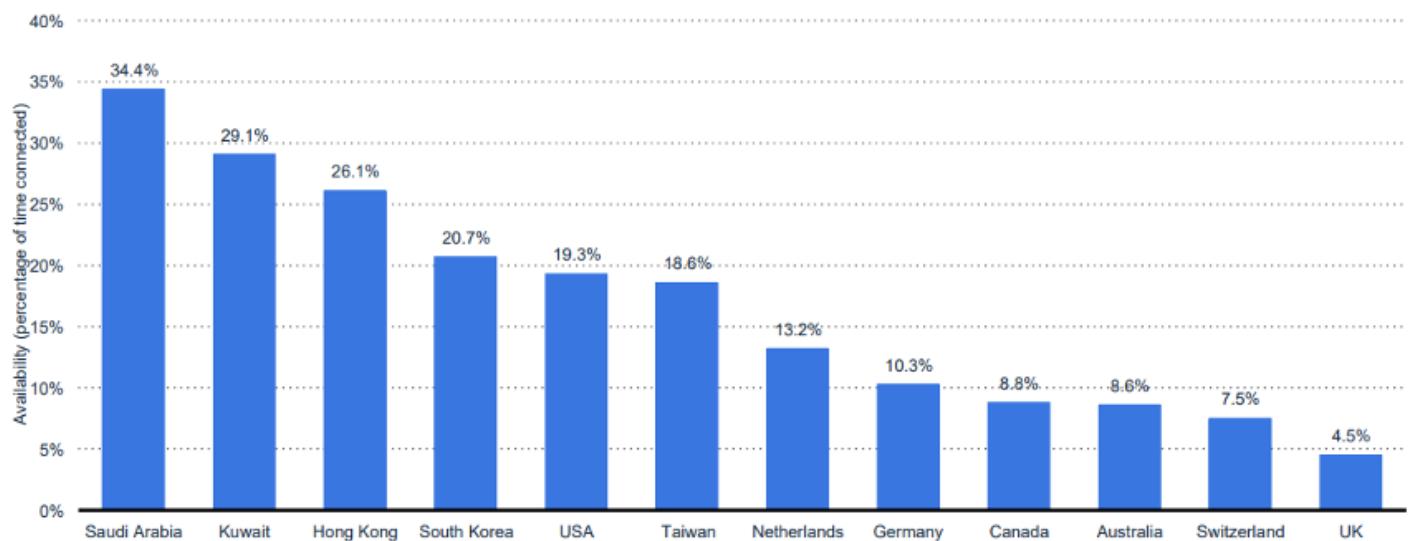
Some of the key players within the industry are Rogers Bell, Telus, Qubecor and Shaw Communications. With only 5 providers accounting for 87.4% of industry revenue it is clear there is a monopolistic competition within the industry [2]. More alternative service providers like Freedom Mobile are trying to provide service with prices that are competitive with the key players. A lot of these alternative service providers cannot surpass cellular coverage of these larger companies which holds them back from surpassing the key players.

## Recent Developments

Recent developments within the industry include the recent development and drive for 5G technology. The race to provide 5G service is regarded as a marathon race. 5G technology will take a while to become mainstream and adopted by majority of the population. The acceleration of 5G is being driven by new devices that now have 5G capabilities. As more consumers purchase devices with 5G capabilities this will increase demand for 5G service and thus accelerate 5G development even more.

### 5G availability in selected countries in 2020

Availability of 5G in countries 2020



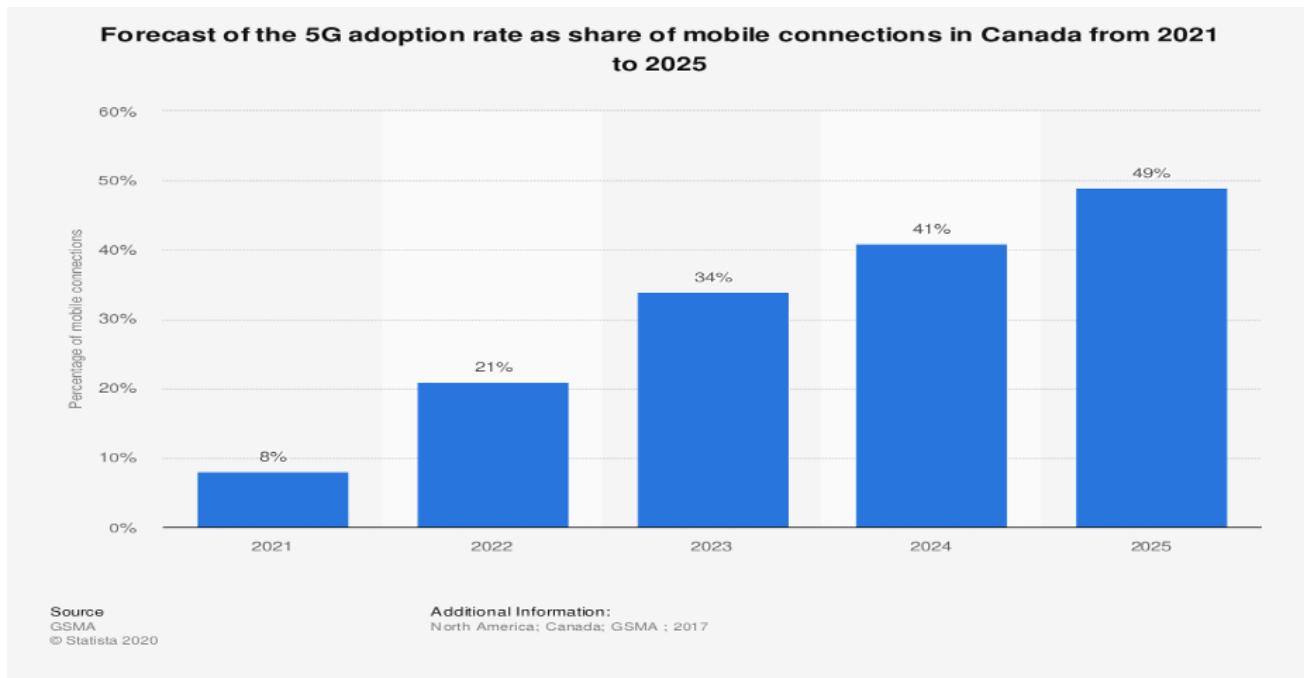
5G availability in selected countries in 2020

Many Canadian service providers have also recently started offering unlimited data plans. This is a huge advantage for consumers as many service providers thrived off charging consumers overage charges. What has helped drive providers to offer unlimited plans is the CRTC's new legislation which limits overage fees to \$50. Providers have realized they can no longer collect huge profits from charging overage fees and instead have pivoted and decided to market their new service plans as being unlimited. These unlimited plans often offer a set amount of data, once a user pass the allotted amount of monthly data their service will be drastically slowed. These drastically slow speeds are a way for providers to limit the data they offer consumers without relying on traditional overage fees [5]. What this means for investors is a lot of these service providers lost a huge revenue stream by this new CRTC legislation on overage fees. Service providers have recognized this and are deciding to make more investment in 5G infrastructure in hopes of driving more revenue.

## Entering the 5G Era

In the upcoming years, 5G is expected to become the next generation of mobile communications technology, transforming the way businesses operate. It is meant to deliver higher multi-Gbps peak data speeds, higher connectivity, low latency, and energy-efficient features making it an ideal choice for various industries and empower new user experiences. 5G will allow end-to-end digitization of physical assets and integration into a digital ecosystem marked by hyper-intelligent and autonomous devices. Along with the rapid emergence of 5G networks, Canadian telecommunication companies aim to take advantage of the advantages of cross-border collaboration and have already started to set up their own infrastructure with Rogers Wireless, Bell Mobility, TELUS Mobility and Videotron [7].

As one of the most developed economies in the world, Canada has a lot to gain from a 5G rollout. In regards to the speed of 5G, under ideal conditions, it has the potential to be 100 times faster than 4G, with a top theoretical speed around 20 Gbps and current, real-world speeds from 50 Mbps to 3 Gbps. Data from Speedtest Intelligence reveals Canada's median download speed over 5G was 205.3% faster than that over 4G during Q4 2020 [11]. In terms of economic price that the 5G infrastructure is expected to cost Canadian telecom operators from 23% to 71% more than 4G, with the benefits mostly realized by the broader economy. Forecasted benefits to the broader Canadian economy are at C\$40 billion in incremental annual GDP contribution by 2026, and around 250,000 permanent jobs. However, connectivity is only expected to account for 11% of the direct value generated from 5G [6]. The adoption rate of 5G is also meant to grow significantly by the consumers in Canada from around 8% to nearly half of the mobile internet users in just within five years from 2021 to 2025.



*Forecast of the 5G adoption rate as share of mobile connections in Canada from 2021 to 2025*

## Entering the 5G Era

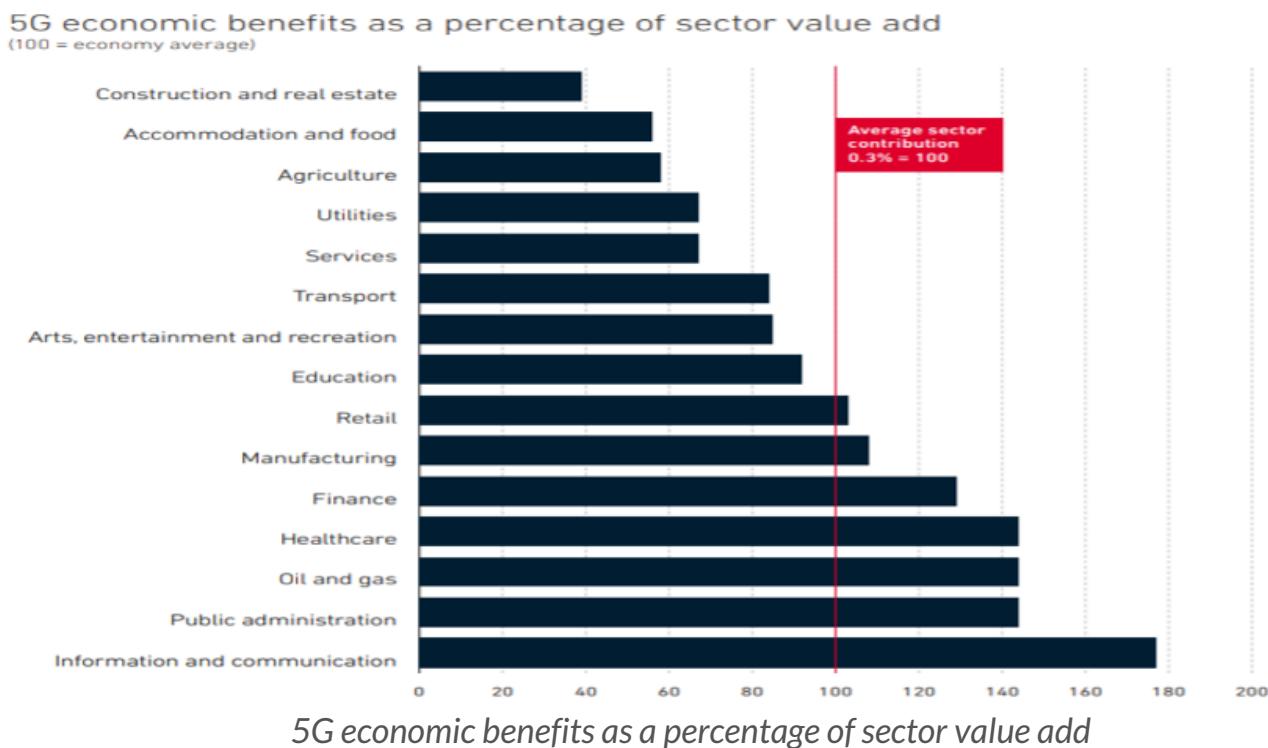
The renowned operator of Canada, Rogers Communications, is expanding its footprint across various provinces in the region. Recently, the operator has expanded its 5G network to 173 towns and cities. Rogers Communications currently reaches half of the country's population. Tracing back to the initial 5G footprint, Rogers deployed the initial wave of a 5G network in Vancouver, Toronto, Ottawa, and Montreal. Other large provinces which were included in the initial launch of the 5G network back in January 2020 included Quebec City, Calgary, and Edmonton [8].

**Number of Cities with Commercially-Available 5G Deployments by Province**  
Ookla 5G Map™ | As of February 2, 2021



*Number of cities with Commercially-Available 5G Developments by Province*

Rogers has also partnered up with the University of Waterloo for a multimillion-dollar deal as a part of their smart campus plan which will provide ground for extensive research into the Multi-access edge computing, the alerting systems design, operation of the network, and the infrastructure necessary to develop and test technologies that 5G will enable. University of Waterloo's innovation, engagement, and initiative will help Rogers achieve the goal of increasing the range of 5G, lead the path for the future of telecommunication in Canada and transform the experience for all the constituents in the University. The next generation of wireless communication, across Canada will help achieving the goal of real-time connectivity and a complete digital world [9].



The analysis indicates that in relation to its current contribution to GDP, the information and communication sector stands to benefit the most from the 5G rollout. Due to the emergence of 5G, we will see a drastic change in the way we communicate in the future. This is because it will allow us to connect to rural areas and support new smart city applications. Similarly, the oil and gas and the healthcare industry are expected to benefit from the 5G network because it will enable new applications to run smoothly and provide better connectivity. 5G networks will enable organizations to fully leverage the power of artificial intelligence, the Internet of Things, augmented reality, and virtual reality (VR) due to their lightning speed, high capacity, ultra-reliability, low latency, reduced energy consumption, and massive connectivity [10]. Hence, Businesses will be able to accomplish more thanks to 5G technology.

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