
This is not a tech bubble... (yet!)

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Portfolio
Construction
Forum

Big Tech Has Been Unstoppable...

As of 31 August 2020

WEIGHT OF TECHNOLOGY+ IN THE MSCI ACWI INDEX

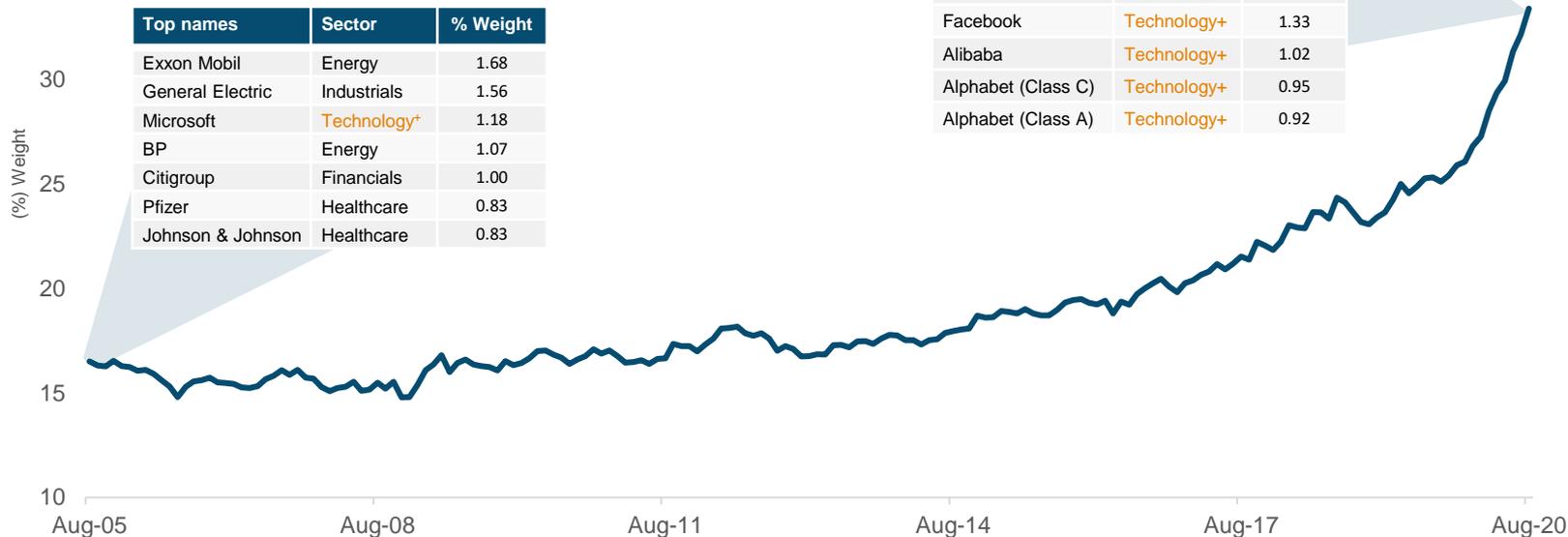
Last 15 Years

35 **15 YEARS AGO: 16% | 1 in top 7**

Top names	Sector	% Weight
Exxon Mobil	Energy	1.68
General Electric	Industrials	1.56
Microsoft	Technology+	1.18
BP	Energy	1.07
Citigroup	Financials	1.00
Pfizer	Healthcare	0.83
Johnson & Johnson	Healthcare	0.83

TODAY: 33% | 7 in top 7

Top names	Sector	% Weight
Apple	Technology+	4.26
Microsoft	Technology+	3.07
Amazon	Technology+	2.75
Facebook	Technology+	1.33
Alibaba	Technology+	1.02
Alphabet (Class C)	Technology+	0.95
Alphabet (Class A)	Technology+	0.92



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Source: Factset, MSCI.

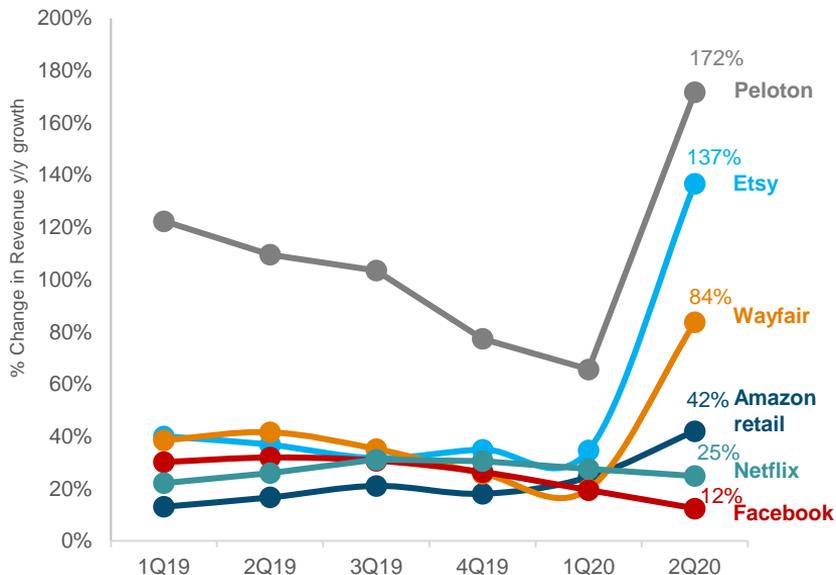
Technology+ is defined as all holdings within the Information Technology sector, plus all holdings in the Automobiles, Entertainment, Interactive Media & Services, Internet & Direct Marketing Retail, Media, Multiline Retail, and Wireless Telecommunication Services Industries using the current MSCI/S&P Global Industry Classification Standard (GICS) for sector and industry reporting.

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...And New Winners Have Also Emerged

CHANGE IN E-COMMERCE REVENUE GROWTH

From 31 March through 30 June 20



NEW WINNERS: YTD PRICE PERFORMANCE

From December 2019 through 31 July 20



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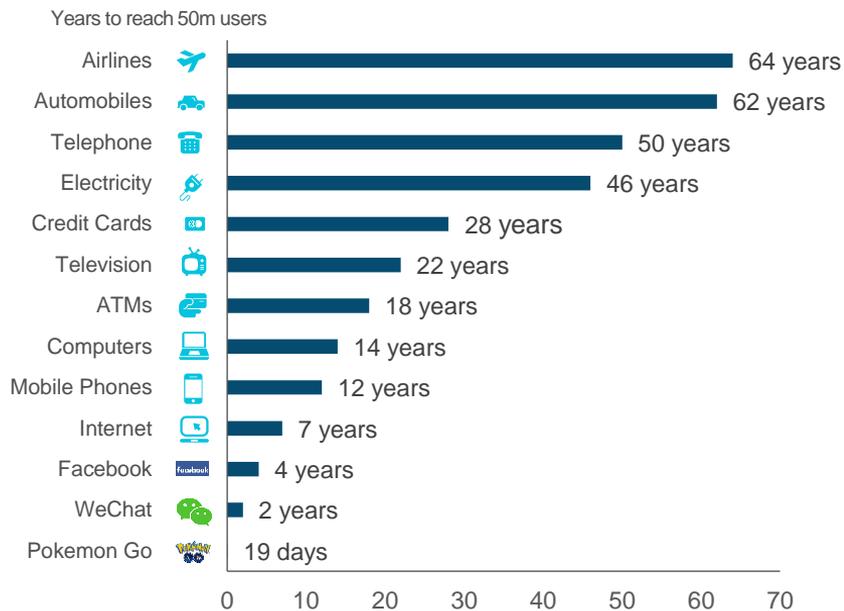
Source: Factset, Quarterly Company Earnings Reports. Facebook revenue growth represents ex-FX earnings.

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Dotted line represents 23 March 2020, the day on which the S&P 500 reached its bottom.

The Pace of Disruption has Accelerated



Source: Marketing 360. The information presented herein is shown for illustrative, informational purposes only. This is not intended to be investment advice or a recommendation to take any particular investment action. The specific securities/companies identified and described above do not necessarily represent securities/companies that were purchased, sold or recommended and no assumptions should be made that the securities/ companies identified and discussed were or will be profitable. The trademarks shown above are the property of the respective owners. T. Rowe Price is not endorsed, sponsored, or otherwise affiliated with any of the trademark owners represented by the trademarks shown above.

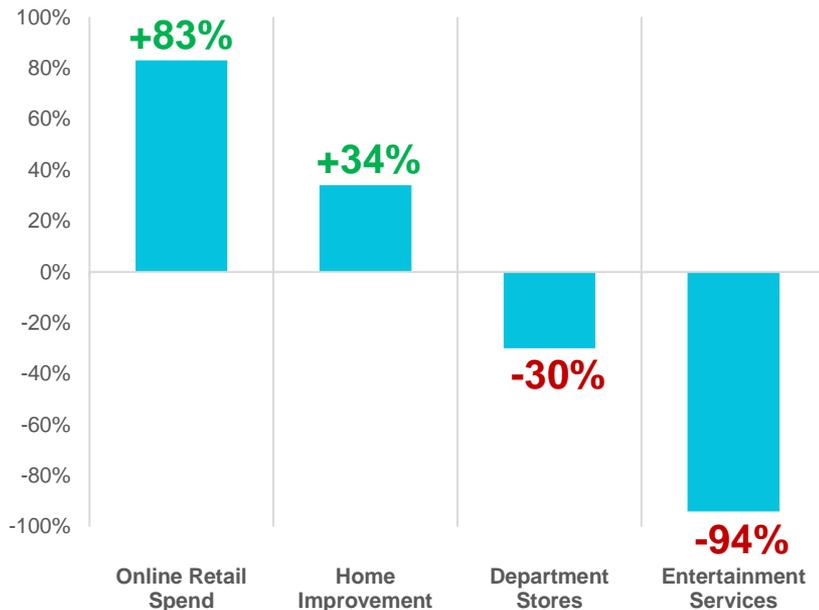


And COVID-19 Has Further Accelerated Change

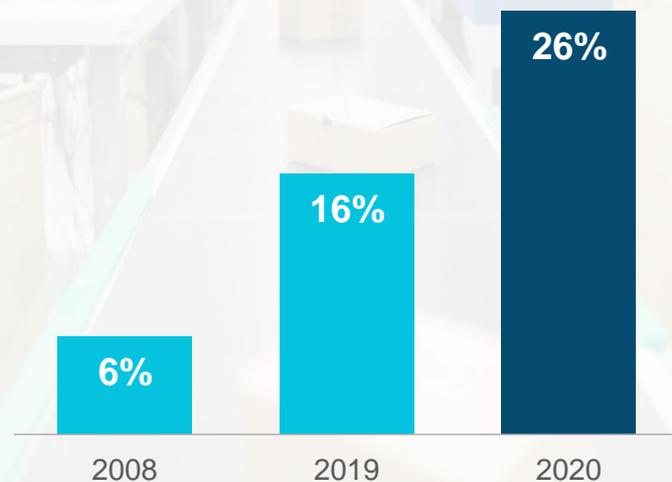
As of 31 August 2020

How We Spend:

Y-o-Y change in card spending habits



US eCommerce Penetration 10 years of growth in 10 weeks



Source: (LHS) BAC internal data. Spend data is of California and represents the YoY change utilizing the 7 day moving average. Worldwide Gartner April 2020.
(RHS) Source for chart: Jeffries Equity Research.

Accelerated Change In Action

As of 30 June 2020

Messaging across
Facebook's platforms
increased

50%
in March

Etsy reported a
100%
increase in same store
sales in April

New buyers on
MercadoLibre's
online platform have risen
45%
since February

Amazon hired
175,000
new employees to cope
with accelerated demand

72%
The increase in paid users
of **SEA's** gaming platform
in Q1

Paypal added
7M
net new active users in
April

Active customers at
Farfetch grew
64%
in the first quarter

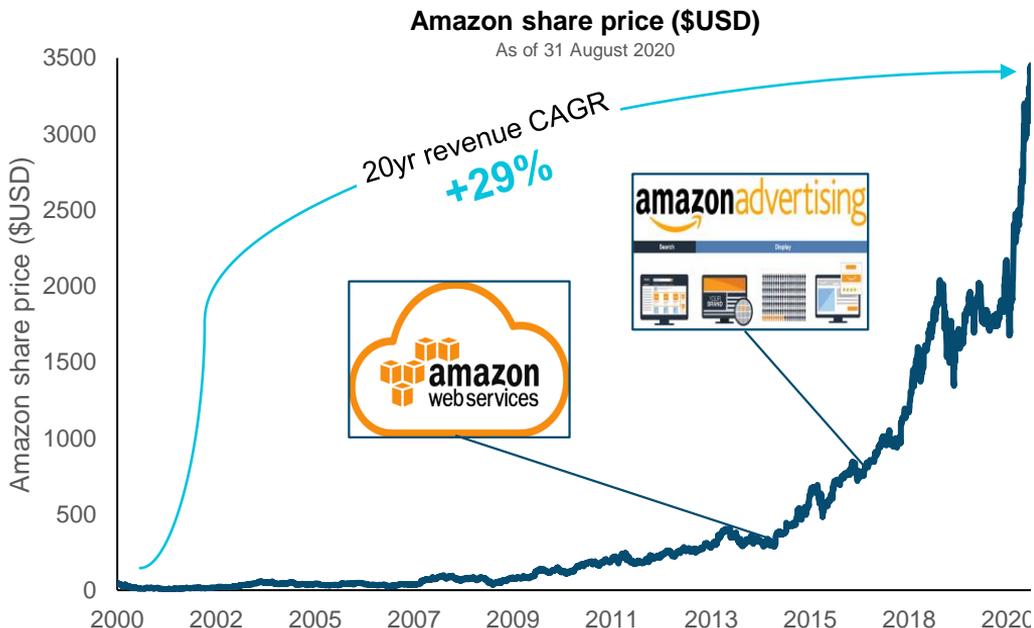
Netflix added
27M
or 1 year's worth of new
subscribers in
6 months

"two years of digital transformation in two months"
Satya Nadella, Microsoft CEO

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Source: Company quarterly earnings releases, Microsoft FQ3 2020 Earnings call

Incumbent Winners Prevail

Amazon's vision and innovation has spurred growth and now provides exposure to 3 of the strongest secular themes



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COVID-19 ACCELERATION

40%

YoY revenue growth in 2Q20

21%

YoY revenue growth in 4Q19

Amazon's secular tailwinds



Offline-to-Online Consumption



Migration to the Cloud

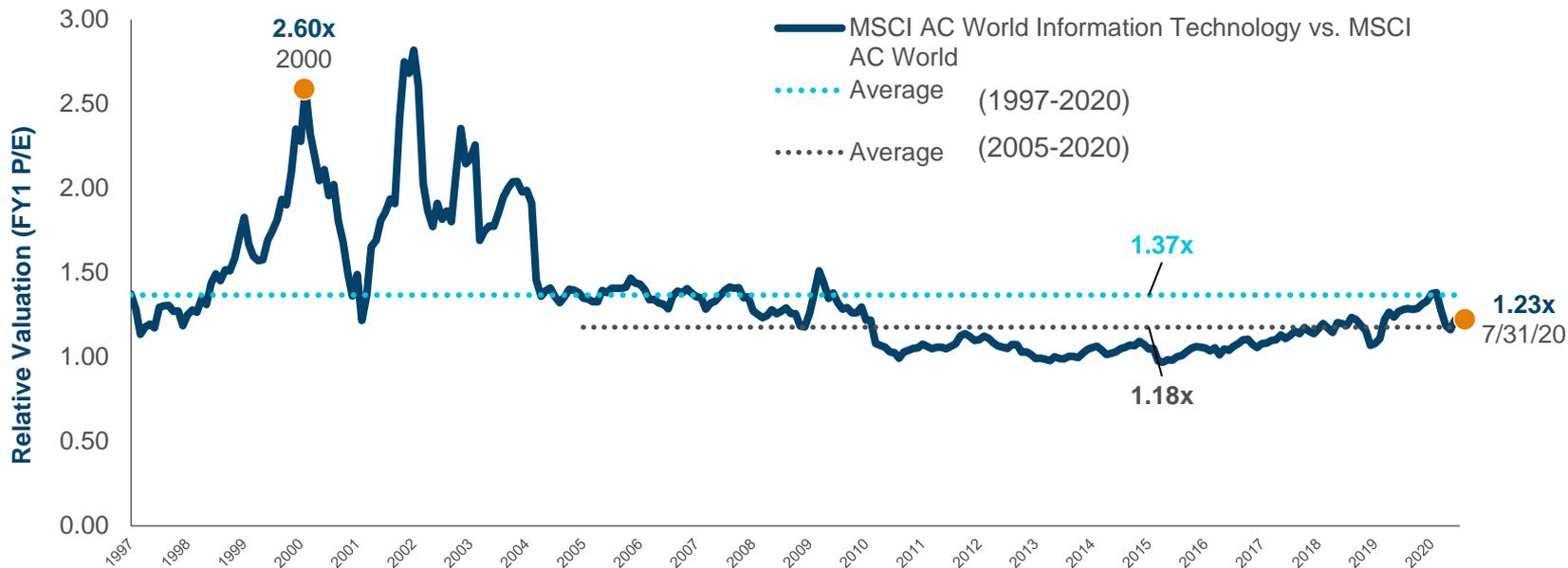


"CAC" as the new rent

Tech now at ~25% Premium To MSCI ACWI VS ~150% in 2000...

January 1997 through 31 July 2020

MSCI AC WORLD INFORMATION TECHNOLOGY RELATIVE TO MSCI AC WORLD INDEX



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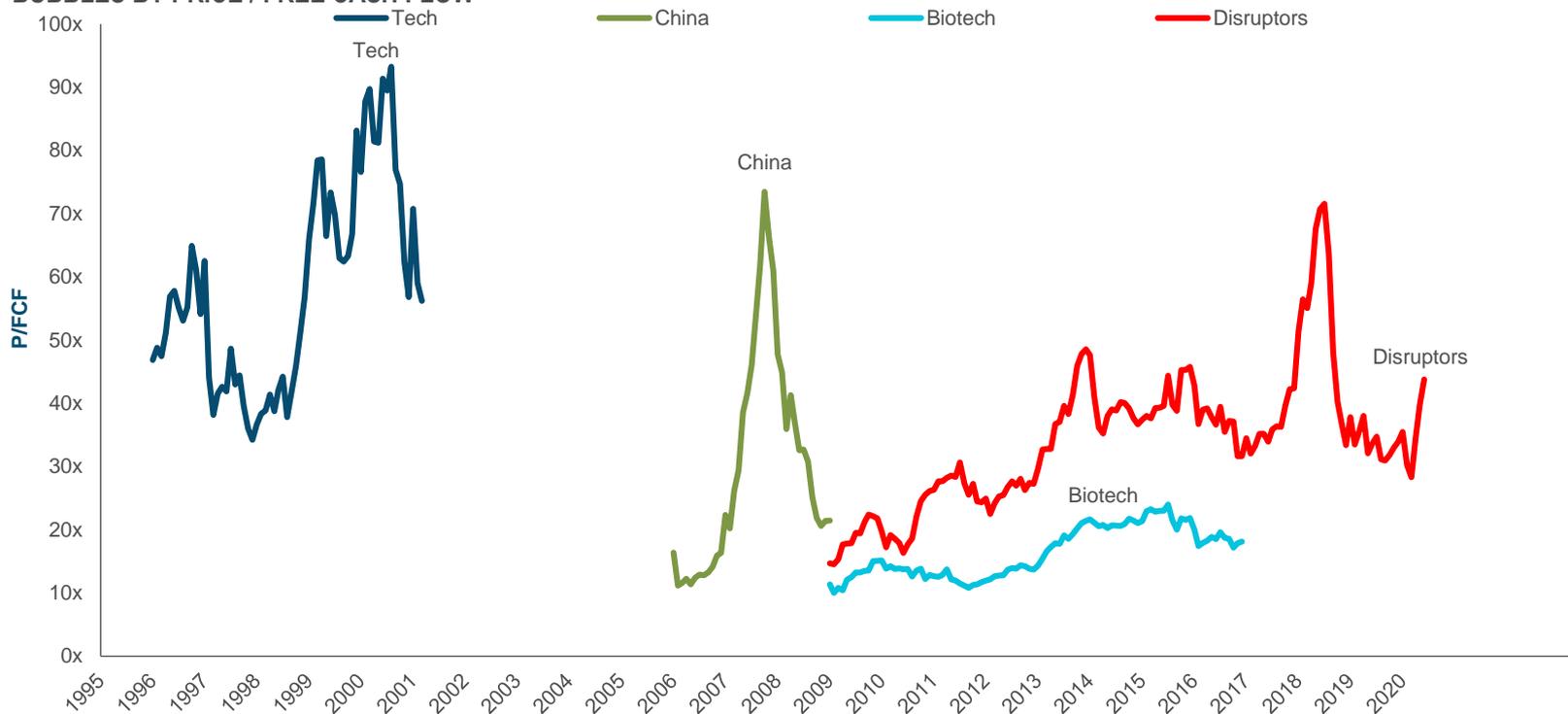
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Includes stocks in the Information Technology sector, combined with stocks in the following GICS industries: Internet & Direct Marketing Retail and Interactive Media & Services. See additional information.

...And We Don't Appear at Bubble Levels of Euphoria (yet)

As of 31 August 2020

BUBBLES BY PRICE / FREE CASH FLOW



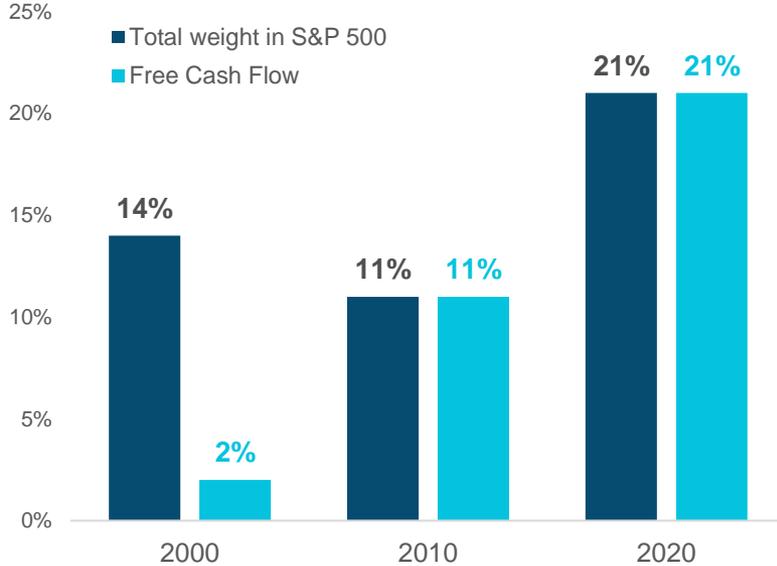
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Index used: Tech = S&P Composite 1500 / Information Technology Sector. China = MSCI China. Biotech = S&P Composite 1500 / Pharmaceuticals Biotechnology & Life Sciences Industry. Disruptors = Market cap weighted blend of S&P 1500 Internet Retail and S&P1500 Interactive Media and Services (After September 2018) / S&P 1500 Internet Software and Services (Before September 2018).

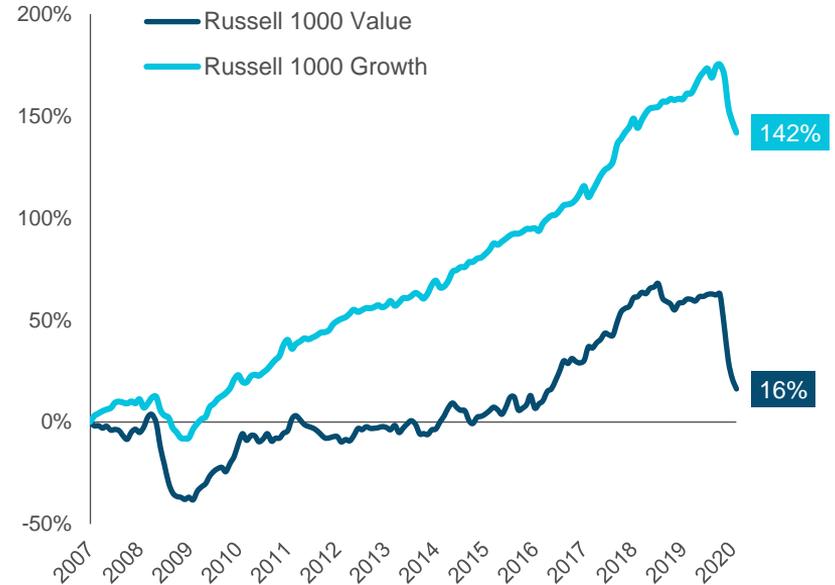
Strong Fundamentals Have Driven Strong Returns

2020 VS 2000: S&P 500, TOP 5 LARGEST COMPANIES

As of 31 August 2020



FREE CASH FLOW GROWTH 1 Jun 07- 30 June 20



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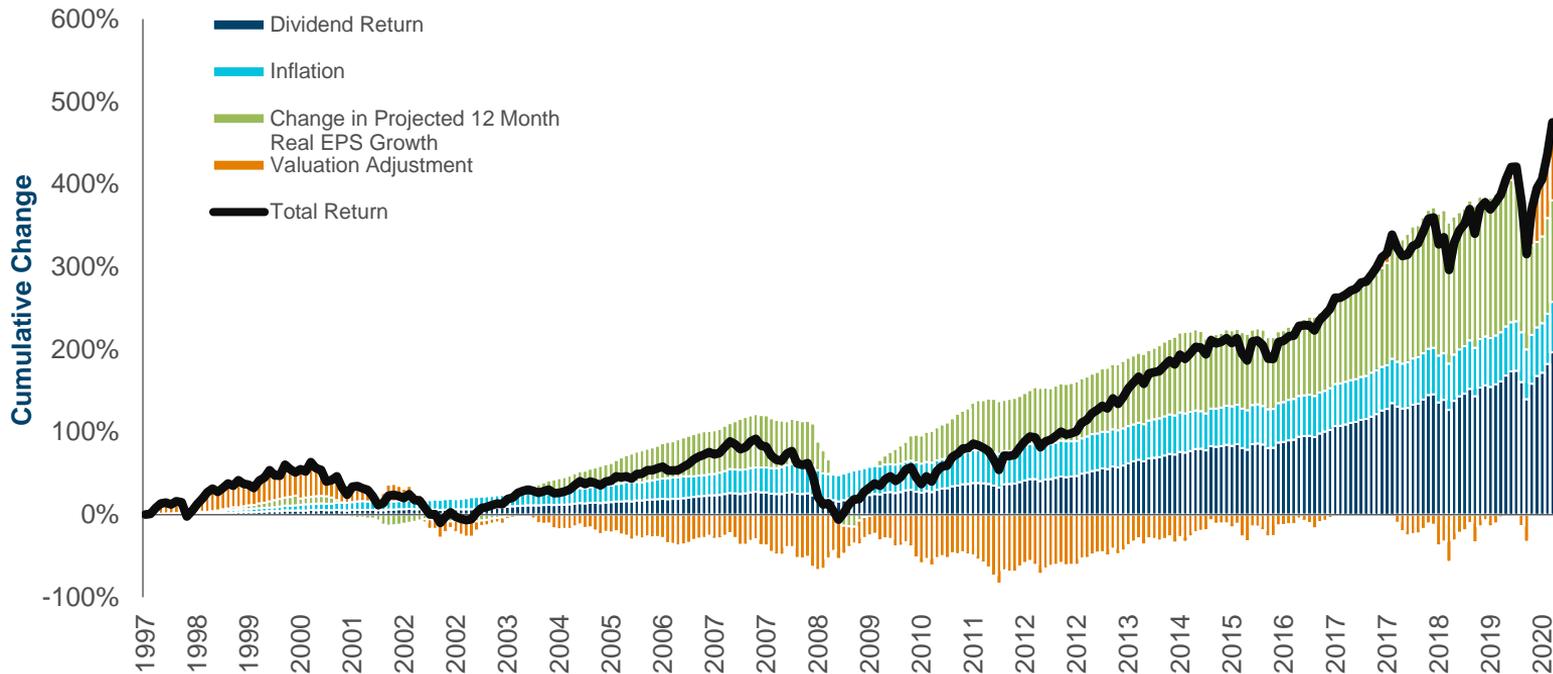
Source: Factset and S&P. See additional information.

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Multiple Expansion Only a Fraction of Returns

As of 31 August 2020

RUSSELL 1000 - TOTAL RETURN DECOMPOSITION

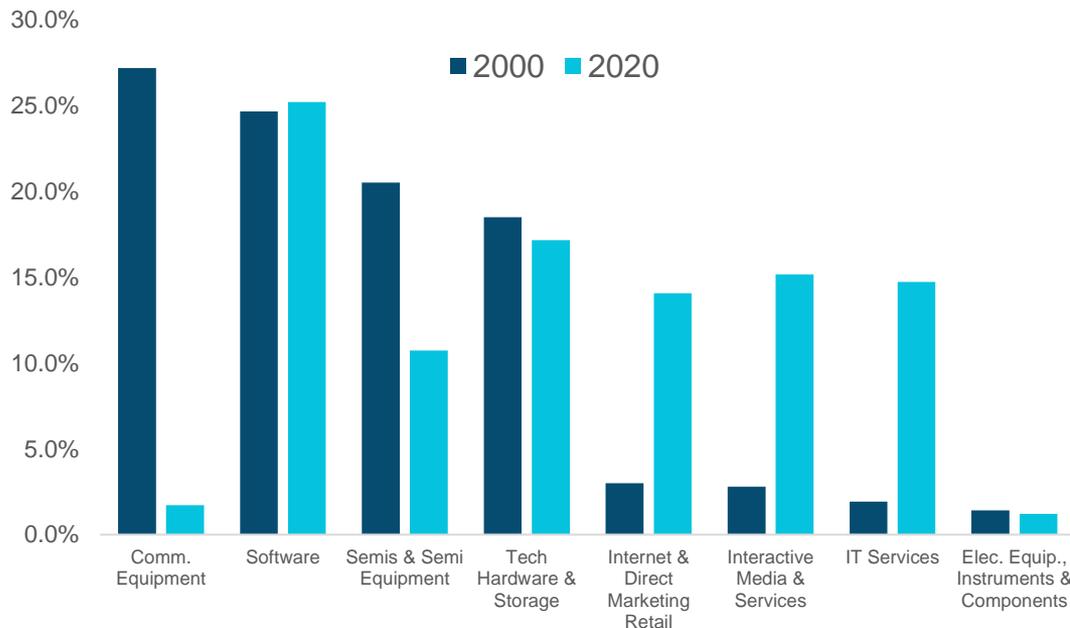


Past performance is not a reliable indicator of future performance.

Source: FactSet, Russell. Valuation adjustment represents the total return after dividends, real earnings growth, and inflation have been subtracted out. It may represent P/E changes, share count reduction, and other factors. T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Tech's Transition Away From Hardware Deserves Higher Multiple

TECHNOLOGY+ INDEX COMPOSITION: 2000 VS 2020



Includes stocks in the Information Technology sector, combined with stocks in the following GICS industries: Internet & Direct Marketing Retail and Interactive Media & Services.

Technology+ is defined as all holdings within the Information Technology sector, plus all holdings in the Automobiles and Internet & Direct Marketing Retail Industries; and all holdings in the Entertainment, Interactive Media and Services, Media, and Wireless Telecommunication Services Industries using the current MSCI/S&P Global Industry Classification Standard (GICS) for sector and industry reporting. Financial data and analytics provider FactSet. Copyright 2020 FactSet. All Rights Reserved.

Online retail + Media + IT services:

2000 = 8%

2020 = 44%

Tech's dominance adds complexity and requires hard choices:

- ✓ COVID-19 has accelerated broad technological transformation with lasting impacts
- ✓ “Tech is expensive” is a too simplistic generalisation
- ✓ As disruption and complexity grows, so does the need to remain active and maintain breadth
- ✓ We don't think this is 1999 yet...but a bubble could be brewin

This is not a tech bubble... (yet!)



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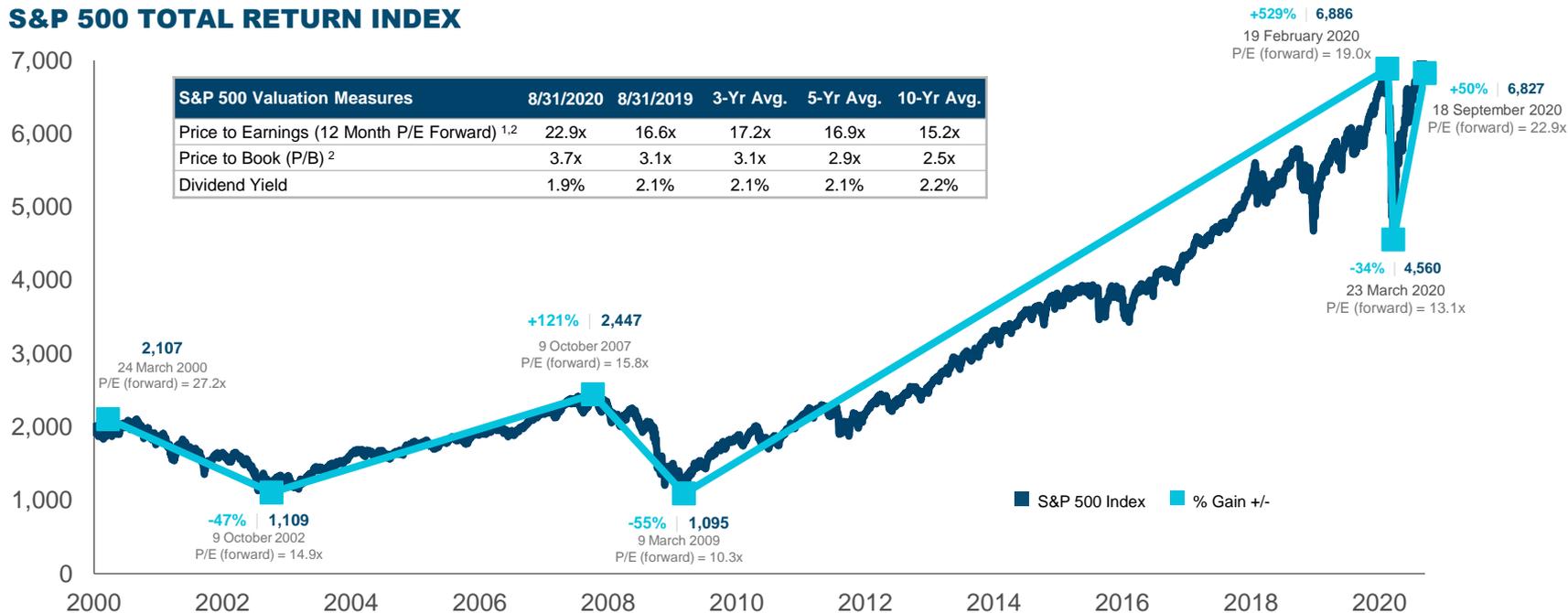


APPENDIX

No Normal Equity Cycle

1 January 2000 to 18 September 2020

S&P 500 TOTAL RETURN INDEX



Past performance is not a reliable indicator of future performance.

¹ Source: I/B/E/S © 2020 Refinitiv. All rights reserved.

² Statistics are based on investment-weighted median.

The S&P 500 Index is made up of primarily large-capitalisation companies that represent a broad spectrum of the U.S. economy and a substantial part of the U.S. stock market's total capitalisation. The S&P 500 Total Return Index represents the value of the S&P500, assuming reinvestment of all distributions.

Sources: Standard & Poors, T. Rowe Price calculations using data from FactSet Research Systems Inc. All rights reserved.

Please refer to Additional Disclosures for further source information.

An Era of 'Growth' Dominance

As of 31 August 2020

MSCI WORLD VALUE VS. MSCI WORLD GROWTH

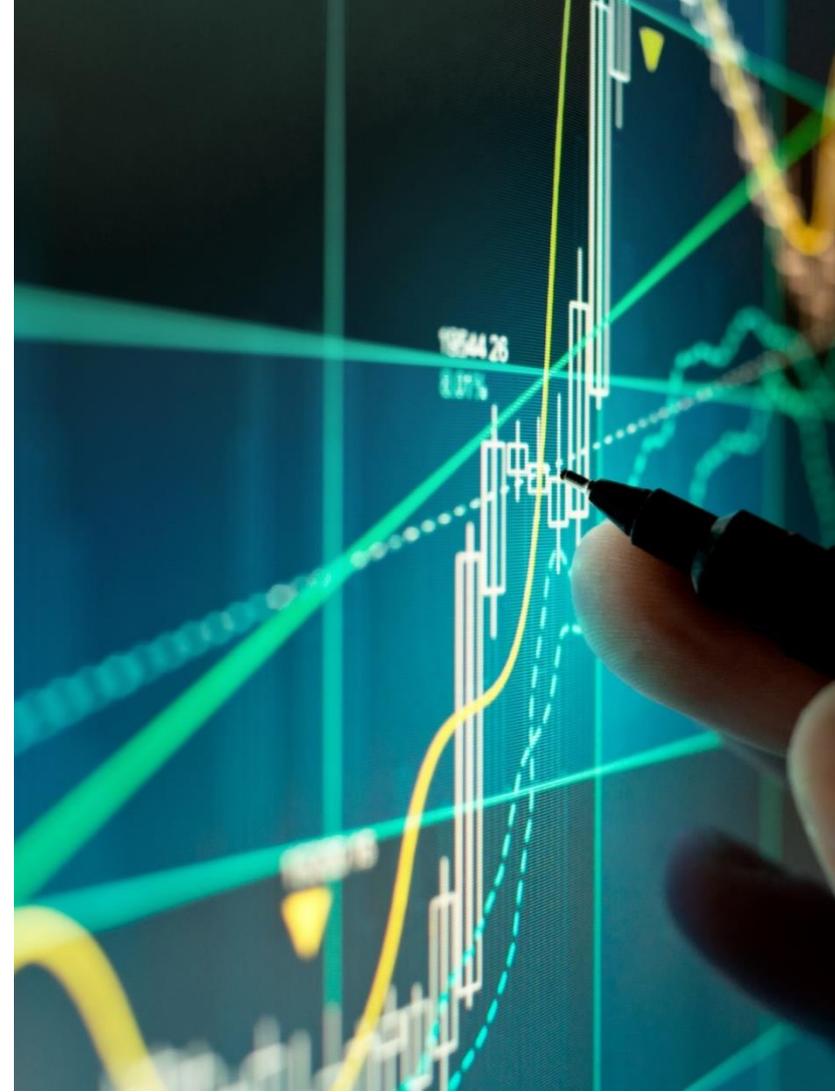
Price Return in USD



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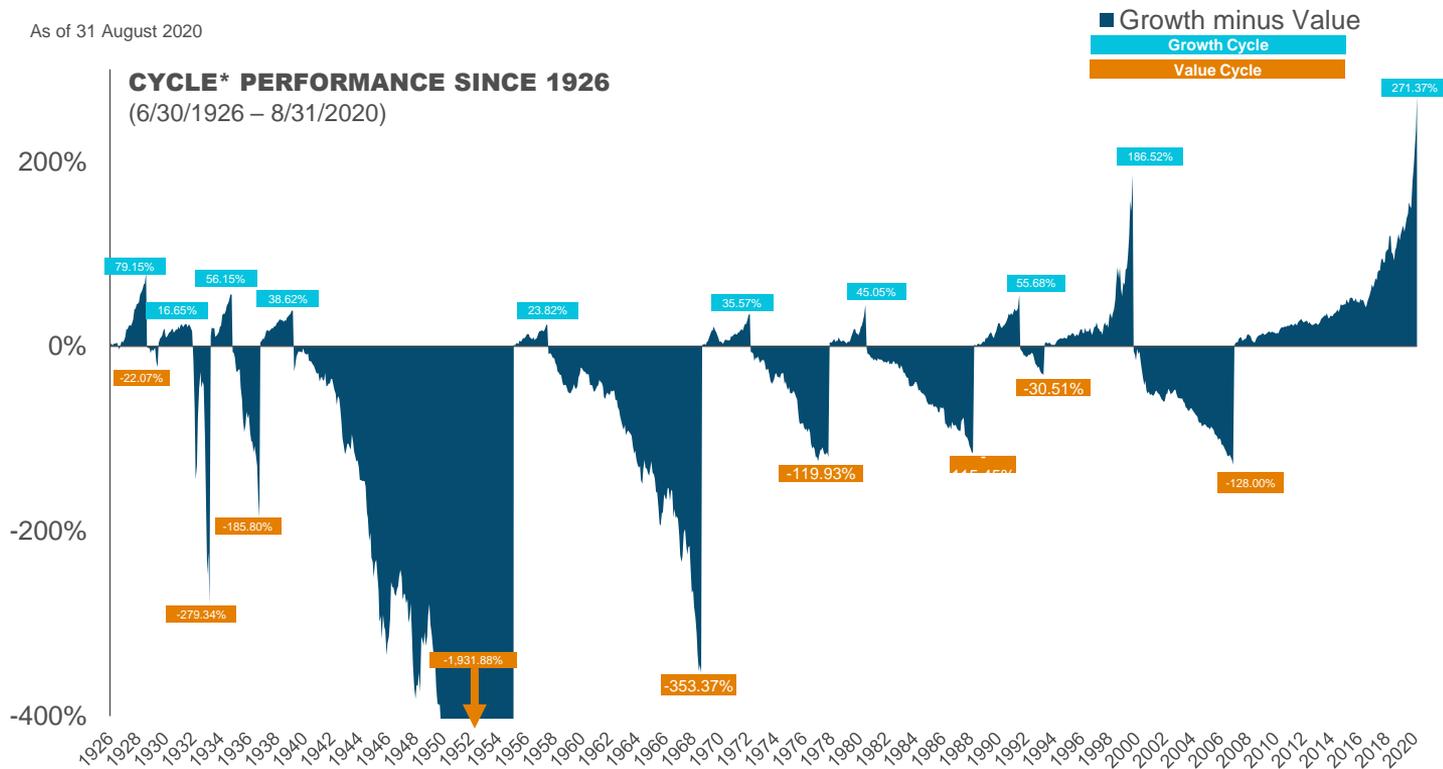
Source: FactSet, MSCI.

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Growth vs. Value Cycles Since 1926

As of 31 August 2020



Past performance is not a reliable indicator of future performance.

*Cycle defined as cumulative periods using month end data where there is more than a 20% swing in relative performance

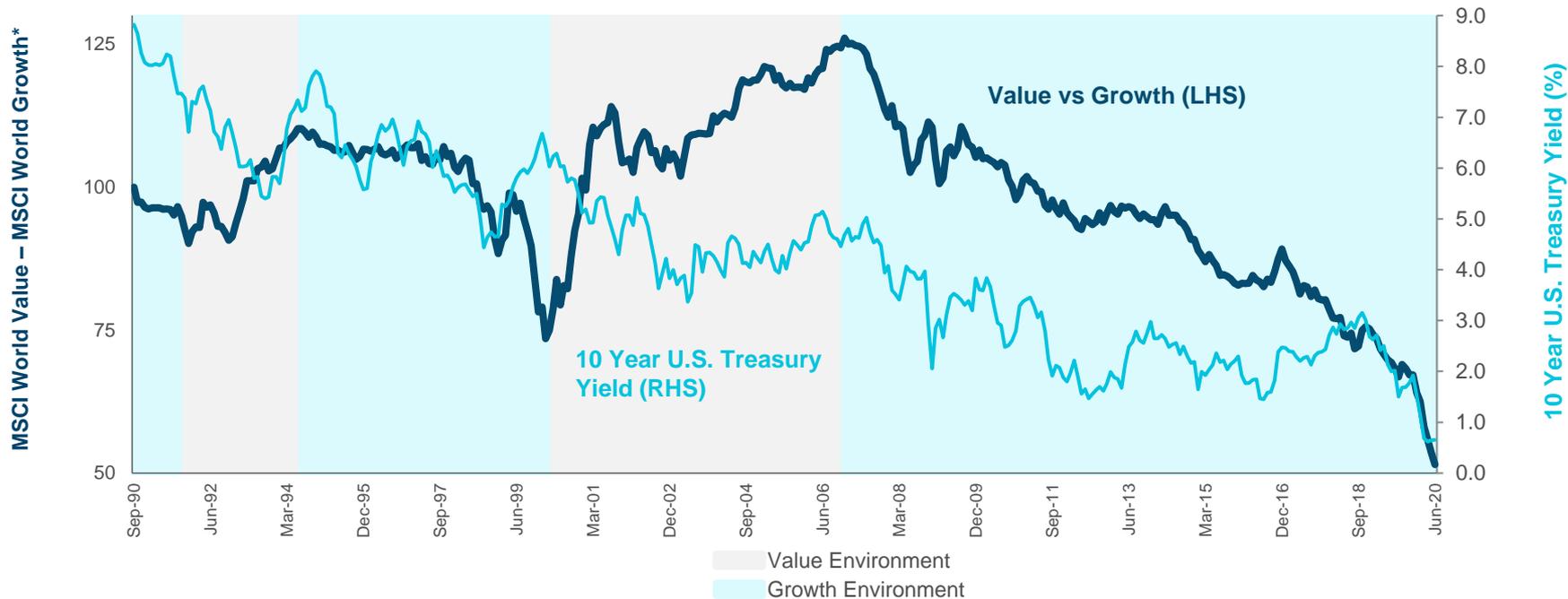
Source: T. Rowe Price analysis using data from Ned Davis Research.

Index: Russell 1000 Growth versus Russell 1000 Value.

Growth Dominance Supported By Rates

As of 30 June 2020

MSCI World Index Growth & Value vs. 10-Year U.S. Treasury Yield



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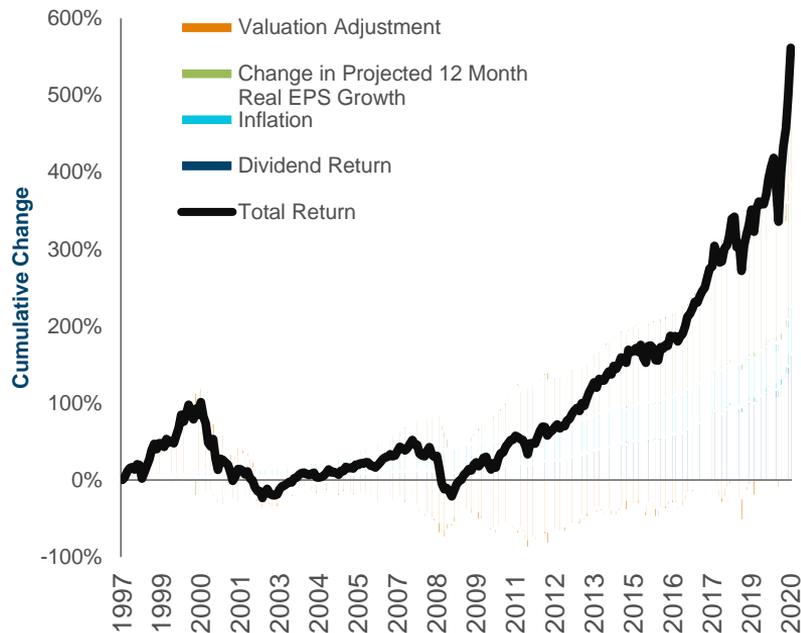
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved, and MSCI.

*Rebased Price Performance (USD)

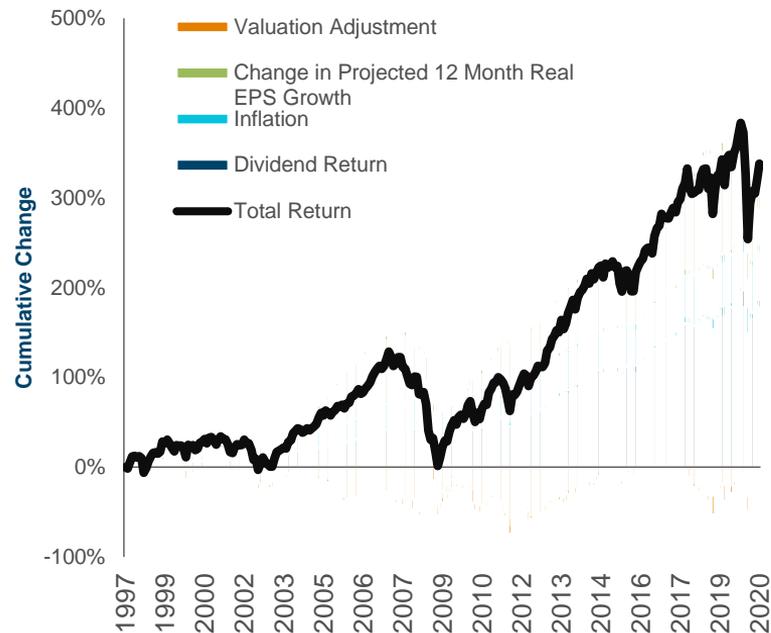
EPS the Key Driver of Growth's Performance

As of 31 August 2020

RUSSELL 1000 GROWTH - TOTAL RETURN DECOMPOSITION



RUSSELL 1000 VALUE - TOTAL RETURN DECOMPOSITION



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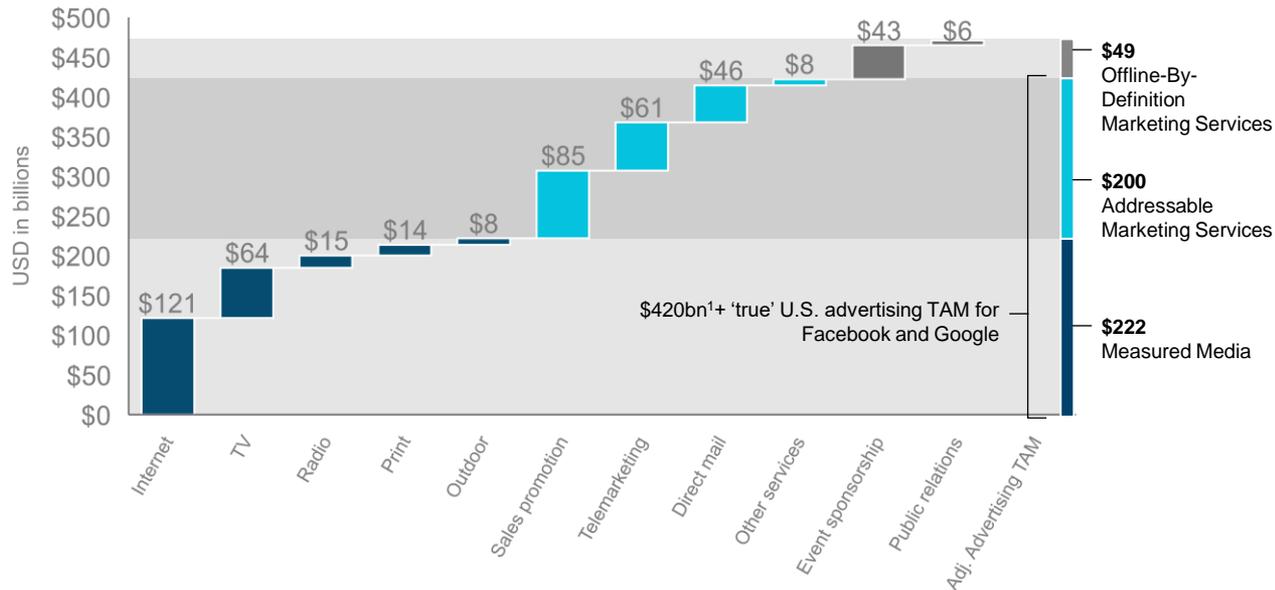
Source: Factset, Russell. Valuation adjustment represents the total return after dividends, real earnings growth, and inflation have been subtracted out. It may represent P/E changes, share count reduction, and other factors.

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

U.S. Advertising Total Addressable Market (TAM) – A Bigger Opportunity

31 December 2019

MEASURED MEDIA + MARKETING SERVICES (2019E)

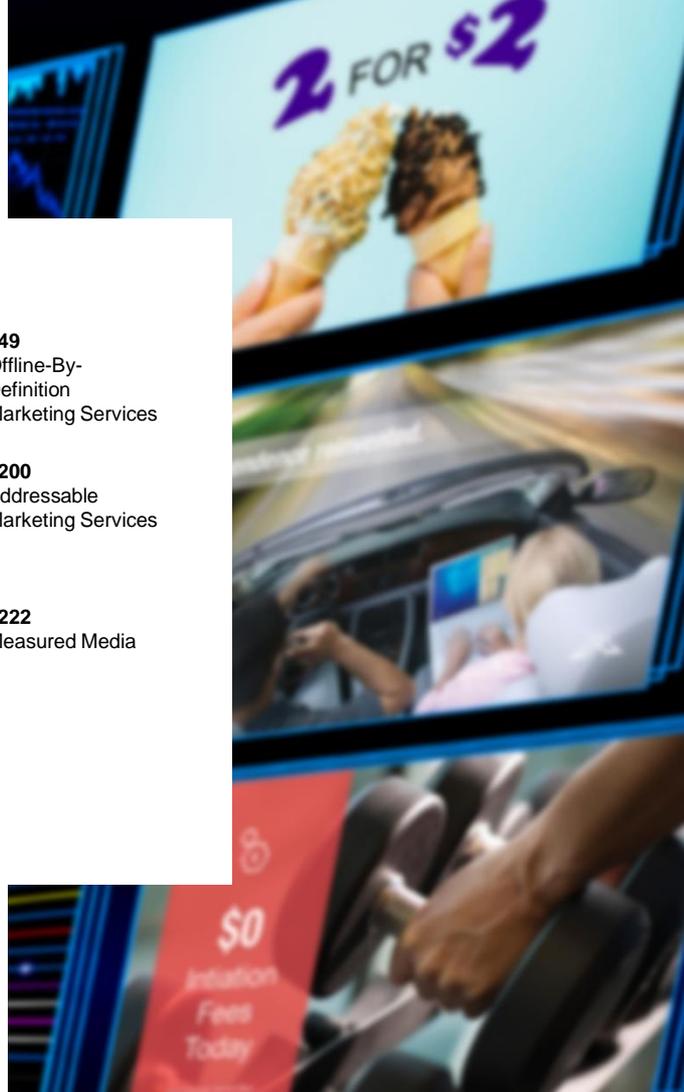


Addressable market for U.S. advertising is two times larger than measured media.

Source: Zenith Media, Magna Global, SNL Kagan and T. Rowe Price estimates.

¹ T. Rowe Price estimates.

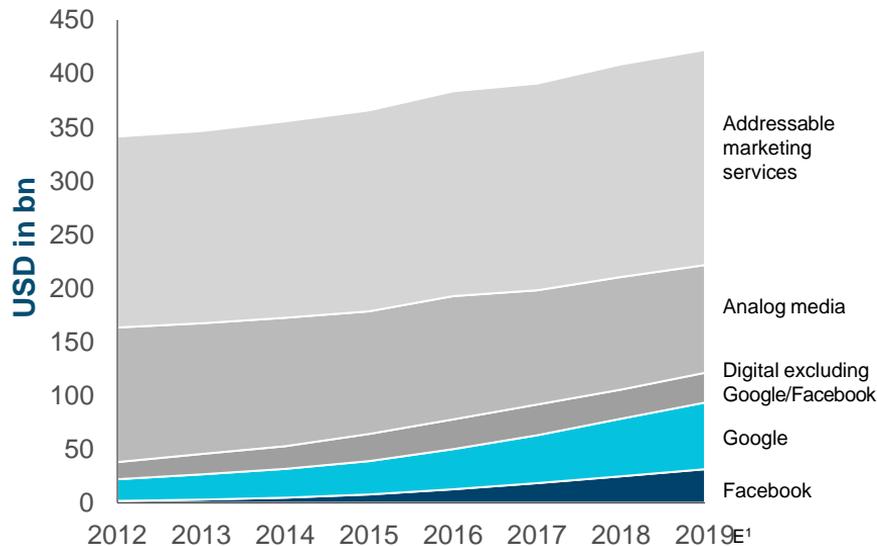
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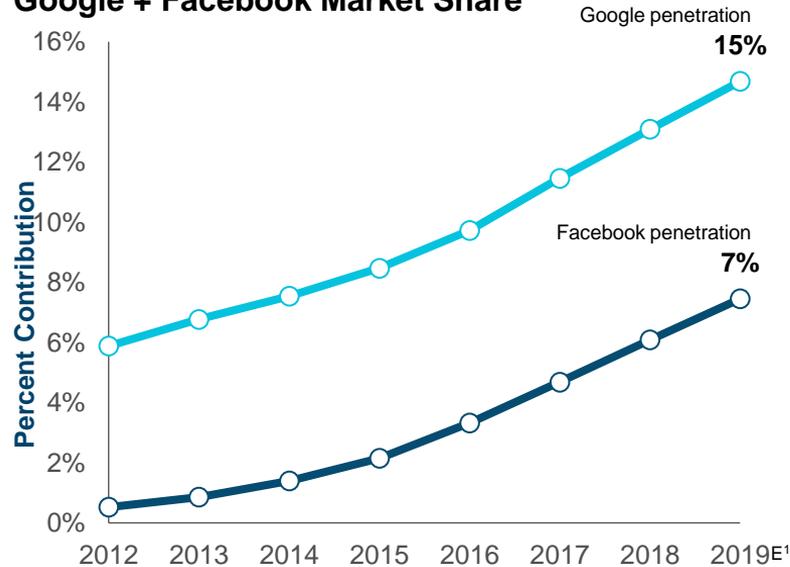
Advertising – Large Underpenetrated Market for Google and Facebook

2012–2019E

U.S. Adjusted Advertising TAM



Google + Facebook Market Share



Google and Facebook platforms very likely to sustain outsized growth into the 2020's.

Source: Company filings, Zenith Media, Magna Global, SNL Kagan, T. Rowe Price Estimates.

¹ T. Rowe Price Estimates

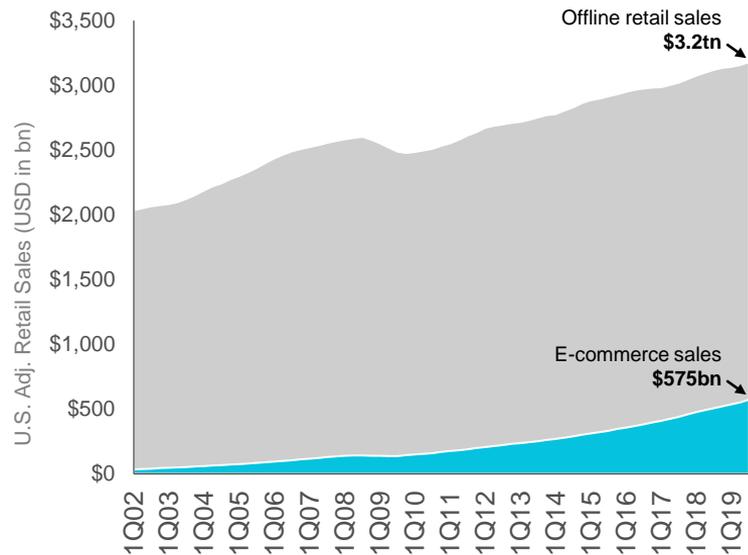
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U.S. E-Commerce & Amazon in the Early Innings

Rolling LTM Analysis (2001–2019)

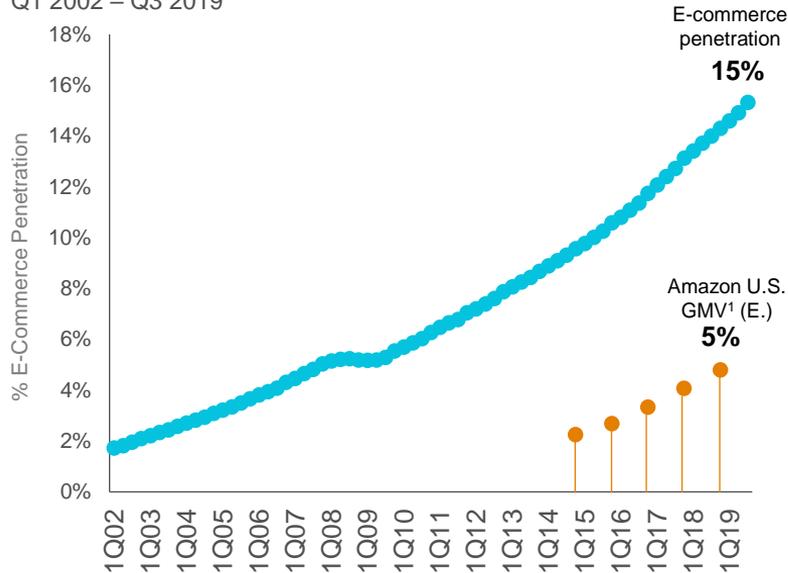
U.S. Adjusted Retail Sales

Q1 2002 – Q3 2019



E-Commerce Penetration

Q1 2002 – Q3 2019



Facebook and Google are the defacto digital landlords of increasing e-commerce activity—customer acquisition costs “CAC” as the new rent theory.

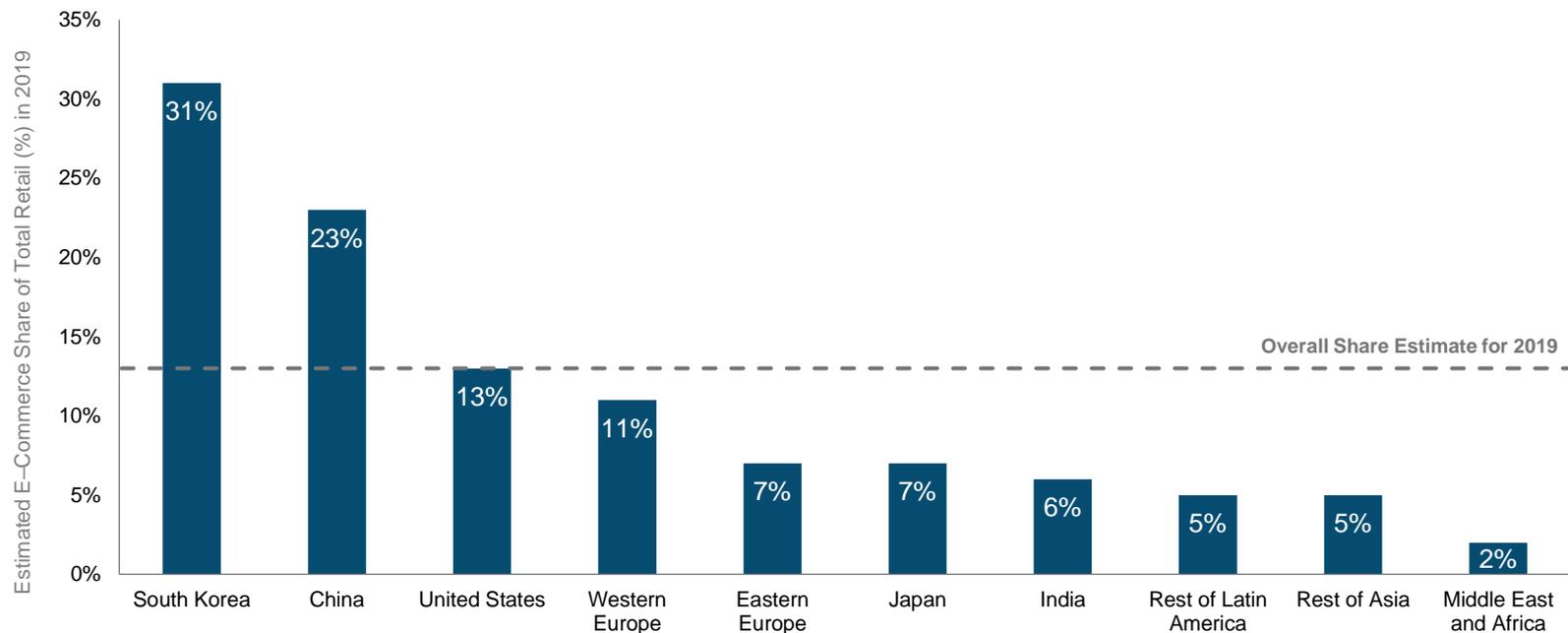
Source: Department of Commerce, company filings, T. Rowe Price estimates.

¹ T. Rowe Price estimates.

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A Long Runway Remains for E-Commerce

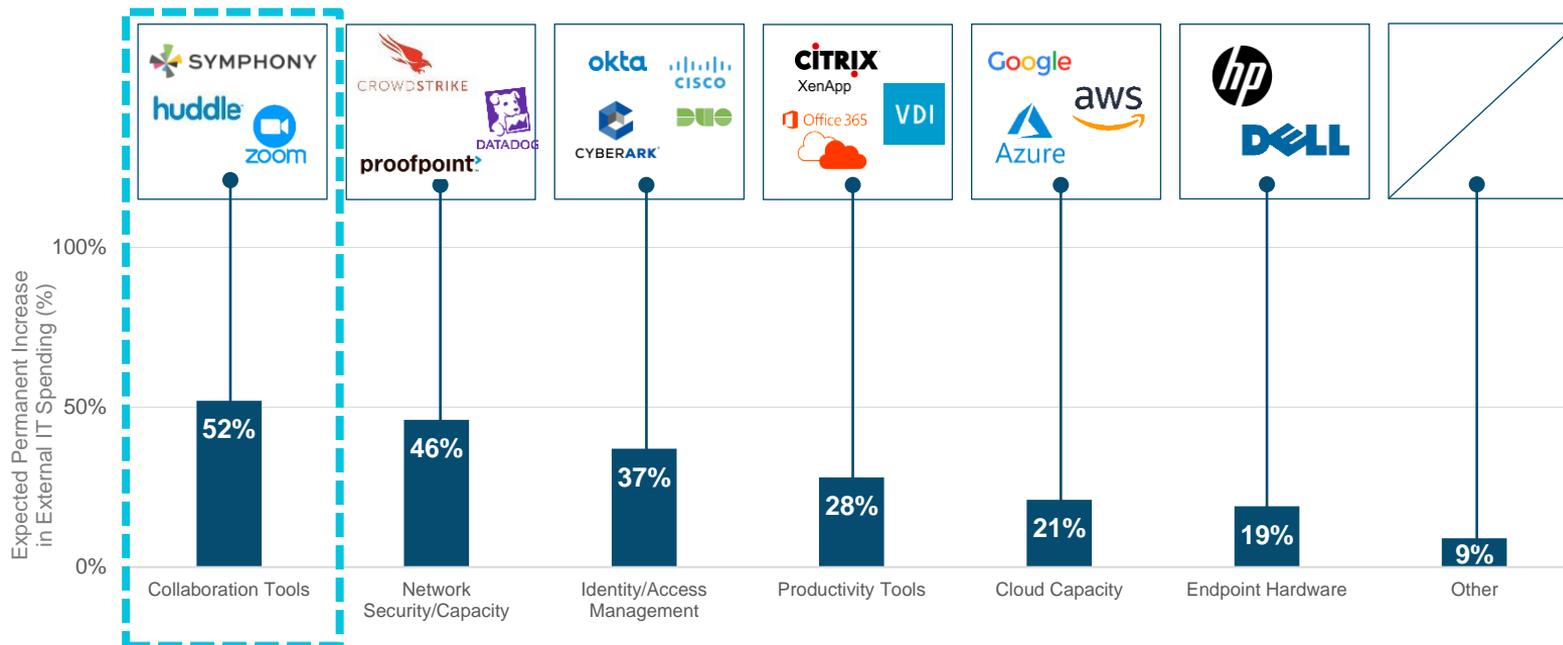
As of 31 December 2019



Source: Company data, Goldman Sachs Global Investment Research, Census Bureau, Euromonitor, IBGE, IPCA, AKIT, Japan METI, iResearch, NBS China.

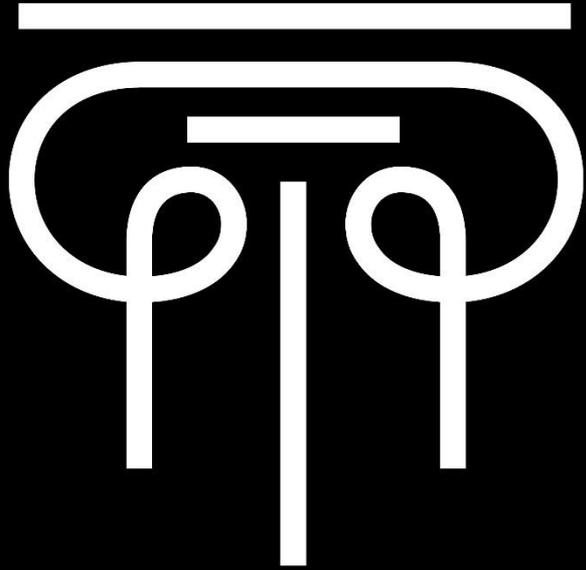
Accelerated Demand with Permanent Impact

Post COVID-19 expectations for **permanent** increase in IT spending



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Source: Morgan Stanley.



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