

Global Insight

Weekly

In the land of the giants

Kelly Bogdanova – San Francisco

The five largest stocks in the S&P 500 have accounted for a disproportionate share of stock market returns for some time now. We look at why this is concerning but also why it's not. Patience is required for holders of diversified equity portfolios.

The major equity indexes can be quirky. They are intended to reflect the performance of “the market,” a broad and diverse group of stocks, and they often do. But lately some U.S. indexes haven't mirrored the performance of the overwhelming majority of their stocks.

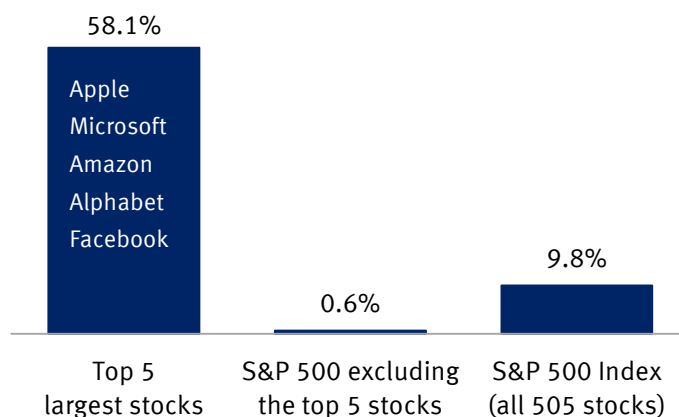
Take the S&P 500, for example. It's widely considered the benchmark or representative U.S. market index due to its composition of large-capitalization stocks, diversified across 11 sectors and numerous sub-industries.

So far in 2020 and for the past year, a handful of the largest stocks within the S&P 500 have far outpaced the index as a whole. Take these giants out of the index, and it's easy to see there is a chasm between the “haves” and “have-nots”:

- The S&P 500 has risen 9.8 percent in the past 12 months (period ending July 31, 2020). This is a healthy return, about two percentage points above the long-term annual average stretching back almost 100 years, excluding dividends.
- But the five largest stocks by market value (capitalization) represent almost all of the index's gains. These tech-oriented stocks have surged 58.1 percent during the same 12-month period: Apple, Microsoft, Amazon, Alphabet (Google), and Facebook.
- When these tech giants are stripped out of the index, the remaining stocks in the S&P 500 have risen only 0.6 percent collectively, according to a study by our national research correspondent.

The five largest stocks have dominated S&P 500 returns

Price return in the past 12 months



Source - National research correspondent, RBC Wealth Management, Thomson Financial, FactSet, Bloomberg; data through 7/31/20

Market pulse

- 3 What to expect from the U.S. economic rebound
- 3 How Canada's recovery is taking shape
- 4 Earnings in Europe better than expected
- 4 Growing divide between China and the U.S.

Click [here](#) for authors' contact information. Priced (in USD) as of 8/6/20 market close, ET (unless otherwise stated). **For important disclosures and required non-U.S. analyst disclosures, see [page 6](#).**

Produced: Aug 6, 2020 17:20ET; Disseminated: Aug 6, 2020 17:23ET



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.

Not a tech bubble redux

This mismatch is concerning to us because the outsized influence of the five largest stocks on the S&P 500, and that of the next largest 20 stocks, is similar to what occurred during the tech bubble roughly 20 years ago.

The five largest stocks make up 22.6 percent of the S&P 500's market capitalization. That's notably above the 18.0 percent level at the peak of the tech bubble, as the top chart shows. The top 25 stocks represent almost as much of the S&P 500 as they did back then.

But we don't think this is the tech bubble 2.0. There are some key differences between then and now.

First, the five largest stocks are less expensive. Today they trade at an elevated price-to-earnings (P/E) ratio of 34.3x based on the forward 12-months consensus earnings forecast. At the height of the tech bubble, the five largest stocks traded at an unseemly P/E ratio of 46.9x. Today's tech giants are also less expensive on other valuation metrics, including net debt-to-EBITDA.

Second, the large mismatch in stock performance seems justified to us based on earnings trends. In the last 12 months, which includes the difficult COVID-19 collapse in earnings, the tech giants have grown earnings by 6.0 percent, while the rest of the S&P 500 has experienced a 13.1 percent decline in earnings, according to our national research correspondent.

Third, there is also a big disparity in profit margins. Net margins have risen 17.5 percent for the five tech giants compared to 10.2 percent for the rest of the S&P 500, on a trailing 12-month basis.

Be disciplined

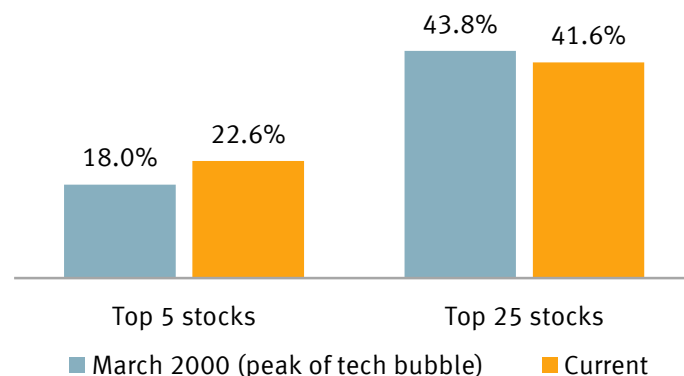
As we've [written previously](#), it's not unusual for a handful of stocks to get hot for periods of time. We think mismatches in performance between the largest contributors to S&P 500 gains and diversified portfolios will largely sort themselves out over the medium and long term.

It's notable that among the five largest stocks during the height of the tech bubble—Microsoft, Cisco Systems, General Electric, Intel, and Exxon Mobil—only one is among the five largest stocks today: Microsoft. And even that stock went through a difficult stretch for more than 10 years after the tech bubble burst.

S&P 500 leadership changes over time, which reinforces our longstanding view that it's prudent to hold diversified portfolios. Until shifts in leadership occur, patience is required.

Market concentration today is comparable to the tech bubble era

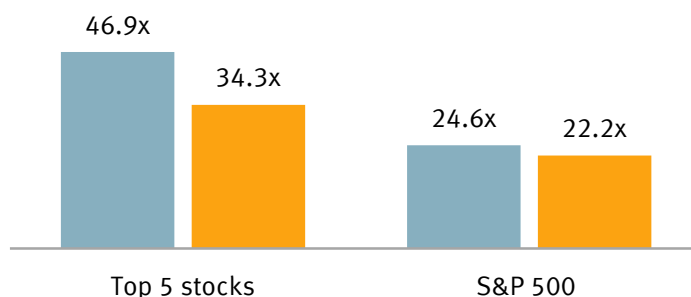
Percentage of market capitalization (weight) in the S&P 500



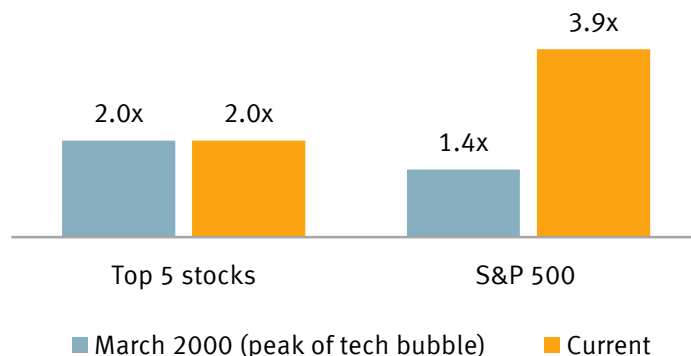
Source - National research correspondent, Thomson Financial, FactSet, RBC Wealth Management; data represents 3-month moving average for both periods, current data as of 7/31/20

The largest 5 stocks are less expensive than during the tech bubble era

Price-to-earnings ratio based on next 12 months consensus earnings forecast



Price-to-earnings divided by growth rate (PEG ratio) based on next 12 months consensus earnings forecast



Source - National research correspondent, Thomson Financial, FactSet; current data as of 7/31/20



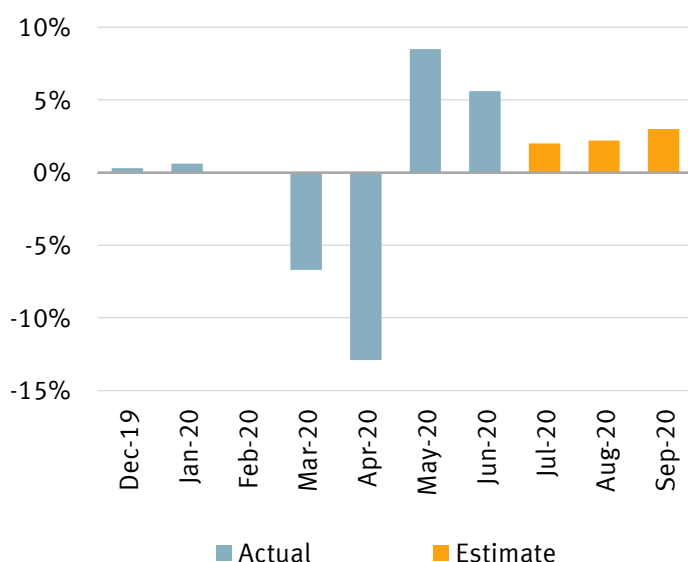
United States

Alan Robinson – Seattle

- **Stocks eked out moderate daily gains for most of the week** with the S&P 500 pushing within 2% of its all-time high posted on Feb. 19. In the tug of war between fiscal stimulus and COVID-19 fears, the former won out as the Senate moved toward a deal before its August recess, with election-year pressures making an eventual deal likely. Virus caseloads in the hardest-hit states appeared to plateau, and positive news flow regarding potential vaccines continued.
- While fiscal stimulus is important in the near term, its longer-term consequences came into focus as ratings agency **Fitch dropped the outlook for its AAA rating on the U.S. from stable to negative**, citing a deteriorating public finance picture. But bond yields continued to fall despite this downgrade and the Mortgage Bankers Association 30-year mortgage rate setting a new record low at 3.1%.
- On the economic front, U.S. data were mixed during the week, with **positive Institute for Supply Management surveys offset by weaker-than-expected construction spending**. All eyes are waiting for the July unemployment report due on Aug. 7. Consensus forecasts are for the unemployment rate to drop to 10.5% from the 14.7% peak seen in April.
- **This will be the first major data point to shed light on the likely third-quarter rebound in the economy.** While

Third-quarter data should improve q/q, but heavy lifting was done at end of Q2

U.S. personal consumption expenditures (m/m change, not annualized)



Source - RBC Wealth Management, FactSet, Atlanta Fed estimates

consensus forecasts are for GDP to grow by 18.8% this quarter from the 32.9% contraction in Q2 2020, if we drill into the monthly details, we see a more muted trend. This was due to an activity surge in May and June, which implies the bulk of the economic rebound may be behind us.

- **Microsoft (MSFT) stock rose during the week as it announced its intention to strike a deal to buy social media upstart TikTok's assets in the U.S., Canada, Australia, and New Zealand.** We think this would assuage White House concerns over China's control over U.S. data, and also potentially provide Microsoft a competitive advantage in the growing field of artificial intelligence.



Canada

Carolyn Schroeder & Sayada Nabi – Toronto

- **Canada's imports and exports jumped sharply in June on the automobile sector's recovery**, though a slower gain in exports led the goods trade deficit to widen to CA\$3.19 billion. According to RBC Economics, the bouncebacks in exports (+17.1% m/m) and imports (+21.8% m/m) were stronger than expected, but both measures were still down relative to pre-pandemic levels. The June increase in trade flows was led by 200%+ increases in both exports and imports of motor vehicles and parts, but increases were also posted in most sub-categories on both sides. **The big risk going forward remains that re-escalation of COVID-19 in the U.S. could prompt renewed shutdowns and weigh on Canadian trade flows again.** At this point, it still looks more likely that the resurgence will stunt the pace of near-term growth south of the border than to re-test the exceptionally low levels of activity in Q2.
- **Canadian GDP data showed a modest economic recovery across the country.** Following an 18% drop across March and April, Canadian GDP rebounded 4.5% in May, and Statistics Canada projects another increase of 5% in June. **The gain in May was widespread but primarily led by the goods and public sector industries along with retail trade.** Construction output grew 17.6% m/m, manufacturing rose 7.4% m/m, and retail was up 16.6% m/m. Moving over to the hospitality sector, accommodations and food services, which experienced a 70% decline over March and April, bounced back 24.2% m/m. While there were many signs of economic recovery throughout the nation, the arts and entertainment segments of the economy declined an additional 3% m/m. As the population continues to alter its day-to-day activities, RBC Economics expects a continued growth lag in the services industry as demand will be under pressure due to the remaining safety protocols amid the pandemic.



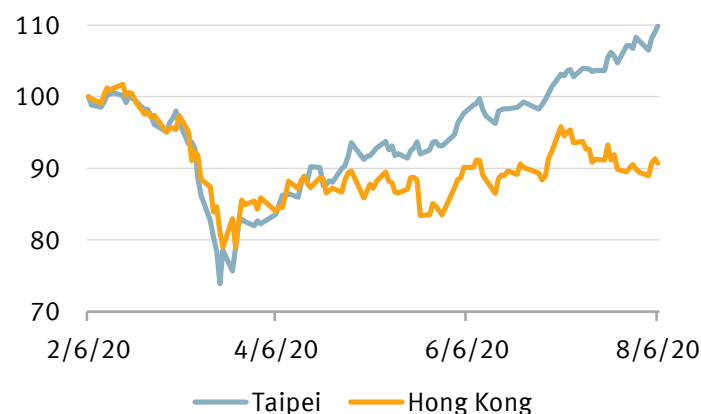
Europe

Frédérique Carrier & Thomas McGarrity, CFA – London

- We are more than halfway through the Q2 earnings season in Europe. So far, in aggregate, Q2 results have been better than expected, though, admittedly, consensus expectations were very subdued. **Some 60% of the companies in the STOXX Europe 600**, an index of UK and Continental European entities, **have beaten consensus earnings per share (EPS) estimates**, a higher rate than the average over the past decade, which stands at 50%.
- Aggregate EPS has declined 23% y/y overall. This was severely impacted by the poor performance of the Energy sector, where earnings collapsed by close to 70% y/y as the freefall in oil prices prompted large asset write-downs. **Excluding Energy, STOXX Europe 600 companies' EPS declined on average by "only" 10% y/y.**
- This seems like an unusually small decline in earnings, given the sharp economic contraction experienced globally in the period. It can be explained by a few larger companies, which did relatively well, cutting expenses ferociously to support earnings, thus skewing the average. **A more telling measure of what companies had to confront is suggested by the EPS contraction for the median stock.** This measure excludes outliers and is more reflective of the highly unfavourable economic conditions faced by European and UK companies in Q2, and points to a more severe earnings contraction of 35% y/y (vs. a 17% y/y decline in Q1).
- Unsurprisingly, cyclicals, especially Financials, but also Industrials and Materials, delivered weak earnings in the quarter. Conversely, the **Consumer Staples and Information Technology sectors have posted the highest levels of beats** versus consensus expectations so far.

A tale of two cities: Taipei shines while Hong Kong stumbles

Relative stock index performance (last six months)



Source - RBC Wealth Management, Refinitiv; normalized daily stock index levels, with 2/6/20 = 100

- Given expectations were exceeded in Q2, **2020 earnings estimates have troughed**, with the consensus now projecting full-year earnings to fall by some 30%. Continued improvement in economic activity and a recovery in oil prices would underpin earnings revisions further, in our view. Consensus expectations currently have earnings rebounding by some 35% in 2021.
- The Bank of England (BoE) kept both the bank rate and its asset purchase target unchanged at 0.1% and £745 billion, respectively. **The BoE thus retains the ability to provide further stimulus in the autumn**, when both the nature of the trading relationship with the EU and shape of the economic recovery will likely be clearer.



Asia Pacific

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

- Asian equities have traded mostly higher this week, but volatility arose in the Chinese and Hong Kong markets after the **U.S. said it will expand its "clean network" campaign against "untrusted" Chinese apps**. This effort could affect some popular apps, such as internet giant Tencent's (700 HK) WeChat. After weeks of threatening to ban TikTok, a video-sharing app, President Donald Trump offered a 45-day reprieve to allow Microsoft (MSFT) to explore buying TikTok's U.S. operations.
- **The U.S. and China will hold talks on Aug. 15 to discuss the progress and challenges in implementing the Phase 1 trade deal**, according to Bloomberg. China has been lagging behind the purchase target set in January due to the COVID-19 outbreak. By the end of the first half of the year, China had bought about 23% of the total purchase target, an acceleration from May's 19% but still far from the target.
- The market viewed the signing of the Phase 1 deal as a milestone between the two countries. However, with **tensions escalating on the trade, technology, financial, and even diplomatic fronts, talks on Phase 2 appear increasingly remote**, in our view. Even Trump has said that the first deal means less to him now. If the Trump administration views the U.S.-China conflict as between two fundamentally opposed systems, it may be harder to strike any agreement going forward.
- China's latest Purchasing Managers' Index (PMI) data suggest **the country extended its economic rebound in July** on recovering foreign demand and strong fiscal support. The official Manufacturing PMI rose from 50.9 in June to 51.1 in July with the main driver a rise in new orders. The export orders component jumped, suggesting that headwinds to foreign demand are easing.



MARKET SCORECARD

Data as of August 6, 2020

Equities (local currency)	Level	MTD	YTD	1 yr	2 yr
S&P 500	3,349.16	2.4%	3.7%	16.2%	17.5%
Dow Industrials (DJIA)	27,386.98	3.6%	-4.0%	5.2%	7.4%
NASDAQ	11,108.07	3.4%	23.8%	41.8%	41.3%
Russell 2000	1,544.62	4.3%	-7.4%	2.8%	-8.3%
S&P/TSX Comp	16,579.10	2.5%	-2.8%	2.7%	1.0%
FTSE All-Share	3,358.54	2.3%	-20.0%	-14.3%	-20.2%
STOXX Europe 600	362.49	1.7%	-12.8%	-1.4%	-6.7%
EURO STOXX 50	3,240.39	2.1%	-13.5%	-1.6%	-7.0%
Hang Seng	24,930.58	1.4%	-11.6%	-4.0%	-10.4%
Shanghai Comp	3,386.46	2.3%	11.0%	21.9%	25.2%
Nikkei 225	22,418.15	3.3%	-5.2%	8.9%	-0.4%
India Sensex	38,025.45	1.1%	-7.8%	2.8%	0.9%
Singapore Straits Times	2,559.10	1.2%	-20.6%	-19.3%	-22.1%
Brazil Ibovespa	104,125.60	1.2%	-10.0%	1.9%	28.5%
Mexican Bolsa IPC	37,998.34	2.6%	-12.7%	-4.5%	-23.0%
Commodities (USD)	Price	MTD	YTD	1 yr	2 yr
Gold (spot \$/oz)	2,065.82	4.6%	36.2%	40.1%	71.1%
Silver (spot \$/oz)	28.95	18.7%	62.2%	76.0%	89.3%
Copper (\$/metric ton)	6,498.75	1.2%	5.7%	14.9%	6.5%
Oil (WTI spot/bbl)	41.95	4.2%	-31.3%	-21.8%	-39.2%
Oil (Brent spot/bbl)	45.16	4.3%	-31.6%	-23.4%	-38.8%
Natural Gas (\$/mmBtu)	2.16	20.0%	-1.4%	2.3%	-24.5%

Govt bonds (bps chg)	Yield	MTD	YTD	1 yr	2 yr
U.S. 10-Yr Tsy	0.535%	0.6	-138.3	-116.8	-240.5
Canada 10-Yr	0.463%	-0.4	-123.9	-77.6	-189.0
U.K. 10-Yr	0.108%	0.4	-71.4	-40.7	-119.6
Germany 10-Yr	-0.531%	-0.7	-34.6	0.5	-92.0
Fixed Income (returns)	Yield	MTD	YTD	1 yr	2 yr
U.S. Aggregate	1.05%	0.1%	7.8%	8.8%	18.9%
U.S. Invest Grade Corp	1.83%	0.3%	8.7%	11.3%	24.1%
U.S. High Yield Corp	5.22%	0.5%	1.2%	5.6%	11.6%
Currencies	Rate	MTD	YTD	1 yr	2 yr
U.S. Dollar Index	92.7740	-0.6%	-3.8%	-5.0%	-2.7%
CAD/USD	0.7514	0.8%	-2.4%	-0.2%	-2.3%
USD/CAD	1.3307	-0.8%	2.4%	0.2%	2.3%
EUR/USD	1.1877	0.8%	5.9%	6.1%	2.8%
GBP/USD	1.3142	0.4%	-0.9%	8.0%	1.5%
AUD/USD	0.7237	1.3%	3.1%	7.0%	-2.0%
USD/JPY	105.5400	-0.3%	-2.8%	-0.9%	-5.3%
EUR/JPY	125.3500	0.5%	2.9%	5.1%	-2.6%
EUR/GBP	0.9037	0.4%	6.8%	-1.8%	1.3%
EUR/CHF	1.0808	0.5%	-0.4%	-1.2%	-6.2%
USD/SGD	1.3687	-0.4%	1.7%	-0.9%	0.0%
USD/CNY	6.9535	-0.3%	-0.1%	-1.0%	1.5%
USD/MXN	22.4147	0.6%	18.4%	14.5%	21.0%
USD/BRL	5.3279	2.0%	32.2%	41.0%	42.6%

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 8/6/20.

Examples of how to interpret currency data: CAD/USD 0.75 means 1 Canadian dollar will buy 0.75 U.S. dollar. CAD/USD -2.4% return means the Canadian dollar fell 2.4% vs. the U.S. dollar year to date. USD/JPY 105.54 means 1 U.S. dollar will buy 105.54 yen. USD/JPY -2.8% return means the U.S. dollar fell 2.8% 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

Carolyn Schroeder – Toronto, Canada

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

Sayada Nabi – Toronto, Canada

sayada.nabi@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.mcgarritty@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: Carolyn Schroeder and Sayada Nabi, 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.

Distribution of Ratings - RBC Capital Markets, LLC Equity Research As of June 30, 2020				
Rating	Count	Percent	Investment Banking Services Provided During Past 12 Months	
			Count	Percent
Buy [Outperform]	776	51.63	238	30.67
Hold [Sector Perform]	635	42.25	130	20.47
Sell [Underperform]	92	6.12	12	13.04

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: 100 Bishopsgate, London, EC2N 4AA, 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