

Global Insight

Weekly

The new abnormal

Kelly Bogdanova – San Francisco

COVID-19 has left economies and companies operating in a state of business as unusual. So, when it comes to the outlook for corporate profits, it's time to throw out the playbook. We look at how investors should gauge the outlook for earnings and stock market valuations.

This corporate earnings season and the next are oddities. This is not because of the double-digit retrenchments that we expect in earnings growth—that's normal during recessions. A key reason we think the Q1 and Q2 reporting seasons will be outliers is because many management teams are having a very difficult time gauging the future amid COVID-19 uncertainties.

Given the abundance of unknowns about the contours of economic recessions and subsequent recoveries in North America, Europe, and globally, there is a meaningful lack of visibility about corporate profits, especially in economically-sensitive industries and those hit hardest by COVID-19 shutdowns.

As a result, we think investors should take 2020 and 2021 earnings forecasts with a grain of salt, and should use a range of estimates when attempting to gauge the future outlook for profits and equity market valuations.

A lack of guidance

Normally during earnings season, analysts and investors have a well-established playbook to work from—profit estimates for the current and next quarters that tend to come reasonably close to reality. Not in this COVID-19 environment. This go-around, many Wall Street industry analysts who cover individual companies will be left in the dark.

Our national research correspondent believes a meaningful share of S&P 500 management teams will withdraw earnings guidance during the Q1 reporting season due to substantial COVID-19-related uncertainties. Companies domiciled in other countries and regions will likely do the same, and we're already

seeing this play out in the early stage of the European reporting season.

There is not much incentive for management teams of economically-sensitive companies to go out on a limb to forecast earnings when operations in so many national and local jurisdictions are in flux and subject to government decisions on when and at what pace businesses can begin getting back to normal.

Before COVID-19 caught fire, roughly half of S&P 500 companies had not yet provided full-year guidance (this is not atypical for early in the year), while roughly the other half had provided guidance.

After the Q1 earnings season largely concludes in the latter part of May, our national research correspondent believes the majority of companies that had previously provided full-year earnings guidance will have withdrawn it. It also thinks the original pack of companies that refrained from providing guidance will continue to sit on the sidelines. It anticipates only

Market pulse

- 3 U.S. Energy sector looks beyond oil futures capitulation
- 3 What oil below zero means
- 4 ECB loosens collateral rules to accept "fallen angels"
- 4 China's Q1 GDP gives a sense of COVID-19's impact

Click [here](#) for authors' contact information. Priced (in USD) as of 4/23/20 market close, ET (unless otherwise stated). **For important disclosures and required non-U.S. analyst disclosures, see [page 6](#).**
Produced: Apr 23, 2020 16:18ET; Disseminated: Apr 23, 2020 16:46ET



Wealth
Management

Investment and insurance products offered through RBC Wealth Management are not insured by the FDIC or any other federal government agency, are not deposits or other obligations of, or guaranteed by, a bank or any bank affiliate, and are subject to investment risks, including possible loss of the principal amount invested.

16 percent of companies will provide full-year guidance, as the middle chart shows.

Room for movement

The lack of and withdrawal of earnings guidance would leave profit forecasts for this year and next even more in flux than they normally are.

The S&P 500 consensus forecast for 2020 of \$136 per share has declined substantially from \$173 since mid-March, according to bottom-up estimates of Wall Street analysts aggregated by Refinitiv I/B/E/S, just as it should have amid COVID-19 risks. RBC Capital Markets is currently forecasting \$135 per share.

Even though both of these 2020 forecasts are in the “reasonable zone,” in our view, there is still downside risk considering the Q1 reporting trends thus far. With 22 percent of S&P 500 companies having reported, 30 percent of them have missed the consensus forecast, a higher rate than usual. The 2020 consensus estimate could continue to drift down in the weeks ahead, and visibility about the remaining quarters of this year is lacking.

The 2021 consensus estimate of \$171 per share still seems far too elevated to us, despite the fact that it has been cut from \$197 per share at the beginning of the year due to COVID-19. RBC Capital Markets is at \$153 per share for next year.

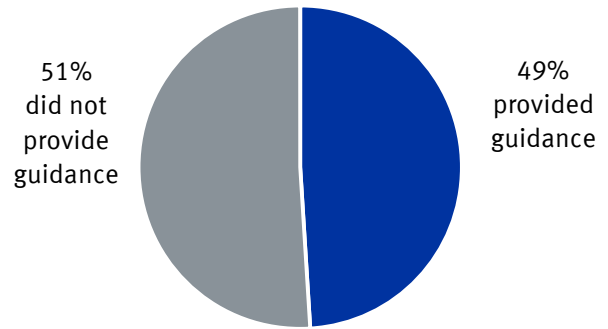
Rely on a range

At this stage, we think investors should take the bottom-up consensus earnings forecasts of Wall Street analysts and the top-down estimates of equity strategists with a grain of salt. We would use a range of estimates to gauge the future path of earnings and market valuations.

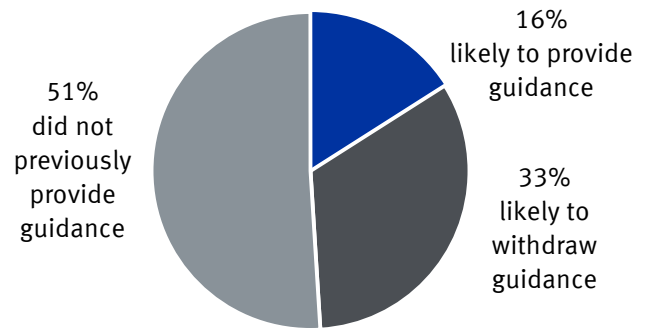
We think \$125–\$135 per share seems like a reasonable range for 2020 until more is known about the depth and duration of the U.S. and global economic recessions. We think \$150 per share is a good ballpark estimate for 2021, but we wouldn’t hold onto it too tightly given the abundance of unknowns about the contours of the economic rebound.

About one-third of U.S. large-cap companies are likely to withdraw earnings guidance

Percentage of S&P 500 companies that previously provided 2020 earnings guidance



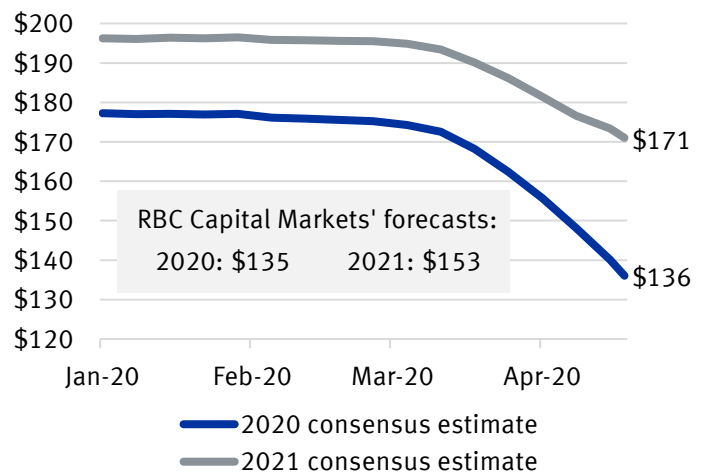
Percentage of S&P 500 companies likely to provide 2020 earnings guidance post-Q1 results



Source - National research correspondent, Standard & Poor's, FactSet; data as of 4/20/20

COVID-19 has pushed profit estimates down substantially, but is it enough?

S&P 500 consensus earnings-per-share forecasts



Source - RBC Wealth Management, Refinitiv I/B/E/S, RBC Capital Markets U.S. Equity Strategy; weekly data from 1/6/20 through 4/23/20



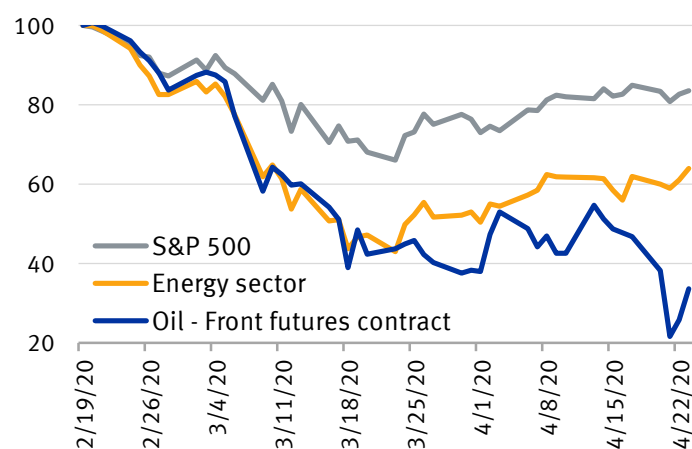
United States

Alan Robinson – Seattle

- **The sharp selloff in oil futures during the week refocused investors' attention on the Energy sector.** Three main factors coincided to cause the decline in North American oil prices. First, a glut of oil arrived as Saudi Arabia and Russia pumped more than was needed in order to lower prices and force competitors out of business. Second, widespread lockdown actions precipitated a sharp decline in demand for gasoline and jet fuel in North America, as road and air traffic volumes plummeted. But while too much supply and too little demand is usually enough to push prices down, the final nail in the coffin came in the form of a severe shortage of places to store oil.
- With crude inventories piling up, RBC Capital Markets, LLC Energy Analyst Kurt Hallead estimates the remaining storage capacity at the Cushing, Oklahoma, hub will be full in a few weeks at the current rate of inflow. Consequently, Hallead **lowered his 2020 average crude oil price forecasts for West Texas Intermediate (WTI) and Brent crude to \$35 and \$39 per barrel, respectively, rising to \$44 and \$46 in 2021.**
- However, we believe equity investors saw this coming and are now looking beyond the near-term disruptions in the oil markets. While it underperformed the S&P 500 through the market low on Mar. 23, the **Energy sector appears to have disconnected from the physical oil market** since then (see chart).
- Our immediate concern regarding the Energy sector is the **sustainability of dividend payments.** While only one of the 27 energy companies in the S&P 500 has cut its dividend

Energy sector looks beyond oil futures capitulation

Relative performance since stock market peak



Source - RBC Wealth Management, Thomson Reuters; data through 4/23/20
Normalized, with 2/19/20 values = 100

so far, we note that 18 of the remaining 26 have negative “Dividend Health” ratings according to Bloomberg. A negative rating suggests a significant near-term risk of a cut. We believe a **wait-and-see approach to Energy stocks may be appropriate.**

- During the week, **the U.S. Senate passed a \$484 billion COVID-19 relief bill** to expand the Paycheck Protection Program by \$310 billion and to increase funding for hospitals and testing. The U.S. House of Representatives has yet to pass the bill at the time of writing, but a “phase four” stimulus package that would focus on infrastructure spending is already being discussed in Washington.



Canada

Richard Tan, CFA & Carolyn Schroeder – Toronto

- Oil-related headlines have captured investor attention amid unprecedented demand destruction and an on-again, off-again price war. This week also showed that negative oil prices are more than a possibility. **The futures market, particularly the May 2020 West Texas Intermediate contracts, dipped into negative territory for the first time ever on Apr. 20.** In other words, if you owned the contract to buy oil and wanted to exit your position, you had to pay someone to take the barrels of oil off your hands. **It’s a strange concept, partly driven by the fact that the May 2020 contracts expired on Apr. 21.** Therefore, if you retained your long position, you would be obligated to take physical delivery of the barrels next month despite storage capacity that is already limited and poised to worsen with consumption in a deeply compromised state.
- It’s important to note that there is not one singular “oil price.” In fact, there are various grades of oil and different contract maturities. If one were to look at contracts with longer-dated maturities, you would see that prices remain depressed but are at least in positive territory. We believe investing into underlying producers remains challenging in the current environment as **oil prices could remain below the level needed to fund capital investments and dividends via cash flow.**
- RBC Economics believes **February data is a prelude to March figures that will likely show a substantial decline in retail activity** due to the mid-month closure of many non-essential retailers. While some sectors will be spared (or even benefit), RBC Economics believes the majority of retailers will see a dramatic pullback in sales with stores closed and consumers strongly encouraged to stay home. Prior to the pandemic, e-commerce sales from domestic retailers were up 18% y/y in February, and Statistics Canada noted many retailers were opening or expanding online platforms in response to COVID-19 containment measures. Although

grocery spending increased 80% in the week ending Mar. 17, shopping patterns have subsequently normalized. Software and data services spending held up better than other discretionary categories, as Canadians equipped themselves to work from home. In addition, spending on books and music (including streaming and online services) has not suffered notably. The combination of Employment Insurance and the new Canada Emergency Response Benefit program will provide a larger-than-usual income offset for the millions of workers losing their jobs, but the still-significant income loss means **consumer spending may experience more of a gradual recovery when physical distancing measures begin to ease.**



Europe

Frédérique Carrier & Thomas McGarrity, CFA – London

- At a summit on Apr. 23, **EU leaders plan to discuss necessary steps to avoid the tail risk of the COVID-19 crisis morphing into a full blown EU and euro crisis.** There is broad based agreement the recently announced €540 billion package agreed to by Eurogroup finance ministers needs to be enlarged, but details have to be worked out.
- Meanwhile, **the European Central Bank (ECB) is widening further its collateral rules**, now accepting so called ‘fallen angels’, i.e., marketable securities that held an investment-grade rating on or prior to Apr. 7 but were downgraded subsequently to levels of BB or above.
- By doing so, the ECB is **following in the footsteps of the Federal Reserve**, which announced a similar measure recently. We think it should benefit significant areas of the corporate sector whose ratings came under significant pressure in the wake of the current economic slowdown. The ECB’s steps **should help contain a possible widening of spreads.** More should be divulged at the Apr. 30 ECB meeting.
- In the early stages of Q1 results season, **the aggregate earnings per share for constituents of the STOXX Europe 600 Index is down 11% y/y.** Cyclical sectors, particularly Financials, have seen a significant earnings decline. Results in defensive sectors have been less extreme, at times even pleasing.
- **Swiss health care giant Roche reported sales growth of 7% y/y**, slightly ahead of consensus, driven by higher sales from new product launches. Given the uptake of its recently introduced medicines, the company confirmed its guidance for low- to mid-single-digit sales growth in 2020.
- **Danone**, the French food manufacturer, **generated organic sales growth of 3.7% y/y**, ahead of consensus, as

the company benefitted from consumers’ pantry loading. Nevertheless, the company **withdrew its full-year guidance** due to its expectation that global supply and demand will remain highly volatile and unpredictable for the remainder of 2020.

- **Unilever also withdrew its full-year outlook** due to the lack of visibility. Its flat Q1 y/y organic sales, despite a sales upswing in hygiene and in-home food products, was due to a collapse in out-of-home consumption affecting its ice cream and food service businesses.



Asia Pacific

Jasmine Duan – Hong Kong & Nicholas Gwee, CFA – Singapore

- China’s Q1 GDP has given the market a sense of COVID-19’s economic impact. **The Chinese economy declined 6.8% y/y in the quarter** (vs. Bloomberg median estimate of -6.0%), following a 6.0% expansion in Q4 2019. This was the first contraction since the country began publishing quarterly data in 1992. **The data suggests that activity improved in March but remained weak** even as containment measures were relaxed. The weak Q1 data was somewhat expected and digested by investors. However, another concern now is that the rebound in activity in March could be partially due to orders received before the global outbreak of the virus. **The plunge in global demand and order cancellations may drag on a recovery in China’s economy in Q2**, and the extent of any rebound remains highly uncertain. The Chinese market’s performance in the medium term will be affected by other countries’ progress in containing the virus and mitigating its impact.
- **The nonperforming loan ratio of Chinese banks rose** by 0.06 percentage points to 2.04% in March. According to the regulator, the banks have deferred payments on RMB 880 billion in loans and rolled over another RMB 576.8 billion in loans for small businesses in Q1. **The regulator said asset quality could worsen in Q2, but overall risks are under control.** In addition, China has drafted plans to restructure some small and medium-sized banks, mostly with market-oriented measures.
- **The Singapore government expects a sharper economic contraction this year** as COVID-19 affects the global economy and supply chains. The Ministry of Trade and Industry now anticipates 2020 GDP growth will contract between 1% and 4%. On Apr. 21, Singapore extended its “circuit-breaker” COVID-19 restrictions for another four weeks until Jun. 1. **The country hopes to “progressively reopen” its economy in about a month’s time** and also plans to significantly expand testing for infection throughout its population.



MARKET SCORECARD

Data as of April 23, 2020

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	2,797.80	8.2%	-13.4%	-4.6%	4.8%
Dow Industrials (DJIA)	23,515.26	7.3%	-17.6%	-11.8%	-3.8%
NASDAQ	8,494.75	10.3%	-5.3%	4.6%	19.2%
Russell 2000	1,214.07	5.3%	-27.2%	-23.4%	-22.3%
S&P/TSX Comp	14,251.09	6.5%	-16.5%	-14.5%	-8.4%
FTSE All-Share	3,205.67	3.2%	-23.6%	-22.1%	-21.4%
STOXX Europe 600	333.24	4.1%	-19.9%	-14.8%	-13.0%
EURO STOXX 50	2,852.46	2.4%	-23.8%	-18.6%	-18.8%
Hang Seng	23,977.32	1.6%	-14.9%	-20.0%	-20.7%
Shanghai Comp	2,838.50	3.2%	-6.9%	-11.3%	-7.5%
Nikkei 225	19,429.44	2.7%	-17.9%	-12.7%	-12.0%
India Sensex	31,863.08	8.1%	-22.8%	-17.4%	-7.5%
Singapore Straits Times	2,542.37	2.5%	-21.1%	-24.2%	-29.0%
Brazil Ibovespa	79,673.30	9.1%	-31.1%	-16.9%	-6.9%
Mexican Bolsa IPC	34,240.60	-0.9%	-21.4%	-24.2%	-29.3%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	1,732.14	9.8%	14.2%	36.1%	30.7%
Silver (spot \$/oz)	15.24	9.1%	-14.6%	2.7%	-8.3%
Copper (\$/metric ton)	5,109.25	3.5%	-16.9%	-20.1%	-25.9%
Oil (WTI spot/bbl)	15.75	-23.1%	-74.2%	-76.3%	-77.0%
Oil (Brent spot/bbl)	21.91	-3.6%	-66.8%	-70.6%	-70.7%
Natural Gas (\$/mmBtu)	1.82	10.7%	-17.0%	-26.0%	-33.7%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	0.597%	-7.3	-132.1	-196.8	-237.8
Canada 10-Yr	0.598%	-9.9	-110.4	-115.2	-175.5
U.K. 10-Yr	0.292%	-6.4	-53.0	-93.5	-124.7
Germany 10-Yr	-0.424%	4.7	-23.9	-46.5	-106.0

Fixed Income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	1.42%	1.6%	4.8%	11.1%	16.8%
U.S. Invest Grade Corp	2.76%	4.9%	1.1%	10.1%	16.7%
U.S. High Yield Corp	8.26%	4.0%	-9.2%	-4.3%	1.7%

Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	100.5310	1.5%	4.3%	3.0%	10.5%
CAD/USD	0.7106	0.0%	-7.7%	-4.6%	-8.7%
USD/CAD	1.4073	0.1%	8.3%	4.8%	9.5%
EUR/USD	1.0767	-2.4%	-4.0%	-4.1%	-11.8%
GBP/USD	1.2340	-0.6%	-6.9%	-4.6%	-11.5%
AUD/USD	0.6367	3.8%	-9.3%	-10.3%	-16.3%
USD/JPY	107.6400	0.1%	-0.9%	-3.8%	-1.0%
EUR/JPY	115.9000	-2.3%	-4.8%	-7.7%	-12.7%
EUR/GBP	0.8726	-1.8%	3.1%	0.5%	-0.4%
EUR/CHF	1.0518	-0.8%	-3.1%	-8.2%	-11.9%
USD/SGD	1.4245	0.2%	5.8%	5.0%	7.5%
USD/CNY	7.0667	-0.2%	1.5%	5.1%	11.9%
USD/MXN	24.8173	4.8%	31.1%	31.3%	31.0%
USD/BRL	5.5275	6.2%	37.1%	46.3%	60.1%

Source - Bloomberg. Note: Equity returns do not include dividends, except for the Brazilian Ibovespa. Bond yields in local currencies. Copper Index data and U.S. fixed income returns as of Wednesday's close. Dollar Index measures USD vs. six major currencies. Currency rates reflect market convention (CAD/USD is the exception). Currency returns quoted in terms of the first currency in each pairing. Data as of 9:35 pm GMT 4/23/20.

Examples of how to interpret currency data: CAD/USD 0.71 means 1 Canadian dollar will buy 0.71 U.S. dollar. CAD/USD -7.7% return means the Canadian dollar fell 7.7% vs. the U.S. dollar year to date. USD/JPY 107.64 means 1 U.S. dollar will buy 107.64 yen. USD/JPY -0.9% return means the U.S. dollar fell 0.9% vs. the yen year to date.

Authors

Kelly Bogdanova – San Francisco, United States

kelly.bogdanova@rbc.com; RBC Capital Markets, LLC

Alan Robinson – Seattle, United States

alan.robinson@rbc.com; RBC Capital Markets, LLC

Richard Tan, CFA – Toronto, Canada

richard.tan@rbc.com; RBC Dominion Securities Inc.

Carolyn Schroeder – Toronto, Canada

carolyn.schroeder@rbc.com; RBC Dominion Securities Inc.

Frédérique Carrier – London, United Kingdom

frederique.carrier@rbc.com; RBC Europe Limited

Thomas McGarrity, CFA – London, United Kingdom

thomas.mcgarrrity@rbc.com; RBC Europe Limited

Jasmine Duan – Hong Kong, China

jasmine.duan@rbc.com; RBC Investment Services (Asia) Limited

Nicholas Gwee, CFA – Singapore

nicholas.gwee@rbc.com; Royal Bank of Canada, Singapore Branch

Disclosures and Disclaimer

Analyst Certification

All of the views expressed in this report accurately reflect the personal views of the responsible analyst(s) about any and all of the subject securities or issuers. No part of the compensation of the responsible analyst(s) named herein is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the responsible analyst(s) in this report.

Important Disclosures

In the U.S., RBC Wealth Management operates as a division of RBC Capital Markets, LLC. In Canada, RBC Wealth Management includes, without limitation, RBC Dominion Securities Inc., which is a foreign affiliate of RBC Capital Markets, LLC. This report has been prepared by RBC Capital Markets, LLC, which is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada.

Non-U.S. Analyst Disclosure: Richard Tan and Carolyn Schroeder, employees of RBC Wealth Management USA's foreign affiliate RBC Dominion Securities Inc.; Frédérique Carrier and Thomas McGarrity, employees of RBC Wealth Management USA's foreign affiliate RBC Europe Limited; Jasmine Duan, an employee of RBC Investment Services (Asia) Limited; and Nicholas Gwee, an employee of Royal Bank of Canada, Singapore Branch contributed to the preparation of this publication. These individuals are not registered with or qualified as research analysts with the U.S. Financial Industry Regulatory Authority ("FINRA") and, since they are not associated persons of RBC Wealth Management, they may not be subject to FINRA Rule 2241 governing communications with subject companies, the making of public appearances, and the trading of securities in accounts held by research analysts.

In the event that this is a compendium report (covers six or more companies), RBC Wealth Management may choose to provide important disclosure information by reference. To access current

disclosures, clients should refer to <https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2> to view disclosures regarding RBC Wealth Management and its affiliated firms. Such information is also available upon request to RBC Wealth Management Publishing, 60 South Sixth St, Minneapolis, MN 55402.

References to a Recommended List in the recommendation history chart may include one or more recommended lists or model portfolios maintained by RBC Wealth Management or one of its affiliates. RBC Wealth Management recommended lists include the Guided Portfolio: Prime Income (RL 6), the Guided Portfolio: Dividend Growth (RL 8), the Guided Portfolio: ADR (RL 10), and the Guided Portfolio: All Cap Growth (RL 12). RBC Capital Markets recommended lists include the Strategy Focus List and the Fundamental Equity Weightings (FEW) portfolios. The abbreviation 'RL On' means the date a security was placed on a Recommended List. The abbreviation 'RL Off' means the date a security was removed from a Recommended List.

Distribution of Ratings

For the purpose of ratings distributions, regulatory rules require member firms to assign ratings to one of three rating categories - Buy, Hold/Neutral, or Sell - regardless of a firm's own rating categories. Although RBC Capital Markets' ratings of Outperform (O), Sector Perform (SP), and Underperform (U) most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis.

Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Outperform]	755	51.64	220	29.14
Hold [Sector Perform]	619	42.34	126	20.36
Sell [Underperform]	88	6.02	11	12.50

Explanation of RBC Capital Markets, LLC Equity Rating System

An analyst's "sector" is the universe of companies for which the analyst provides research coverage. Accordingly, the rating assigned to a particular stock represents solely the analyst's view of how that stock will perform over the next 12 months relative to the analyst's sector average.

Ratings:

Outperform (O): Expected to materially outperform sector average over 12 months. **Sector Perform (SP):** Returns expected to be in line with sector average over 12 months. **Underperform (U):** Returns expected to be materially below sector average over 12 months. **Restricted (R):** RBC policy precludes certain types of communications, including an investment recommendation, when RBC is acting as an advisor in certain merger or other strategic transactions and in certain other circumstances. **Not Rated (NR):** The rating, price targets and estimates have been removed due to applicable legal, regulatory or policy constraints which may include when RBC Capital Markets is acting in an advisory capacity involving the company.

As of March 31, 2020, RBC Capital Markets discontinued its Top Pick rating. Top Pick rated securities represented an analyst's best

idea in the sector; expected to provide significant absolute returns over 12 months with a favorable risk-reward ratio. Top Pick rated securities have been reassigned to our Outperform rated securities category, which are securities expected to materially outperform sector average over 12 months.

Risk Rating:

The **Speculative** risk rating reflects a security's lower level of financial or operating predictability, illiquid share trading volumes, high balance sheet leverage, or limited operating history that result in a higher expectation of financial and/or stock price volatility.

Valuation and Risks to Rating and Price Target

When RBC Wealth Management assigns a value to a company in a research report, FINRA Rules and NYSE Rules (as incorporated into the FINRA Rulebook) require that the basis for the valuation and the impediments to obtaining that valuation be described. Where applicable, this information is included in the text of our research in the sections entitled "Valuation" and "Risks to Rating and Price Target", respectively.

The analyst(s) responsible for preparing this research report have received (or will receive) compensation that is based upon various factors, including total revenues of RBC Capital Markets, LLC, and its affiliates, a portion of which are or have been generated by investment banking activities of RBC Capital Markets, LLC and its affiliates.

Other Disclosures

Prepared with the assistance of our national research sources. RBC Wealth Management prepared this report and takes sole responsibility for its content and distribution. The content may have been based, at least in part, on material provided by our third-party correspondent research services. Our third-party correspondent has given RBC Wealth Management general permission to use its research reports as source materials, but has not reviewed or approved this report, nor has it been informed of its publication. Our third-party correspondent may from time to time have long or short positions in, effect transactions in, and make markets in securities referred to herein. Our third-party correspondent may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any company mentioned in this report.

RBC Wealth Management endeavors to make all reasonable efforts to provide research simultaneously to all eligible clients, having regard to local time zones in overseas jurisdictions. In certain investment advisory accounts, RBC Wealth Management or a designated third party will act as overlay manager for our clients and will initiate transactions in the securities referenced herein for those accounts upon receipt of this report. These transactions may occur before or after your receipt of this report and may have a short-term impact on the market price of the securities in which transactions occur. RBC Wealth Management research is posted to our proprietary Web sites to ensure eligible clients receive coverage initiations and changes in rating, targets, and opinions in a timely manner. Additional distribution may be done by sales personnel via e-mail, fax, or regular mail. Clients may also receive our research via third-party vendors. Please contact your RBC Wealth Management Financial Advisor for more information regarding RBC Wealth Management research.

Conflicts Disclosure: RBC Wealth Management is registered with the Securities and Exchange Commission as a broker/dealer and an investment adviser, offering both brokerage and investment advisory services. RBC Wealth Management's Policy for Managing Conflicts of Interest in Relation to Investment Research is available from us on our website at <https://www.rbccm.com/GLDisclosure/PublicWeb/DisclosureLookup.aspx?EntityID=2>. Conflicts of interests related to our investment advisory business can be found in Part 2A Appendix 1 of the Firm's Form ADV or the RBC Advisory Programs Disclosure Document. Copies of any of these documents are available upon request through your Financial Advisor. We reserve the right to amend or supplement this policy, Part 2A Appendix 1 of the Form ADV, or the RBC Advisory Programs Disclosure Document at any time.

The authors are employed by one of the following entities: RBC Wealth Management USA, a division of RBC Capital Markets, LLC, a securities broker-dealer with principal offices located in Minnesota and New York, USA; by RBC Dominion Securities Inc., a securities broker-dealer with principal offices located in Toronto, Canada; by RBC Investment Services (Asia) Limited, a subsidiary of RBC Dominion Securities Inc., a securities broker-dealer with principal offices located in Hong Kong, China; by Royal Bank of Canada, Singapore Branch, a licensed wholesale bank with its principal office located in Singapore; and by RBC Europe Limited, a licensed bank with principal offices located in London, United Kingdom.

Research Resources

This document is produced by the Global Portfolio Advisory Committee within RBC Wealth Management's Portfolio Advisory Group. The RBC WM Portfolio Advisory Group provides support related to asset allocation and portfolio construction for the firm's Investment Advisors / Financial Advisors who are engaged in assembling portfolios incorporating individual marketable securities. The Committee leverages the broad market outlook as developed by the RBC Investment Strategy Committee, providing additional tactical and thematic support utilizing research from the RBC Investment Strategy Committee, RBC Capital Markets, and third-party resources.

Third-party disclaimers

The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of MSCI Inc. ("MSCI") and Standard & Poor's Financial Services LLC ("S&P") and is licensed for use by RBC. Neither MSCI, S&P, nor any other party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

References herein to "LIBOR", "LIBO Rate", "L" or other LIBOR abbreviations means the London interbank offered rate as administered by ICE Benchmark Administration (or any other person that takes over the administration of such rate).

Disclaimer

The information contained in this report has been compiled by RBC Wealth Management, a division of RBC Capital Markets, LLC, from sources believed to be reliable, but no representation or warranty, express or implied, is made by Royal Bank of Canada, RBC Wealth Management, its affiliates or any other person as to its accuracy, completeness or correctness. All opinions and estimates contained in this report constitute RBC Wealth Management's judgment as of the date of this report, are subject to change without notice and are provided in good faith but without legal responsibility. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur. Every province in Canada, state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, the securities discussed in this report may not be eligible for sale in some jurisdictions. This report is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. Nothing in this report constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients, including clients who are affiliates of Royal Bank of Canada, and does not have regard to the particular circumstances or needs of any specific person who may read it. The investments or services contained in this report may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services. To the full extent permitted by law neither Royal Bank of Canada nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct, indirect or consequential loss arising from, or in connection with, any use of this report or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior written consent of Royal Bank of Canada in each instance. Additional information is available upon request.

To U.S. Residents: This publication has been approved by RBC Capital Markets, LLC, Member NYSE/FINRA/SIPC, which is a U.S. registered broker-dealer and which accepts responsibility for this report and its dissemination in the United States. RBC Capital Markets, LLC, is an indirect wholly-owned subsidiary of the Royal Bank of Canada and, as such, is a related issuer of Royal Bank of Canada. Any U.S. recipient of this report that is not a registered broker-dealer or a bank acting in a broker or dealer capacity and that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, should contact and place orders with RBC Capital Markets, LLC. International investing involves risks not typically associated with U.S.

investing, including currency fluctuation, foreign taxation, political instability and different accounting standards.

To Canadian Residents: This publication has been approved by RBC Dominion Securities Inc. RBC Dominion Securities Inc.* and Royal Bank of Canada are separate corporate entities which are affiliated. *Member-Canadian Investor Protection Fund. ©Registered trademark of Royal Bank of Canada. Used under license. RBC Wealth Management is a registered trademark of Royal Bank of Canada. Used under license.

RBC Wealth Management (British Isles): This publication is distributed by RBC Europe Limited and RBC Investment Solutions (CI) Limited. RBC Europe Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority (FCA registration number: 124543). Registered office: Riverbank House, 2 Swan Lane, London, EC4R 3BF, UK. RBC Investment Solutions (CI) Limited is regulated by the Jersey Financial Services Commission in the conduct of investment business in Jersey. Registered office: Gaspé House, 66-72 Esplanade, St Helier, Jersey JE2 3QT, Channel Islands, registered company number 119162.

To Hong Kong Residents: This publication is distributed in Hong Kong by Royal Bank of Canada, Hong Kong Branch which is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission ('SFC'), and RBC Investment Services (Asia) Limited, which is regulated by the SFC.

To Singapore Residents: This publication is distributed in Singapore by the Royal Bank of Canada, Singapore Branch, a registered entity licensed by the Monetary Authority of Singapore. This material has been prepared for general circulation and does not take into account the objectives, financial situation, or needs of any recipient. You are advised to seek independent advice from a financial adviser before purchasing any product. If you do not obtain independent advice, you should consider whether the product is suitable for you. Past performance is not indicative of future performance. If you have any questions related to this publication, please contact the Royal Bank of Canada, Singapore Branch. Royal Bank of Canada, Singapore Branch accepts responsibility for this report and its dissemination in Singapore.

© RBC Capital Markets, LLC 2020 – Member NYSE/FINRA/SIPC

© RBC Dominion Securities Inc. 2020 – Member Canadian Investor Protection Fund

© RBC Europe Limited 2020

© Royal Bank of Canada 2020

All rights reserved

RBC1253