Marketing Material

RE-EXAMINE VALUATION AND GROWTH AT NEW RECORD HIGH

David Bianco
Chief Investment Officer, Americas

IN A NUTSHELL

_ S&P 500 record high plus anemic EPS growth equals rich valuation
_ Fair P/E is driven by real EPS growth plus dividend yield vs. real cost of equity
_ Median S&P 500 ex-Financials trailing P/E is 21x, median forward P/E 19.5x
_ Healthy S&P 500 EPS growth needs recovery in manufacturing, GDP less so
_ Holiday cheer or holiday gloom?: What are the next catalysts for equities?

S&P 500 RECORD HIGH PLUS ANEMIC EPS GROWTH EQUALS RICH VALUATION

S&P 500 continues to make new highs ever since surpassing its previous high in late October. At 3093, it is 18.9x our 2019 estimated (E) earnings per share (EPS) of 163.50 dollars (USD), and 18.2x our 2020E EPS of 170 USD. Our 2020 EPS forecast represents only 4% year-over-year (y/y) growth. However, we believe mid-single digit EPS growth can be achieved if trade tension eases and a deal to lower tariffs is signed. If inflation is 2%, which is the U.S. Federal Reserve's (Fed's) symmetric target, then 5% EPS growth is 3% real, which is slightly below but near long-term historical values. To sustain a steady-state price-to-earnings ratio (P/E) (1 / real cost of equity), real EPS growth plus dividend yield must equal the real cost of equity. Given real bond yield (10-year Treasury-Inflation-Protected-Securities (TIPS) yield) slightly over 0%, we estimate the S&P's real cost of equity at about 5.25%. Real EPS growth of 3% with a 2% dividend yield will cover a 5.0-5.5% real cost of equity, which justifies a trailing P/E of 18x-20x on non-GAAP S&P 500 EPS. Based on our intrinsic valuation, S&P 500 at ~3000 or 18.5x 2019 S&P 500 EPS is fair value. So we see current valuation a little rich, but such overshoot is understandable on the optimistic sentiment from developments to reduce trade tariffs and other geopolitical risks including Brexit.

FAIR P/E IS DRIVEN BY REAL EPS GROWTH PLUS DIVIDEND YIELD VS. REAL COST OF EQUITY

Shareholders are compensated by capital gains and dividend yield. EPS growth drives capital gains over the long-term and EPS retention and reinvestment drive EPS growth (inflation aside). The opportunity cost of retained EPS is a forgone dividend. Thus, anytime a dividend yield is less than the real cost of equity, a company should generate long-term EPS growth that provides offsetting compensation. EPS growth is merely a dividend substitute and is value neutral unless real EPS growth plus dividend yield exceeds or falls short of the real cost of equity. EPS growth above this threshold can be considered value-added EPS growth or rising economic profit. EPS growth below this threshold should receive compressed or punitive valuations. Clearly S&P 500 EPS growth has been sub-par in 2019 and likely runs slightly short of the threshold in 2020 too, but the very low real interest rates compensate partly for such anemic EPS growth. We try to stay disciplined in our S&P 500 valuation, thus not ready yet to apply a P/E above 18.5x at the moment. But if some substantive version of a trade deal is reached and S&P 500 EPS growth prospects brighten, and real long-term yields stay low, then S&P 500 P/E has more upside, and vice versa.

MEDIAN S&P 500 EX-FINANCIALS TRAILING P/E IS 21X, MEDIAN FORWARD P/E 19.5X

Financials especially big banks trade at a large discount to the S&P 500. Valuations of S&P 500 ex Financials are richer. The median trailing P/E of S&P 500 non-financial stocks is 21x and median forward P/E is 19.5x, highest since 1985 except for during the Tech bubble. Our P/E/Vix measure shows some complacency in the U.S. equity market and it is not far from the threshold for over-exuberance. All these valuations are at or above the levels that contributed to multiple market corrections in recent years.

HEALTHY S&P 500 EPS GROWTH NEEDS RECOVERY IN MANUFACTURING, GDP LESS SO

U.S. manufacturing is concentrated on heavy industries, producing sophisticated industrial, tech, and health-care equipment. And much of the growth in U.S. manufacturing has been linked to emerging-market (EM) growth and especially EM Asia. China as the largest EM economy has exemplified the stages of EM economic development: export-led, then industrialization and less-sophisticated manufacturing, infrastructure construction, urbanization, to consumption drive, and high technologies. And the demand for U.S. manufacturing has shifted from industrial equipment for producing capital intensive commodities and for construction, to technology hardware, software, robotics, next-gen network etc. In the last two decades, the leading component that has driven the growth in U.S. industrial production is tech related. More than half of S&P 500 revenue is from manufacturing industries, but manufacturing is only 11% of U.S. gross domestic product (GDP). We need to see some trade tension relief and manufacturing recovery for the S&P 500 to return to mid-to-high single digit EPS growth.

HOLIDAY CHEER OR HOLIDAY GLOOM?: WHAT ARE THE NEXT CATALYSTS FOR EQUITIES?

We expect the S&P 500 to be range bound as the overhang uncertainties unfold, with probably slightly more downside risk. How will the trade talks go, if or not a trade deal will be reached, the details of the deal if reached; How the Fed characterizes the health of the economy, what are the next steps of Fed policy; What is the permanent impact of the trade war, how will it affect multinational companies' growth plans and capital allocation. We keep our next 5% price move of S&P 500 as "Down."

GLOSSARY

Brexit is a combination of the words "Britain" and "Exit" and describes the exit of the United Kingdom of the European Union.

The CBOE Volatility Index (Vix) is a trademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index. It is a popular measure of the volatility of the S&P 500 as implied in the short term option prices on the index.

A correction is a decline in stock market prices.

Cost of equity (CoE) is the return (often expressed as a rate of return) a firm theoretically pays to its equity investors, to compensate for the risk they undertake by investing their capital.

The dividend yield is the dividend that a company pays out each year divided by its share price.

Earnings per share (EPS) is calculated as a company's net income minus dividends of preferred stock, all divided by the total number of shares outstanding.

Emerging markets (EM) are economies not yet fully developed in terms of, amongst others, market efficiency and liquidity.

Generally accepted accounting principles, or GAAP, are a set of rules that encompass the details, complexities, and legalities of business and corporate accounting.

The gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.

Inflation is the rate at which the general level of prices for goods and services is rising and, subsequently, purchasing power is falling.

The intrinsic value is the one that comes closest to the value that an objective fundamental analysis would ascribe to an asset.

The price-to-earnings (P/E) ratio compares a company's current share price to its earnings per share.

In economics, a real value is adjusted for inflation.

Treasury Inflation-Protected Securities (TIPS) are a form of U.S. Treasury bonds designed to protect investors against inflation. These bonds are indexed to inflation and pay investors a fixed interest rate as the bond's par value adjusts with the inflation rate.

The U.S. dollar (USD) is the official currency of the United States and its overseas territories.

The U.S. Federal Reserve, often referred to as "the Fed", is the central bank of the United States.

APPENDIX: PERFORMANCE OVER THE PAST 5 YEARS (12-MONTH PERIODS)

	10/14 - 10/15	10/15 - 10/16	10/16 - 10/17	10/17 - 10/18	10/18 - 10/19
S&P 500	5.2%	4.5%	23.6%	7.3%	14.7%

Past performance is not indicative of future returns.
Sources: Bloomberg Finance L.P., DWS Investment Management Americas Inc. as of 11/12/19

IMPORTANT INFORMATION: EMEA

The following document is intended as marketing communication.
DWS is the brand name under which DWS Group GmbH & Co. KGaA and its subsidiaries operate their business activities. Clients will be provided DWS products or services by one or more legal entities that will be identified to clients pursuant to the contracts, agreements, offering materials or other documentation relevant to such products or services.
The information contained in this document does not constitute investment advice.
All statements of opinion reflect the current assessment of DWS Investment GmbH and are subject to change without notice.
Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical performance analysis, therefore actual results may vary, perhaps materially, from the results contained here.
Past performance, [actual or simulated], is not a reliable indication of future performance.
The information contained in this document does not constitute a financial analysis but qualifies as marketing communication. This marketing communication is neither subject to all legal provisions ensuring the impartiality of financial analysis nor to any prohibition on trading prior to the publication of financial analyses.
This document and the information contained herein may only be distributed and published in jurisdictions in which such distribution and publication is permissible in accordance with applicable law in those jurisdictions. Direct or indirect distribution of this document is prohibited in the USA as well as to or for the account of US persons and persons residing in the USA.

IMPORTANT INFORMATION: UK

Issued in the UK by DWS Investments UK Limited. DWS Investments UK Limited is authorised and regulated by the Financial Conduct Authority (Registration number 429806).
DWS is the brand name of DWS Group GmbH & Co. KGaA. The respective legal entities offering products or services under the DWS brand are specified in the respective contracts, sales materials and other product information documents. DWS, through DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively “DWS”) are communicating this document in good faith and on the following basis.
This document is a financial promotion and is for general information purposes only and consequently may not be complete or accurate for your specific purposes. It is not intended to be an offer or solicitation, advice or recommendation, or the basis for any contract to purchase or sell any security, or other instrument, or for DWS to enter into or arrange any type of transaction as a consequence of any information contained herein. It has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor.
This document does not identify all the risks (direct and indirect) or other considerations which might be material to you when entering into a transaction. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS, are suitability and appropriate, in light of their particular investment needs, objectives and financial circumstances. We assume no responsibility to advise the recipients of this document with regard to changes in our views.
We have gathered the information contained in this document from sources we believe to be reliable; but we do not guarantee the accuracy, completeness or fairness of such information and it should not be relied on as such. DWS has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate.
DWS does not give taxation or legal advice. Prospective investors should seek advice from their own taxation agents and lawyers regarding the tax consequences on the purchase, ownership, disposal, redemption or transfer of the investments and strategies suggested by DWS. The relevant tax laws or regulations of the tax authorities may change at any time. DWS is not responsible for and has no obligation with respect to any tax implications on the investment suggested.
This document contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author‘s judgment as of the date of this document. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/ or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements or to any other financial information contained in this document.
PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Publisher: DWS Investment GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany

IMPORTANT INFORMATION – APAC

DWS is the brand name of DWS Group GmbH & Co. KGaA. The respective legal entities offering products or services under the DWS brand are specified in the respective contracts, sales materials and other product information documents. DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively "DWS Group") are communicating this document in good faith and on the following basis.

This document has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS Group, are appropriate, in light of their particular investment needs, objectives and financial circumstances. Furthermore, this document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as giving investment advice.

DWS Group does not give tax or legal advice. Investors should seek advice from their own tax experts and lawyers, in considering investments and strategies suggested by DWS Group. Investments with DWS Group are not guaranteed, unless specified.

Investments are subject to various risks, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time. Furthermore, substantial fluctuations of the value of the investment are possible even over short periods of time. The terms of any investment will be exclusively subject to the detailed provisions, including risk considerations, contained in the offering documents. When making an investment decision, you should rely on the final documentation relating to the transaction and not the summary contained herein. Past performance is no guarantee of current or future performance. Nothing contained herein shall constitute any representation or warranty as to future performance.

Although the information herein has been obtained from sources believed to be reliable, DWS Group does not guarantee its accuracy, completeness or fairness. No liability for any error or omission is accepted by DWS Group. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid. All third party data (such as MSCI, S&P, Dow Jones, FTSE, Bank of America Merrill Lynch, Factset & Bloomberg) are copyrighted by and proprietary to the provider. DWS Group or persons associated with it may (i) maintain a long or short position in securities referred to herein, or in related futures or options, and (ii) purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation.

The document was not produced, reviewed or edited by any research department within DWS Group and is not investment research. Therefore, laws and regulations relating to investment research do not apply to it. Any opinions expressed herein may differ from the opinions expressed by other DWS Group departments including research departments. This document may contain forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this material. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS Group as to the reasonableness or completeness of such forward looking statements or to any other financial information contained herein.

This document may not be reproduced or circulated without DWS Group's written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including the United States.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS Group to any registration or licensing requirement within such jurisdiction not currently met within such jurisdiction. Persons into whose possession this document may come are required to inform themselves of, and to observe, such restrictions.

Unless notified to the contrary in a particular case, investment instruments are not insured by the Federal Deposit Insurance Corporation ("FDIC") or any other governmental entity, and are not guaranteed by or obligations of DWS Group.

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited and the content of this document has not been reviewed by the Securities and Futures Commission.

In Singapore, this document is issued by DWS Investments Singapore Limited and the content of this document has not been reviewed by the Monetary Authority of Singapore.

In Australia, this document is issued by DWS Investments Australia Limited (ABN: 52 074 599 401) (AFSL 499640) and the content of this document has not been reviewed by the Australian Securities Investment Commission.

Publisher: DWS Investment GmbH, Mainzer Landstraße 11-17, 60329 Frankfurt am Main, Germany