ALGER

Inspired by Change, Driven by Growth.

Summer 2019

Capital Markets: Observations and Insights

Reframing Risk

Reframing Risk

"The word 'risk' derives from the early Italian *risicare*, which means 'to dare.' In this sense, risk is a choice rather than a fate." – Peter L. Bernstein

At Alger we think about risk somewhat differently. For most the primary measures of risk are statistically accepted metrics such as downside capture, beta, and standard deviation. While we monitor those metrics, we believe they are an imperfect shorthand intended to capture fundamental risk.

To us, risk is the chance of loss. In such a rapidly changing world, that could be the risk of getting disrupted as innovation strikes. In that sense statistically cheap stocks may not provide investors with protection. Even historically less volatile stocks, such as consumer staples, are proving to be more prone to risk than conventional measures would suggest. In our view, it is a mistake to think of risk only in the context of the economic cycle as we have seen time and time again that innovation is often more powerful. We believe those companies benefitting from change will serve to mitigate investor risk while those on the losing side are likely to create undue risk, particularly in a weak economy.

We believe that understanding how innovation and change are likely to play out is the best risk mitigation tool.

Daniel C. Chung, CFA
Chief Executive Officer
Chief Investment Officer

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Senior Vice President
Director of Market Strategy

Key Observations and Themes

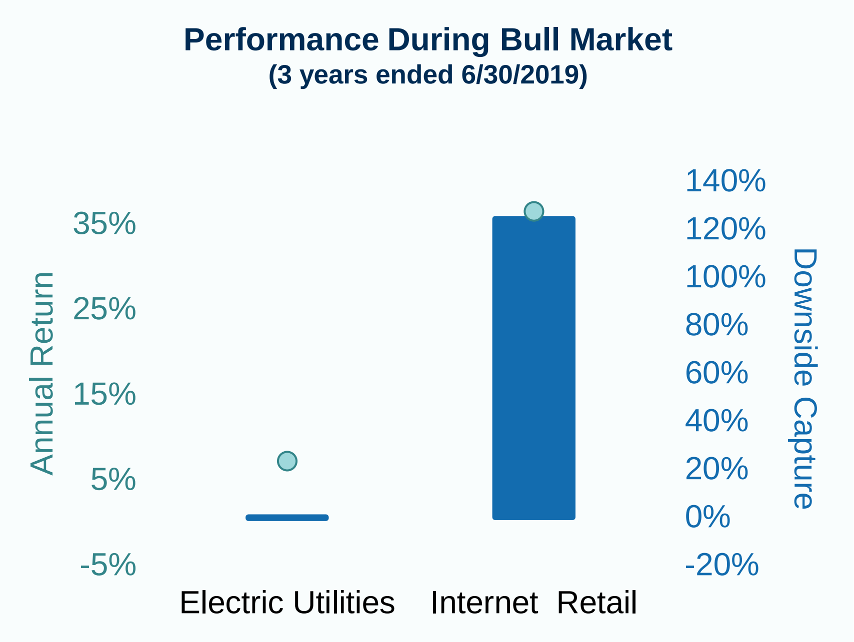
Reframing Risk

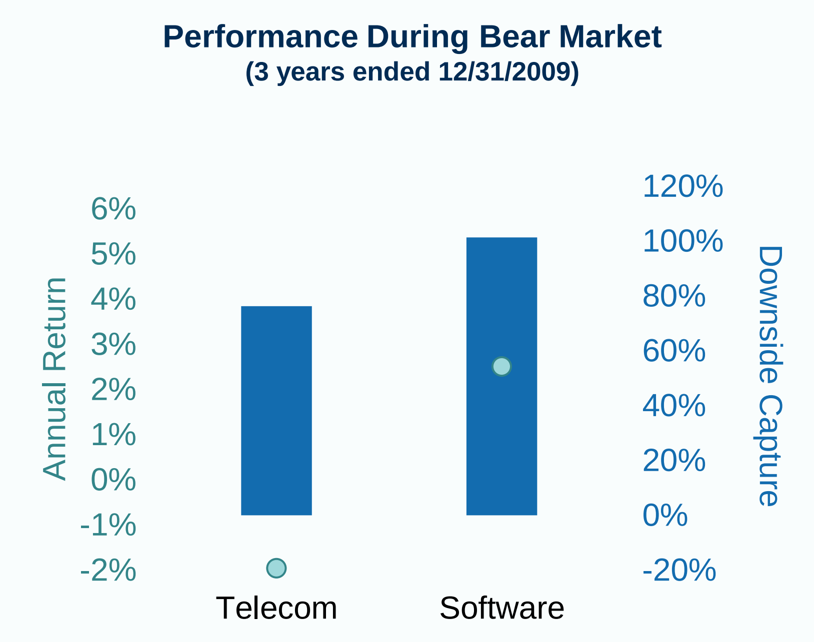
The Downside of Downside Capture

- Low downside capture is thought to reduce risk, but over reasonably long periods, strong secular growth can provide superior returns, *even in down markets*

Low Downside Capture Can Underperform Secular Growth in Both Bull and Bear Markets

Annual Return   Downside Capture



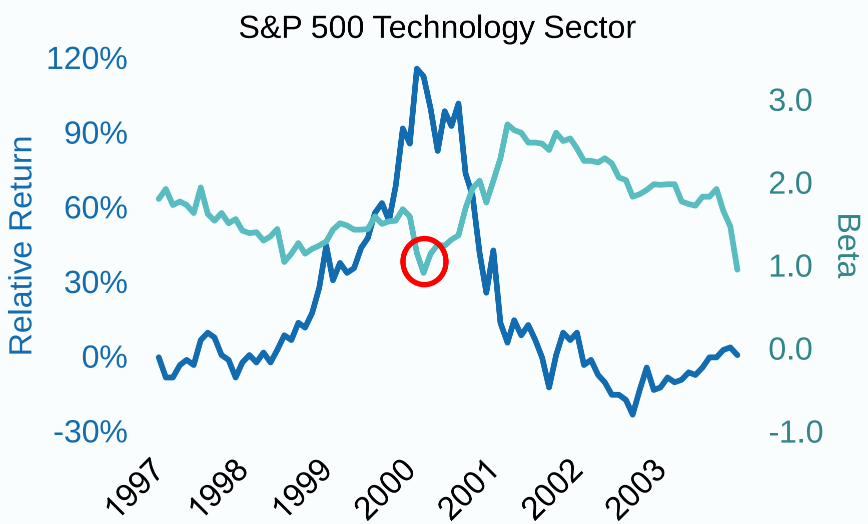


Source: FactSet. The figures presented are provided for illustrative purposes. They include examples of the performance of two industries with downside captures above and below 100%, respectively. Examples of such performance during a bull market and bear market are provided. Please note that using different industries or different time periods might have materially different results than those shown above. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

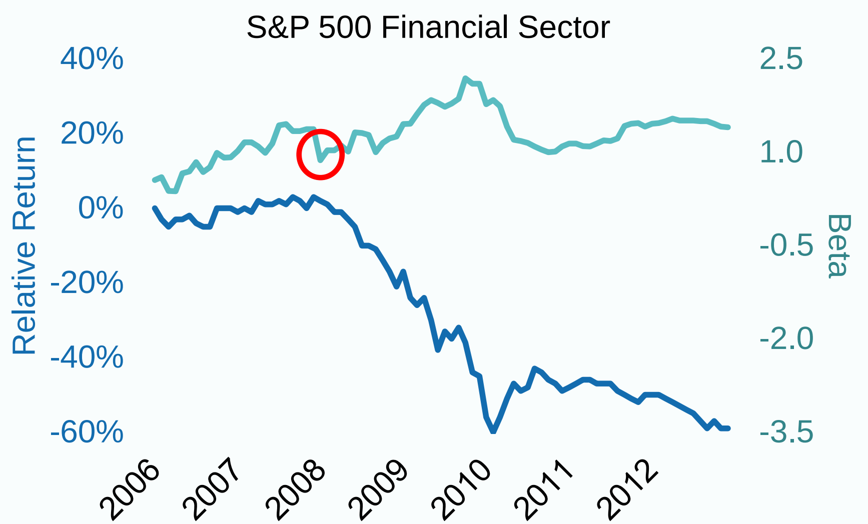
Reframing Risk
Beyond Beta

- Beta is thought to be a good measure of risk but in practice it is backward looking in nature, making it a poor measure of potential losses
  - At the tech bubble peak, the beta of technology stocks was less than one; the same was true of financials in early 2008 prior to the Global Financial Crisis

Below Market Risk at Height of Tech Bubble?



Below Market Risk Preceding the Mortgage Meltdown?

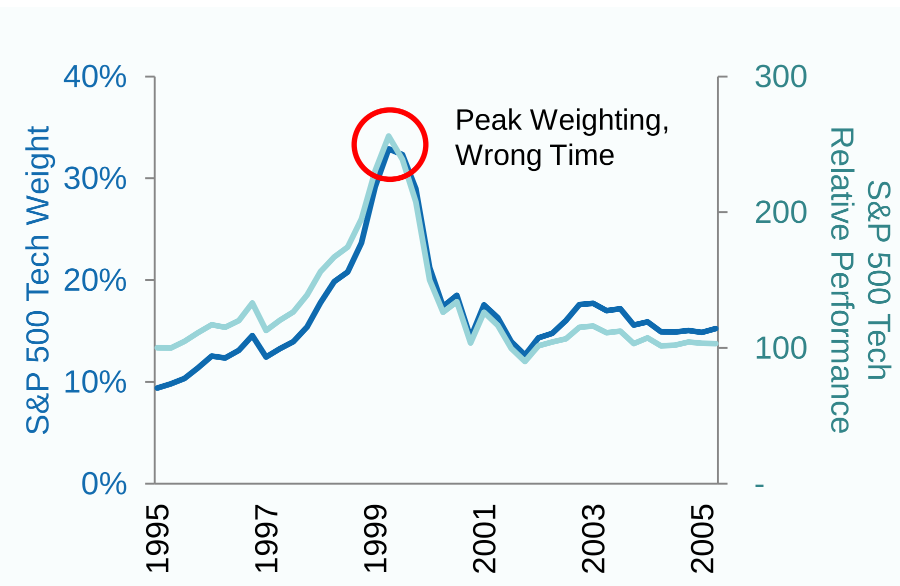


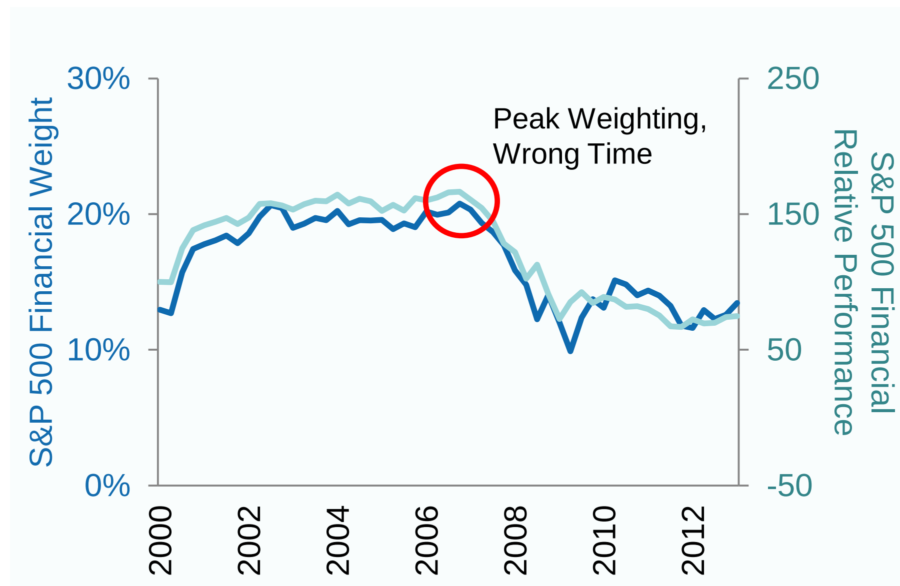
Source: FactSet. Beta calculated relative to S&P 500 on 12-month trailing basis. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

Reframing Risk
Passive Problems?

- The vast majority of passive investing allows relative performance to drive relative weighting changes, irrespective of fundamentals
  - This can exacerbate problems such as in Tech in the late 1990s or in Financials prior to the Global Financial Crisis

Passive Proves Problematic at Points

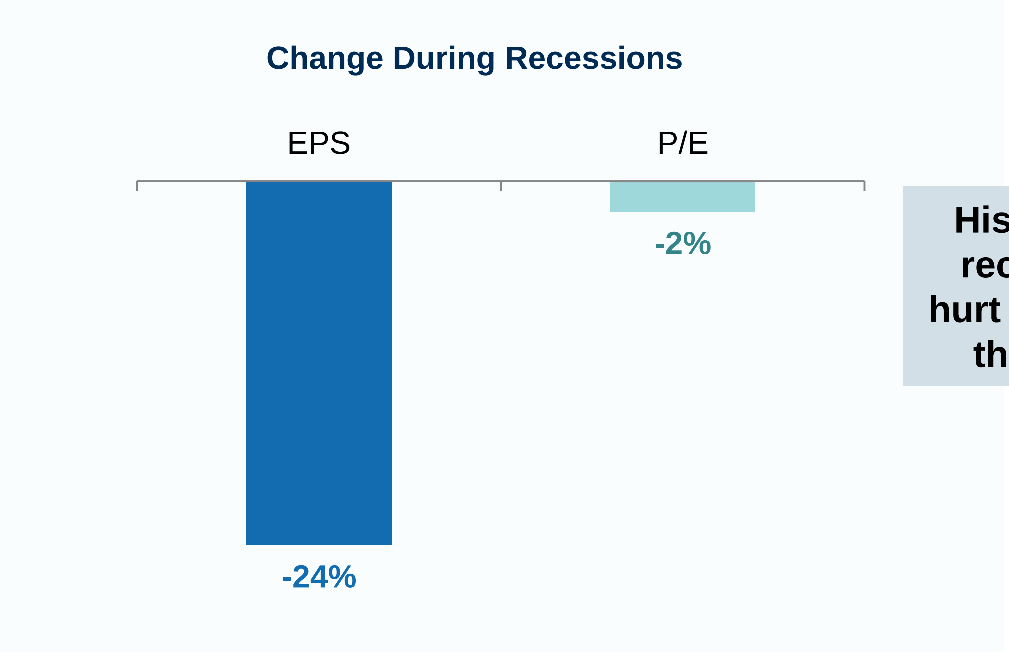




Source: FactSet. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

Reframing Risk
Fundamentals vs. Valuation

- Instead of using statistics, investors should think of risk as the chance of loss or the probability that the bear case comes to fruition
- But what is more important when assessing risk—fundamentals or valuation?



Historically, recessions hurt EPS more than P/Es

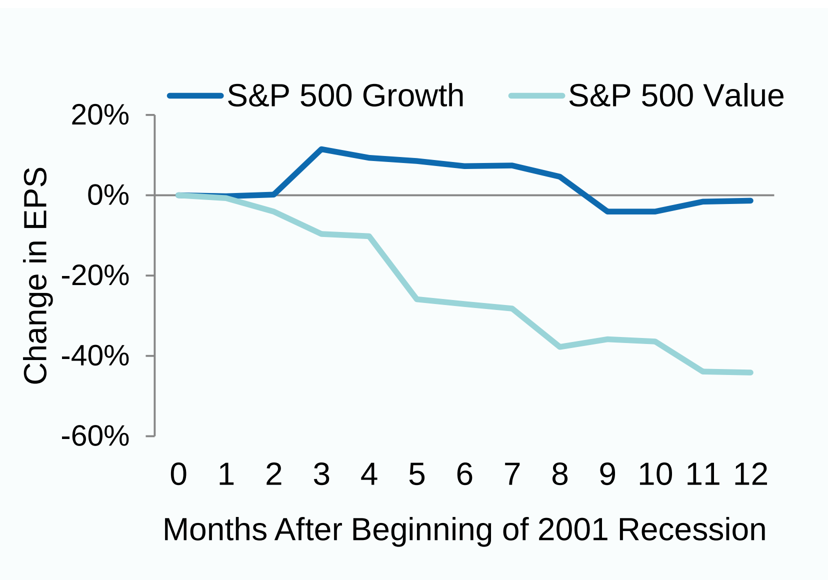
Source: FactSet. Average of past three U.S. recessions beginning three months prior to the start of each of the official recession periods.

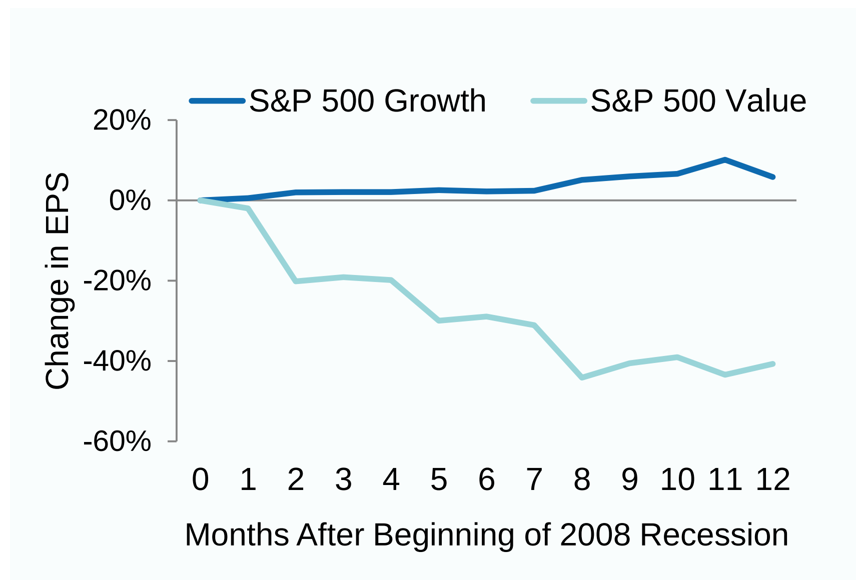
Reframing Risk

Not All Fundamentals Are Created Equally

- Understanding the downside to sales, earnings, and cash flows in a difficult economic environment is key to understanding risk in portfolios
  - Value stocks have often acted like sailboats that depend on the wind of economic activity, while Growth stocks enjoy a secular motor to help protect against volatility

Look for Stocks Where Fundamentals May Prove Resilient

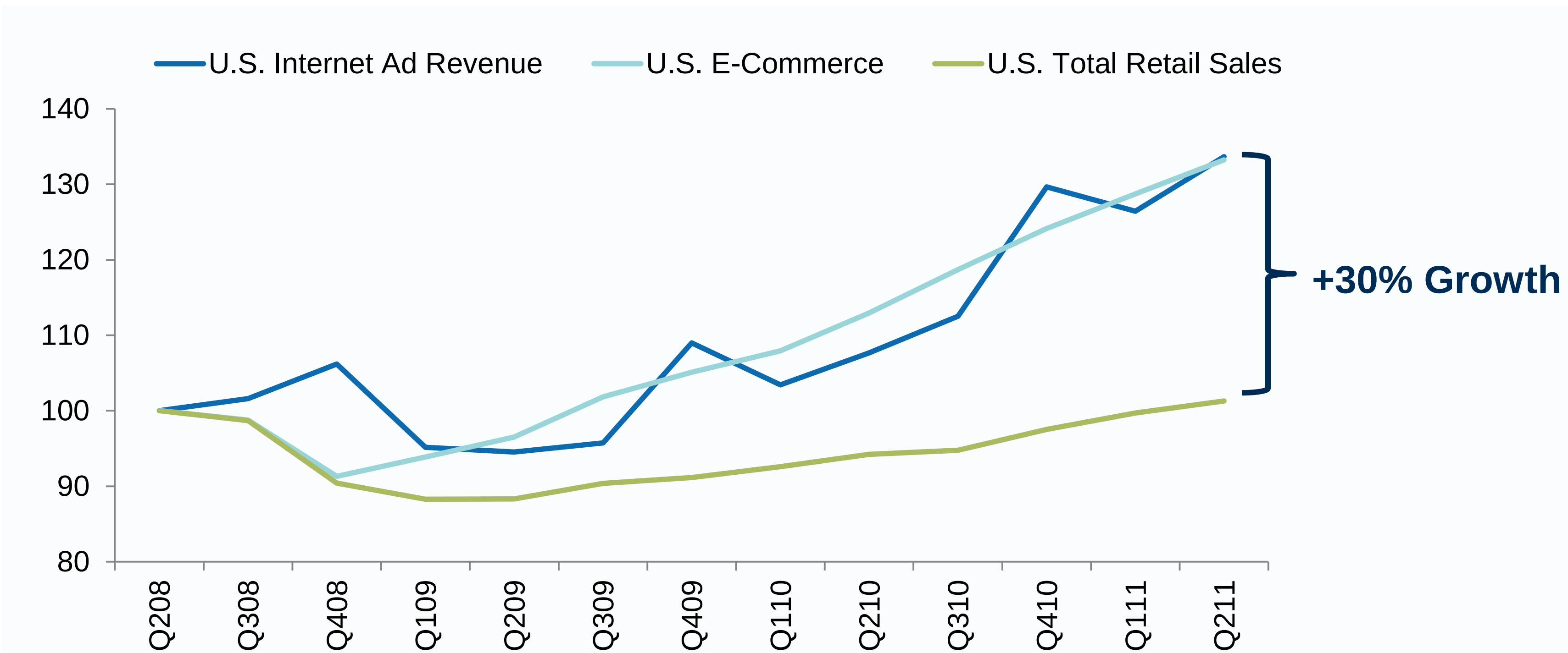




Source: FactSet.

Reframing Risk
Beating Economic Volatility?

- Innovation can triumph over economic volatility
  - History shows that there are areas of innovation and growth throughout recessions, depressions, and panics over the past 150 years*
  - This may be why Growth stock fundamentals have held up better in recessions

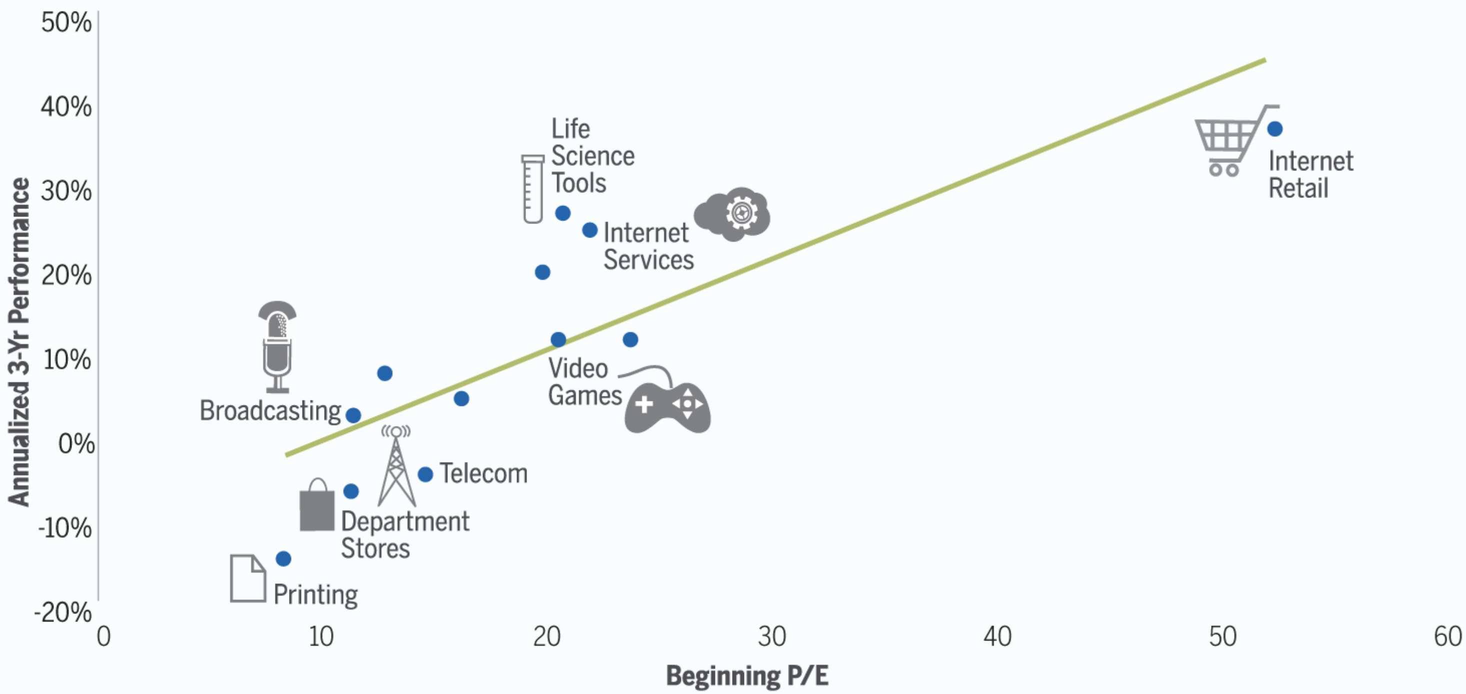


Source: Bureau of Economic Analysis, PwC, Census Bureau. *See Alger's white paper "The Enduring Force of Innovation."

Reframing Risk
Focusing on Fundamentals

- When it comes to areas of innovation, fundamentals prove more important than valuation metrics

Innovation Changes the Rules of Valuation—Higher P/Es Yield Higher Returns?

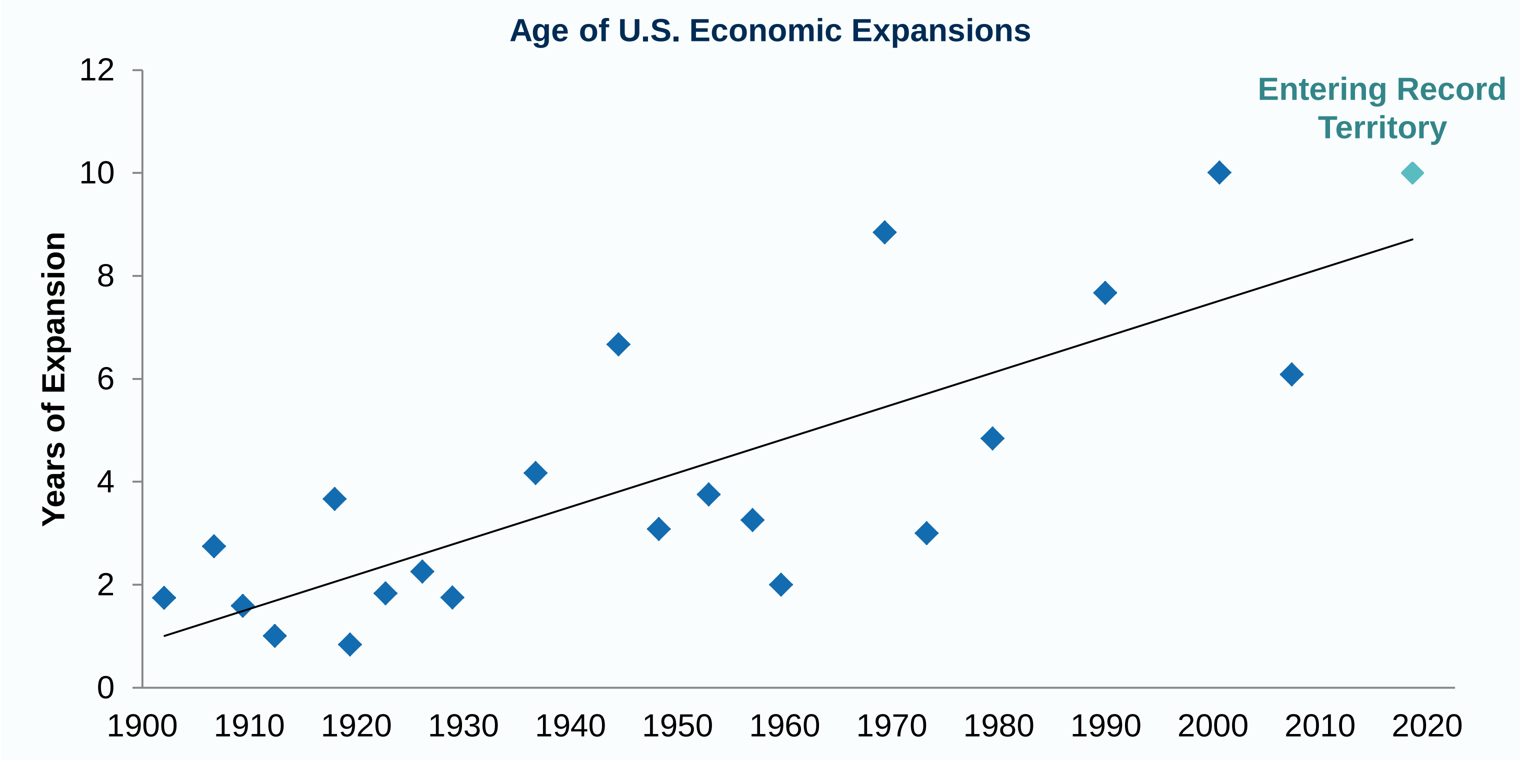


Source: FactSet for the three-year period ended 6/30/19, based on GICS industries of the S&P 1500 Index.

Younger than It Looks

Cycles Have Been Lasting Longer

- U.S. economic expansions have been increasing in duration. Driving factors include:
  - Increased fiscal and monetary intervention (e.g., tax cuts/spending and assertive Fed)
  - Structural changes in the economy (e.g., larger proportion of services)
  - Technological advances (e.g., improved inventory management)



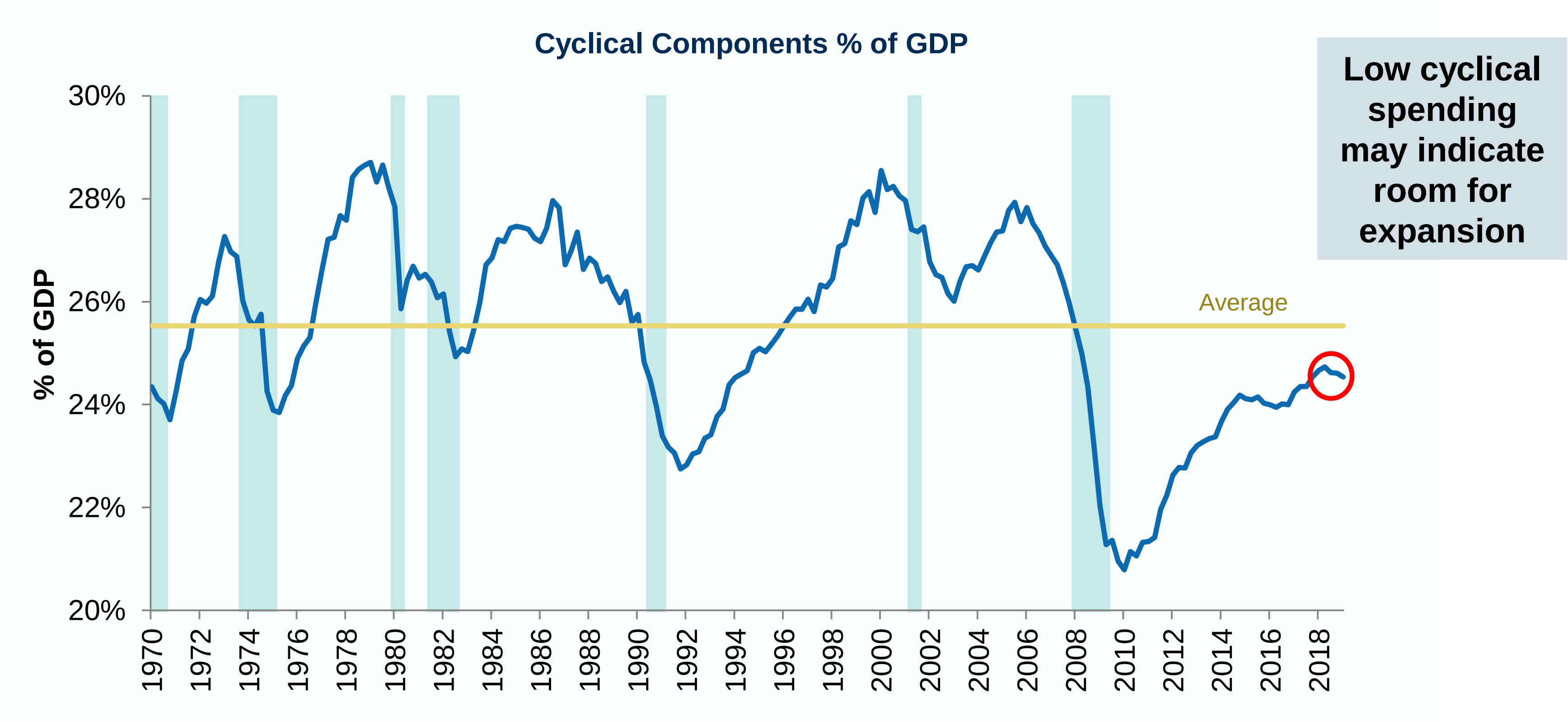
Source: FactSet and Alger. Note: double-dip recession in early 1980s accounted for as one recession.

ECONOMY

Younger than It Looks

Cyclical Spending Signals More Expansion

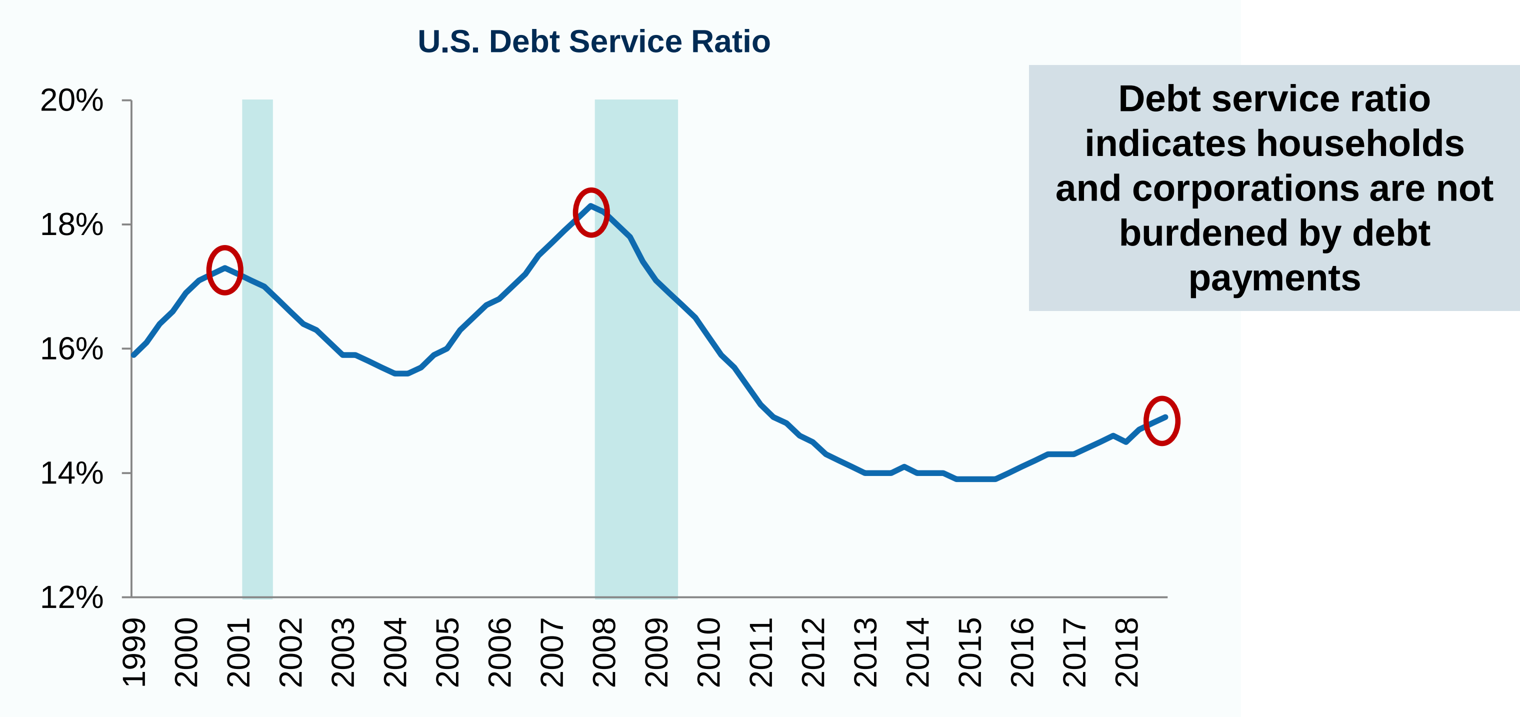
- The cyclical components of GDP – business investment, residential investment, and consumer durables – have historically risen much higher prior to economic peaks
- The implication is that the economic expansion has room to expand



Source: U.S. Bureau of Economic Analysis.

Younger than It Looks
Low Debt Burden

- Despite higher levels of debt as a % of GDP, the U.S. non-financial private sector debt service ratio is much lower than in the past two recessions
  - Because more than 80% of U.S. consumer and business debt is fixed, higher interest rates would not have a dramatic impact on service costs

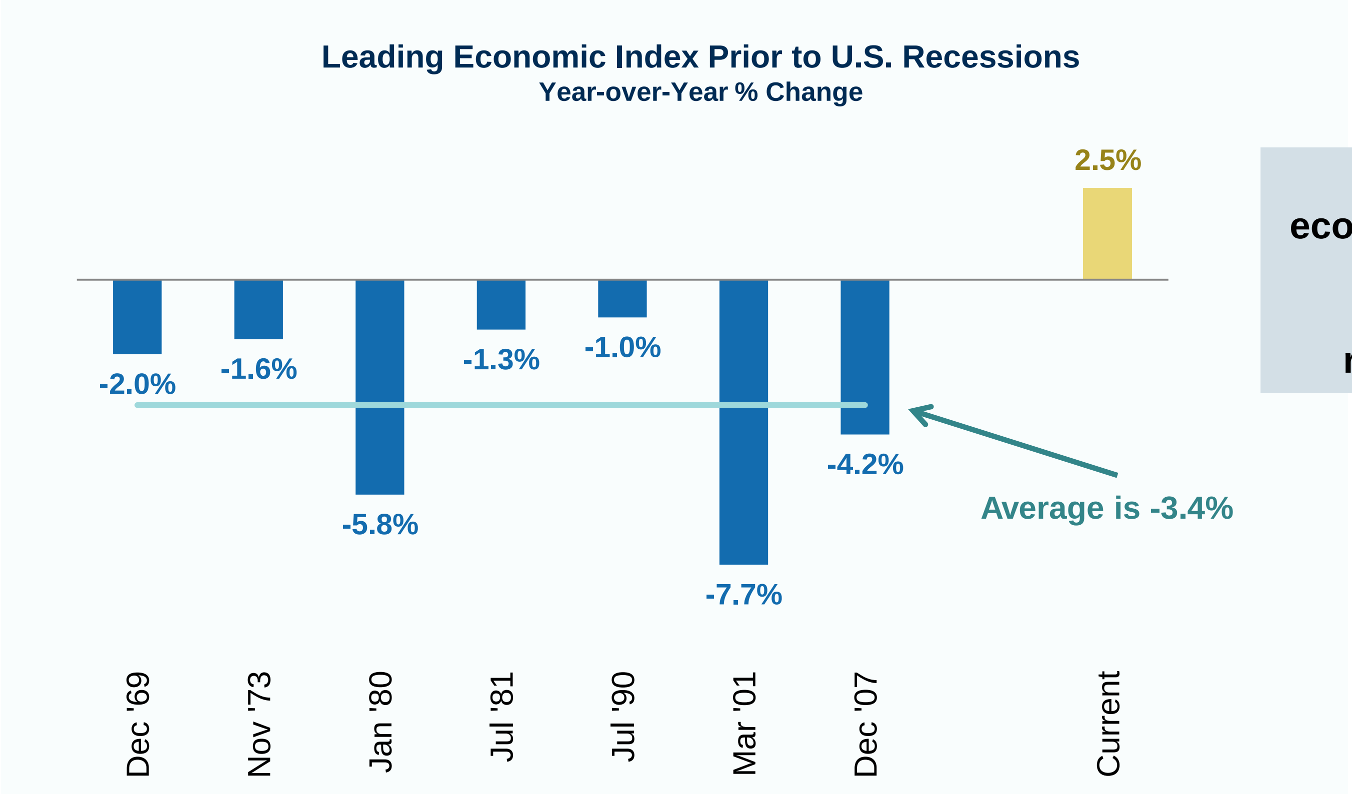


Source: Bank for International Settlements, June 2019. Debt Service Ratio is the share of income used for interest payments and amortizations in the non-financial private sector. Shaded regions indicate recessions.

Younger than It Looks

Follow The Leader

- The Leading Economic Index is a good indicator of future economic growth or lack thereof
- Historically, it has declined on a year-over-year basis leading up to a recession
- Currently, it is rising, indicating continued economic growth, albeit at a slower pace



Leading economic index does not indicate recession

Source: The Conference Board and Alger analysis as of June 2019.

Style Divergence
Structural Issues Driving Growth vs. Value

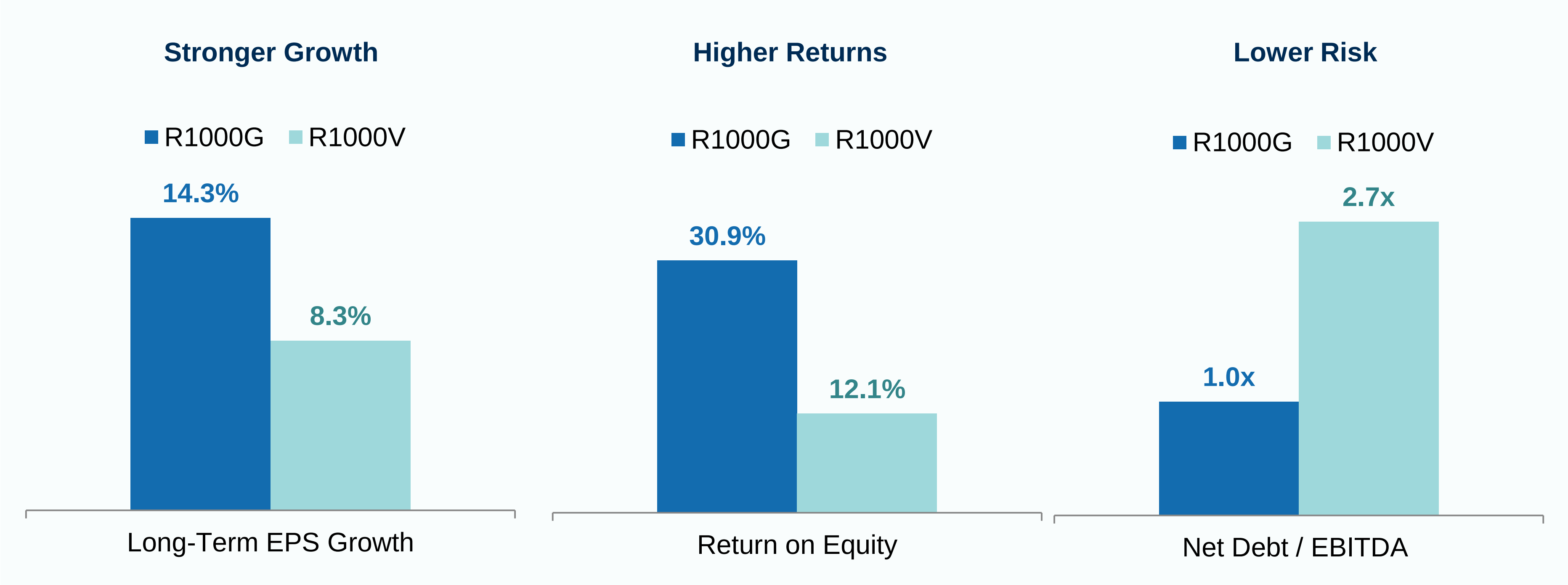
- Growth stocks have dramatically outperformed (>30%) Value stocks over the past decade
- The driver has been the very weak performance of the valuation metric Price-to-Book, which is used heavily in index classifications of Growth vs. Value stocks
- As accounting fails to keep up with the changing economy, book value may no longer be as relevant (e.g., R&D is not capitalized in book value)

Style classification too dependent upon flawed book value

Source: FactSet as of 6/30/19. Low price-to-book returns are based on the B/P Northfield factor for the Northfield broad U.S. market database. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

Style Divergence
The Growth Advantage

- Three variables drive P/E multiples: growth, return on capital, and risk
- As compared to the Russell 1000 Value Index, the Russell 1000 Growth Index has higher expected EPS growth, higher return on equity, and lower risk in the form of better balance sheets



Source: FactSet as of 6/30/19. Growth represents consensus long-term analyst estimates and actual future EPS growth rates might be materially different than the forecasts shown.

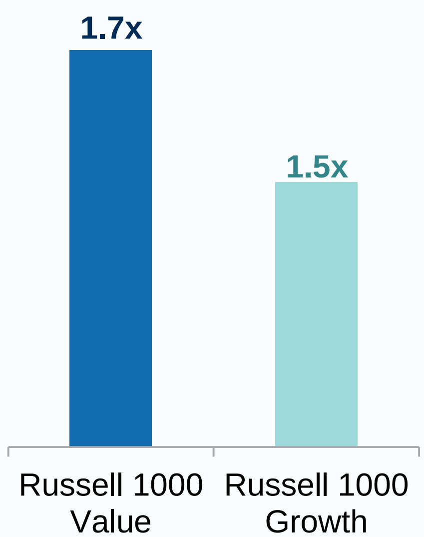
STYLE DIVERGENCE

Style Divergence
Growth and Value Near Equilibrium

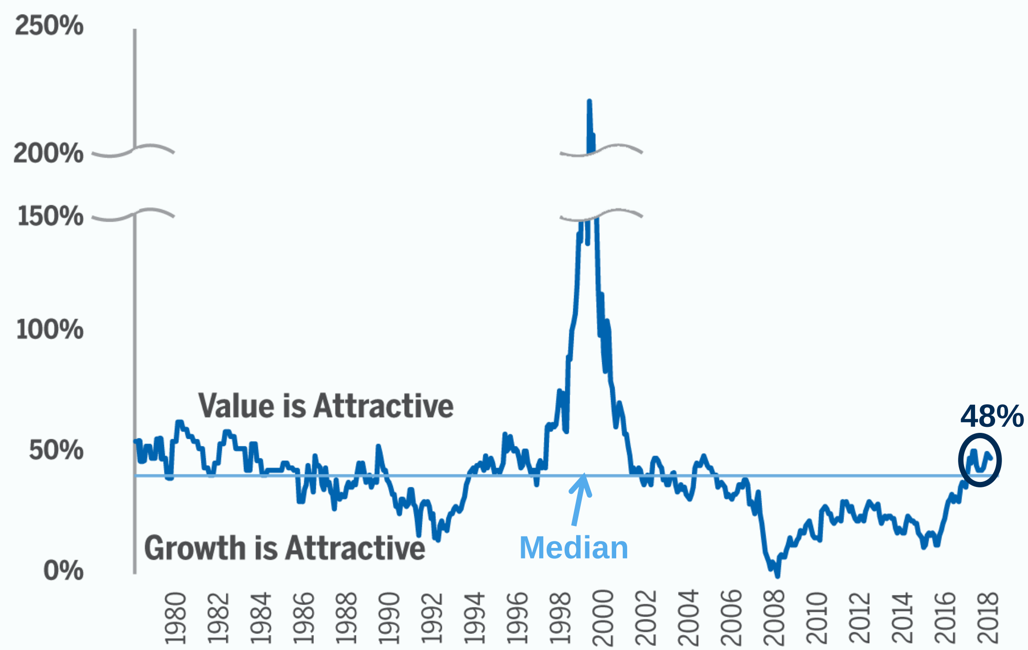
- Despite their outperformance over the past several years, Growth stocks are not very expensive compared to their Value equity counterparts relative to expected growth rates or history

Russell 1000 Growth vs. Russell 1000 Value PEG Ratio
(P/E Divided by Long-Term Growth Rate)

Growth stocks are cheaper relative to long-term growth



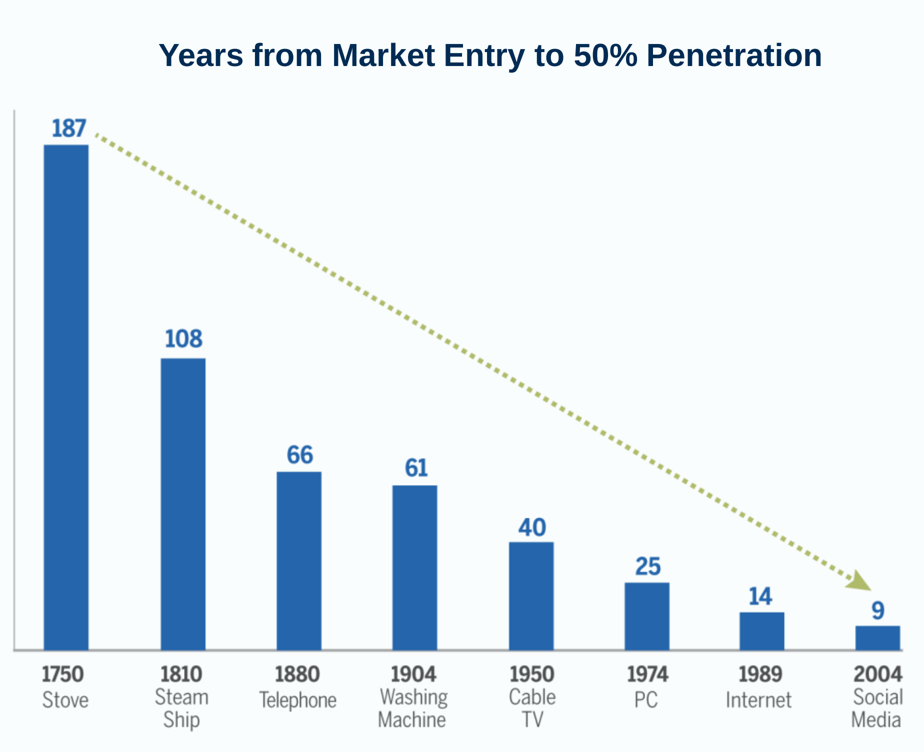
Russell 1000 Growth Relative to Russell 1000 Value P/E

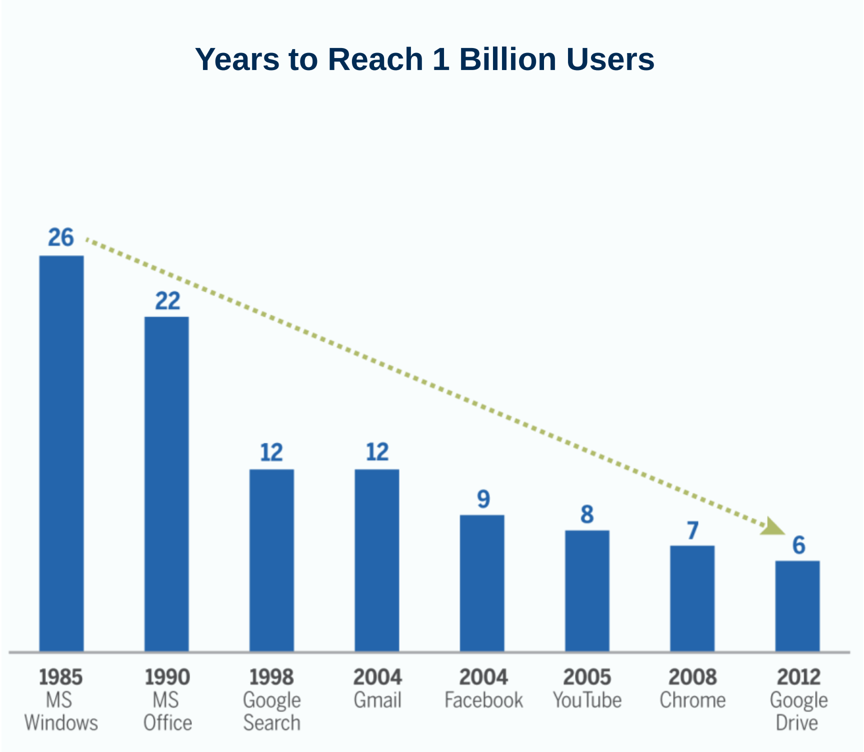


Source: FactSet, Bank of America as of 6/30/19. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

Accelerating Innovation
Stepping on the Gas

- Research has shown that innovation is accelerating across many areas of the economy
- As a result new products and services are diffusing through society faster, disrupting businesses at a greater pace



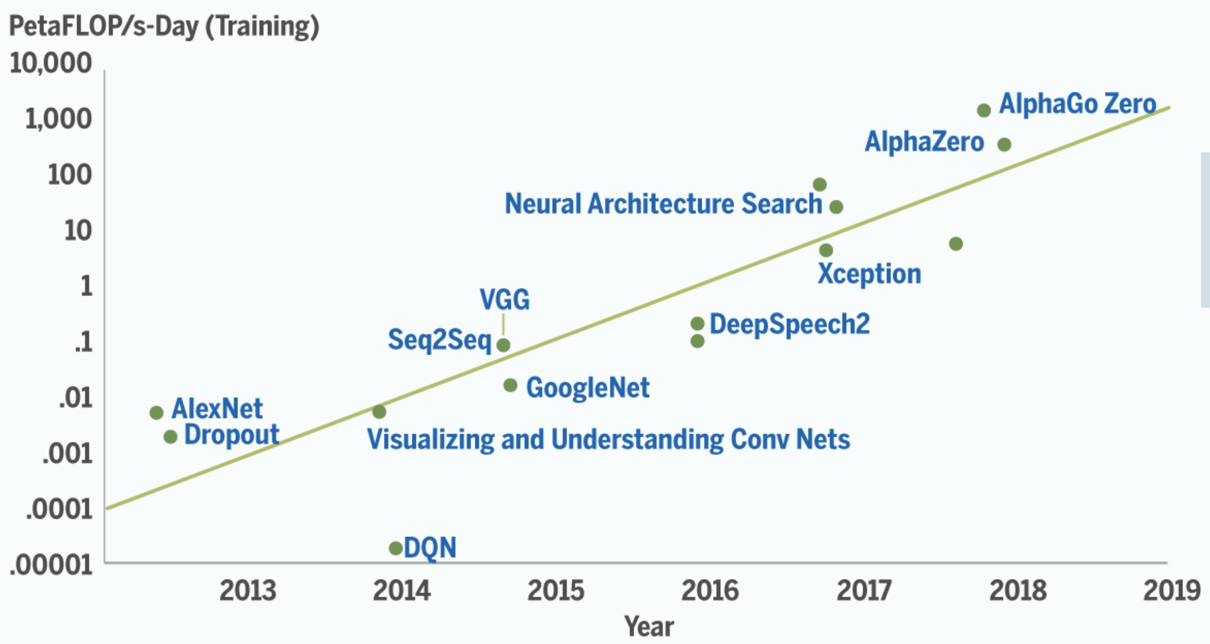


Source: Asymco, Visual Capitalist, company disclosures.

Accelerating Innovation
A New, More Powerful Driver of Disruption

- Moore's Law, the doubling of transistors on a microchip every two years, has been the driving force of the global digital revolution
- Now a new exponential law for artificial intelligence (AI) is set to usher in even larger, more powerful changes in technology and living standards

Exponential Growth in the Training of Artificial Intelligence Programs

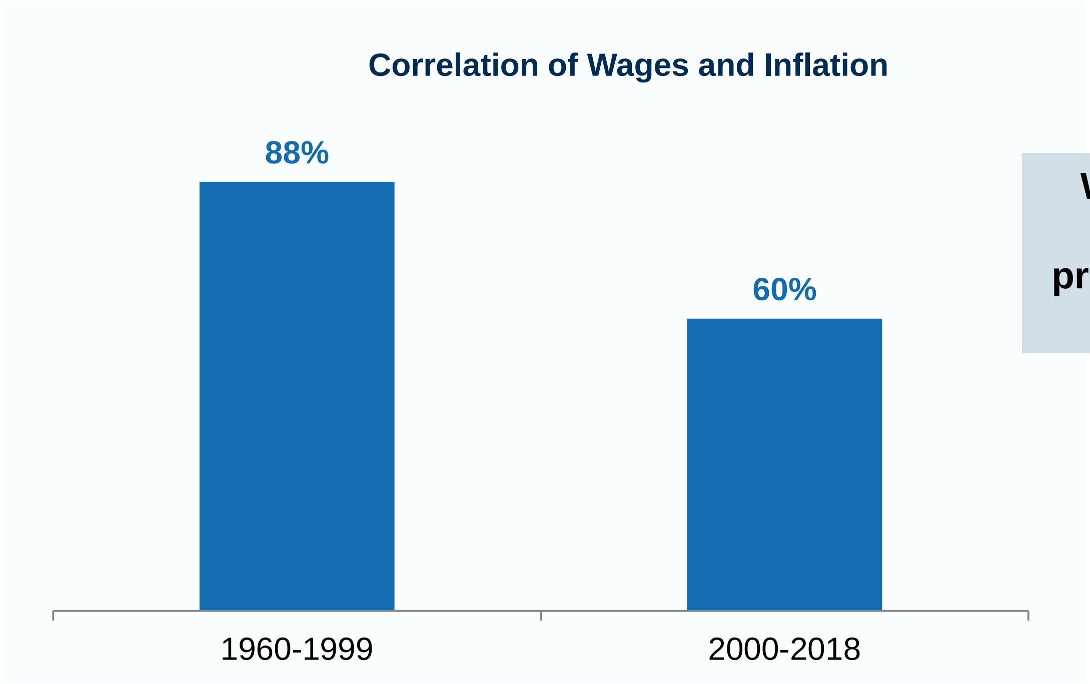


AI program training doubling every 3 to 5 months

Source: OpenAI.

Accelerating Innovation
Innovation Deflation

- While low unemployment should indicate inflation pressures, we believe innovation in the form of pricing transparency, new business models, and automation is driving down inflation
  - An indication of this dynamic is the declining correlation of wages and inflation

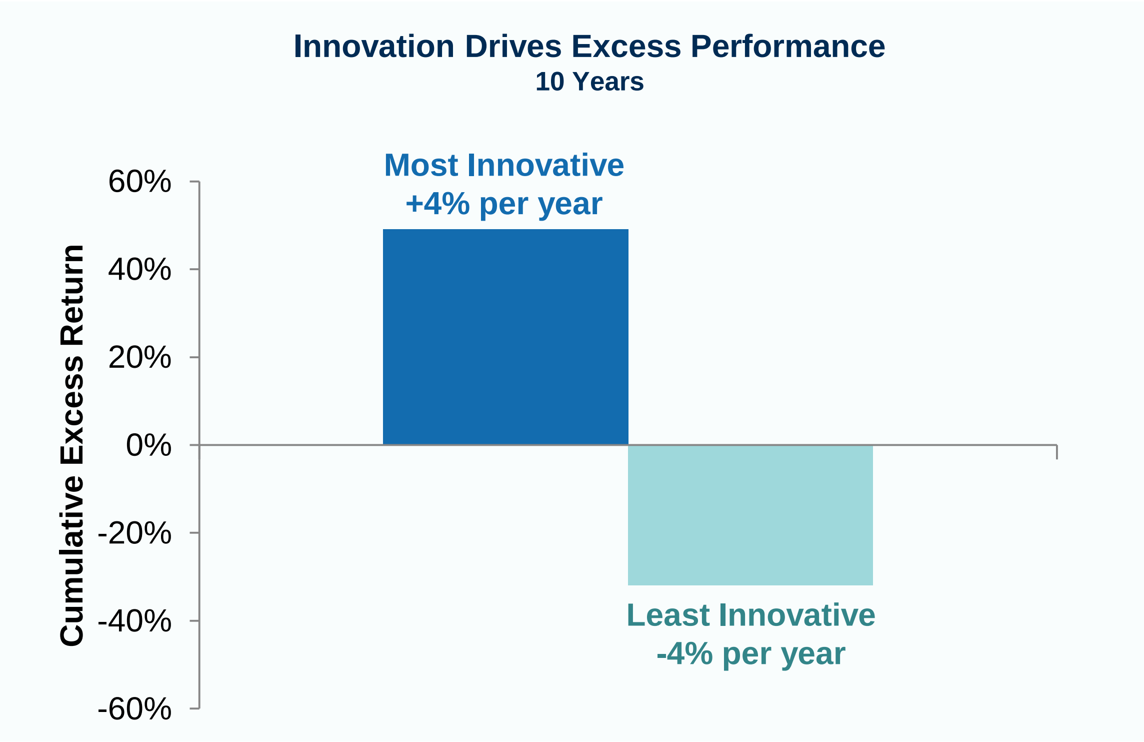


Wages are having less impact on prices likely because of innovation

Source: Alger analysis, U.S. Bureau of Economic Statistics, and U.S. Bureau of Labor Statistics. Wages are year-over-year change in unit labor costs and inflation is year-over-year change in PCE price deflator ex-food & energy.

Accelerating Innovation
Innovation as Wealth Creator

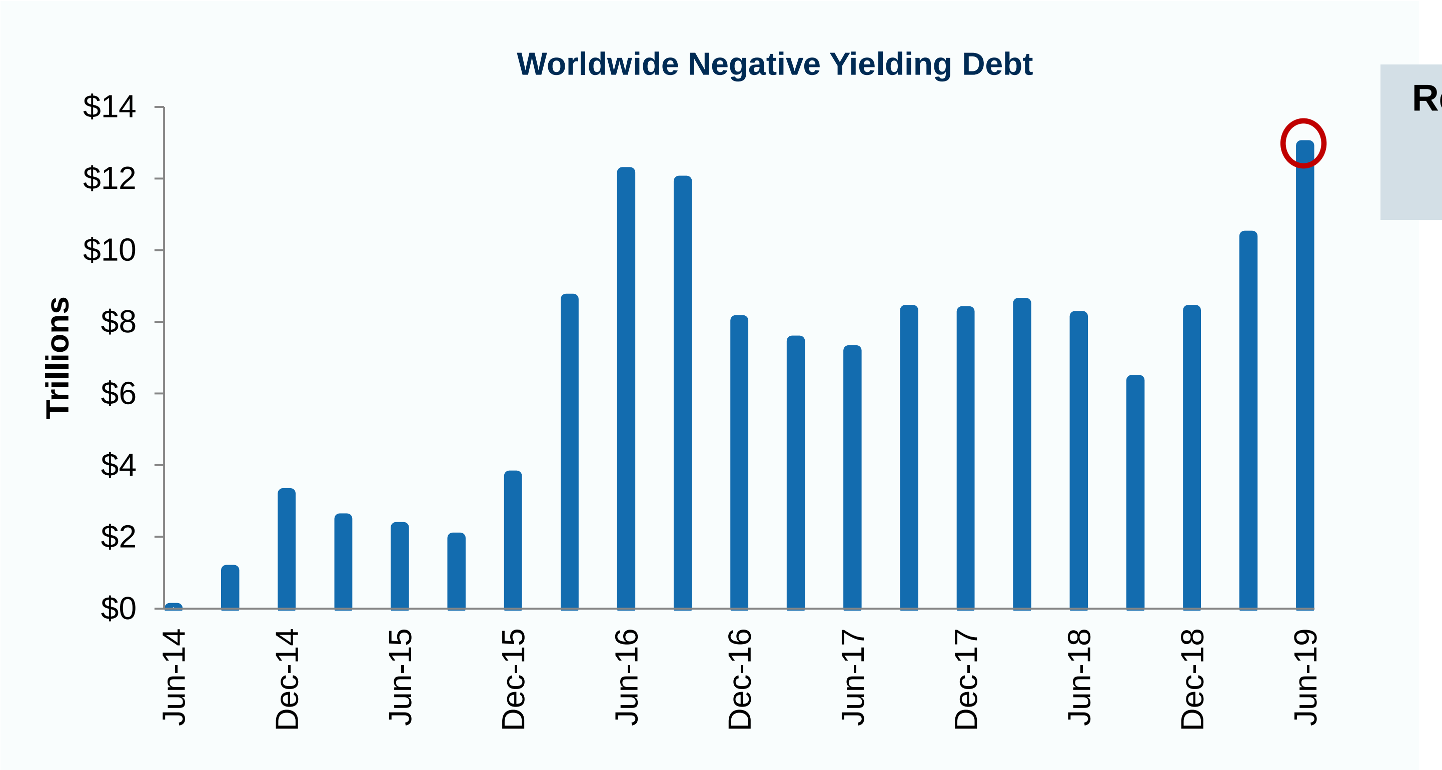
- Studies have shown and our research demonstrates that the most innovative companies grow their sales, earnings, and stock prices faster*



Source: FactSet. Most/least innovative stock excess performance is derived from highest and lowest S&P 1500 quintiles based on R&D as % of sales, normalized for market value, using one month returns for 10 years ending 4/30/19. *Baruch Lev and Suresh Radhakrishnan, "The Stock Market Valuation of R&D Leaders." **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

The Search for Yield
Paying to Lend

- Weakening global economic activity due in part to the trade war along with secularly low inflation has weighed on interest rates, driving record negative yielding debt

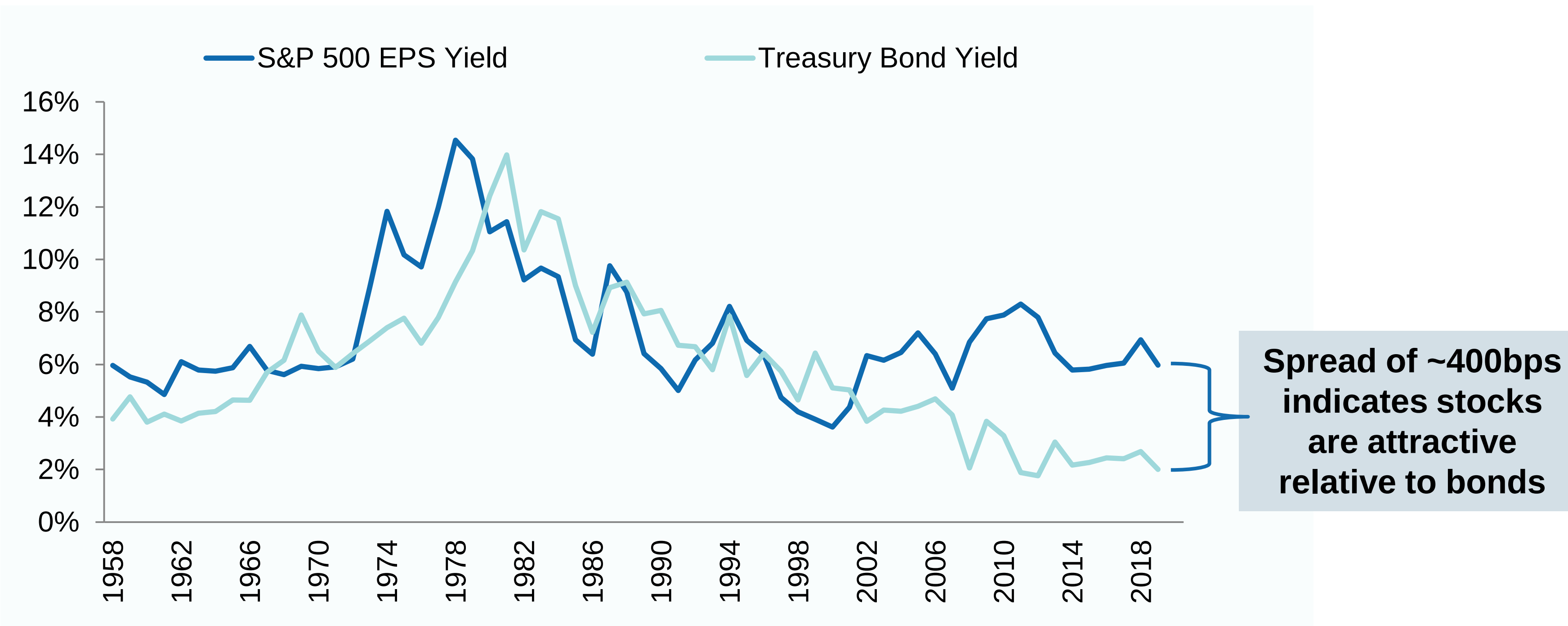


Record $13 trillion in negative yielding debt!

Source: Bloomberg as of 6/30/19.

The Search for Yield
Stocks Are Cheap Relative to Bonds

- Historically, the "earnings yield" of equities (inverse of the P/E) has been just modestly above 10-year Treasury yields
- Since the Global Financial Crisis, however, that spread has widened out and has yet to normalize, making equities attractive relative to bonds

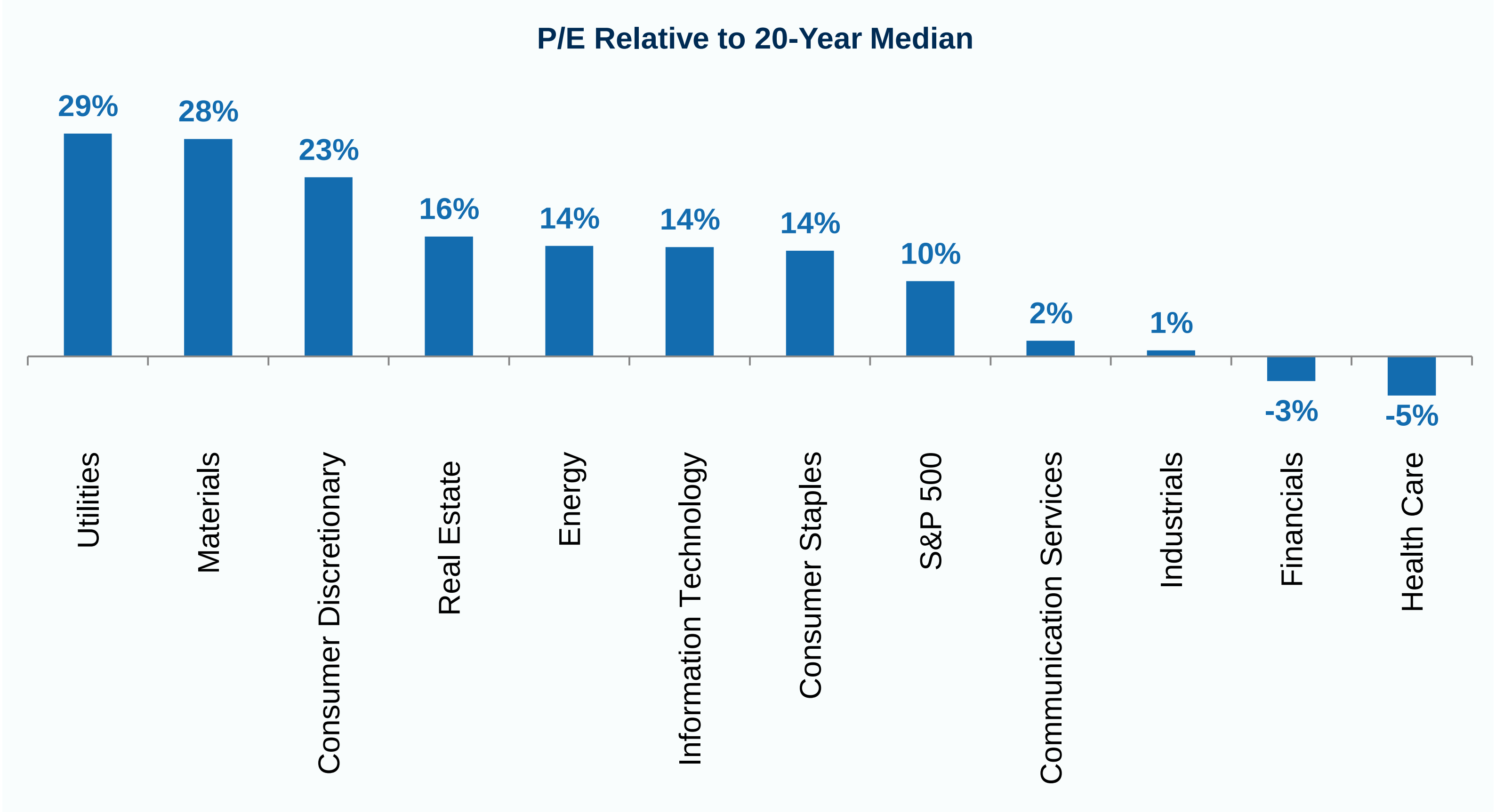


Source: FactSet, Federal Reserve, and S&P, as of 6/30/19.

The Search for Yield

Bond-like Equities Are in Favor

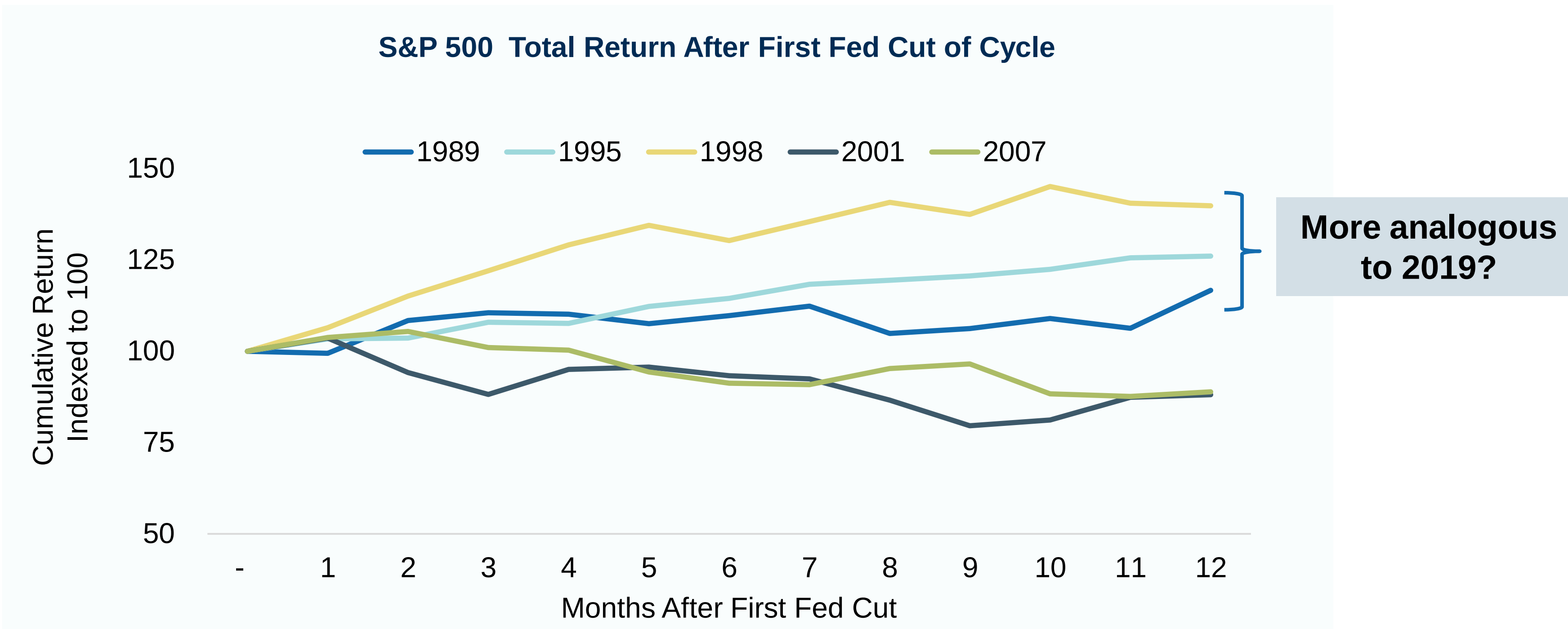
- Low interest rates are driving bond-like equity sectors to trade at premiums to their historical valuations while health care appears inexpensive due in part to political issues



Source: FactSet and UBS, based on S&P 500 Index as of 6/30/19. The Communication Services, Consumer Discretionary, and Technology sectors' historical data have been restated to reflect September 2018 changes to the GICS sector classifications. Note that Consumer Discretionary ex-Internet Retail is at a 3% premium to its 20-year median.

Additional Insights
After the First Cut

- Historically, stocks have gone onto produce strong gains but have occasionally also experienced losses after the first Fed rate cut
- Down periods following cuts in 2001 and 2007 had the backdrop of the tech bubble and the global financial crisis, respectively, and therefore may be less analogous to the current situation
  – Today's environment, in terms of the economy and innovation, may resemble 1995 or 1998

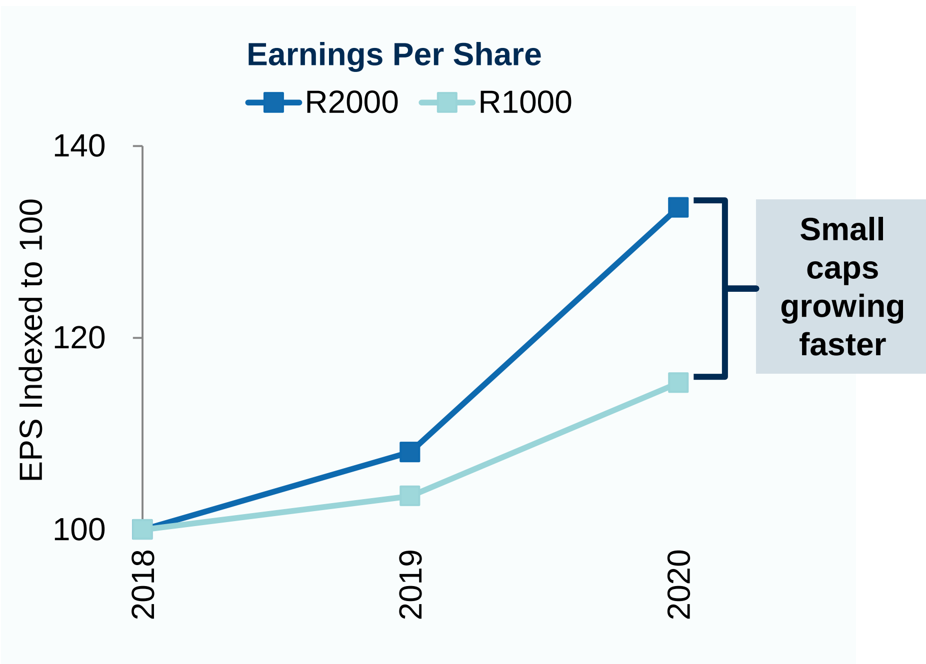


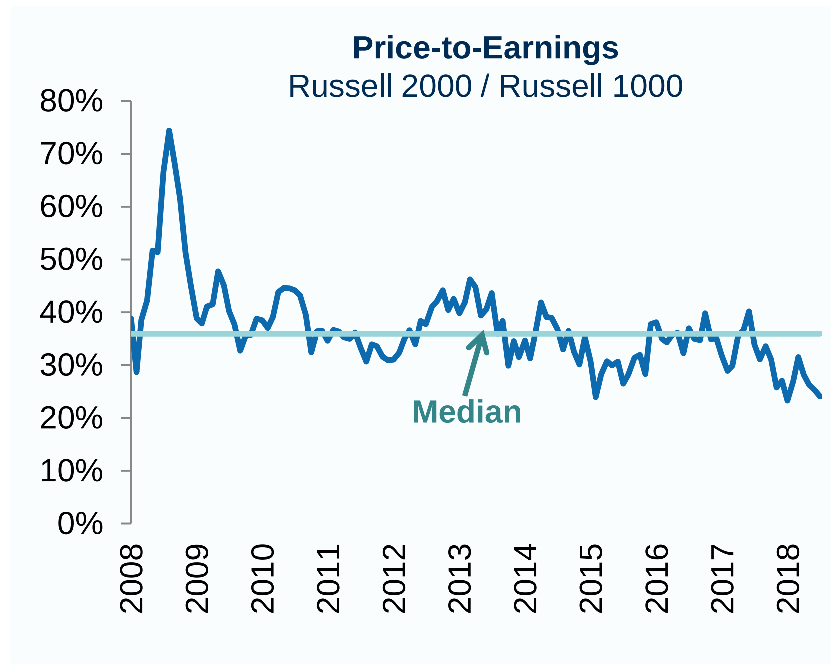
Source: FactSet. Rate cuts occurred in June 1989, July 1995, September 1998, January 2001, and September 2007. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

Additional Insights

Smaller Capitalization Stocks Poised to Outperform

- **Stronger fundamentals**: Estimated small cap EPS growth for ‘19 & ‘20 is double that of large cap
- **Compelling valuation**: Small cap P/E multiple premium is low relative to history
- **More levered to domestic economy**: U.S. small caps have less exposure to international economies

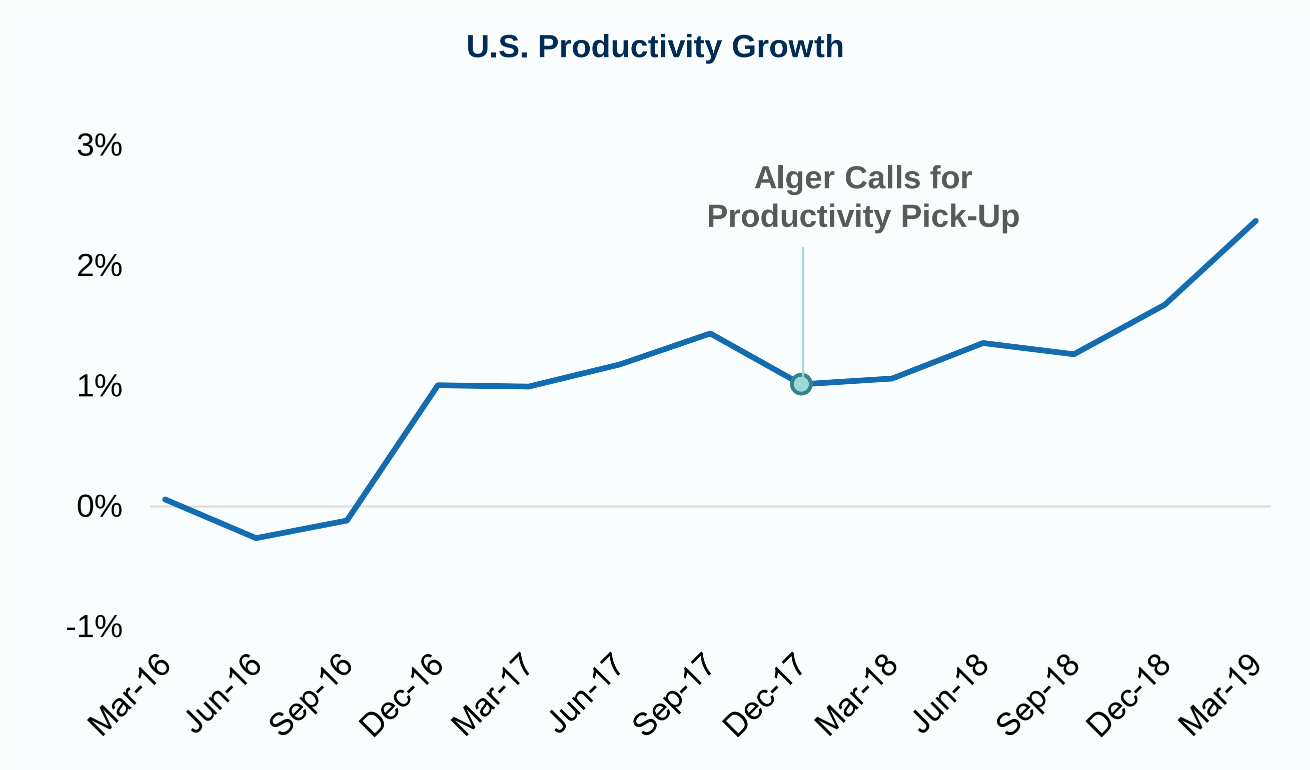




Source: FactSet as of June 2019. EPS for 2019-2020 are consensus estimates and actual earnings per share might be materially different than shown.

Additional Insights
Productivity Is Improving

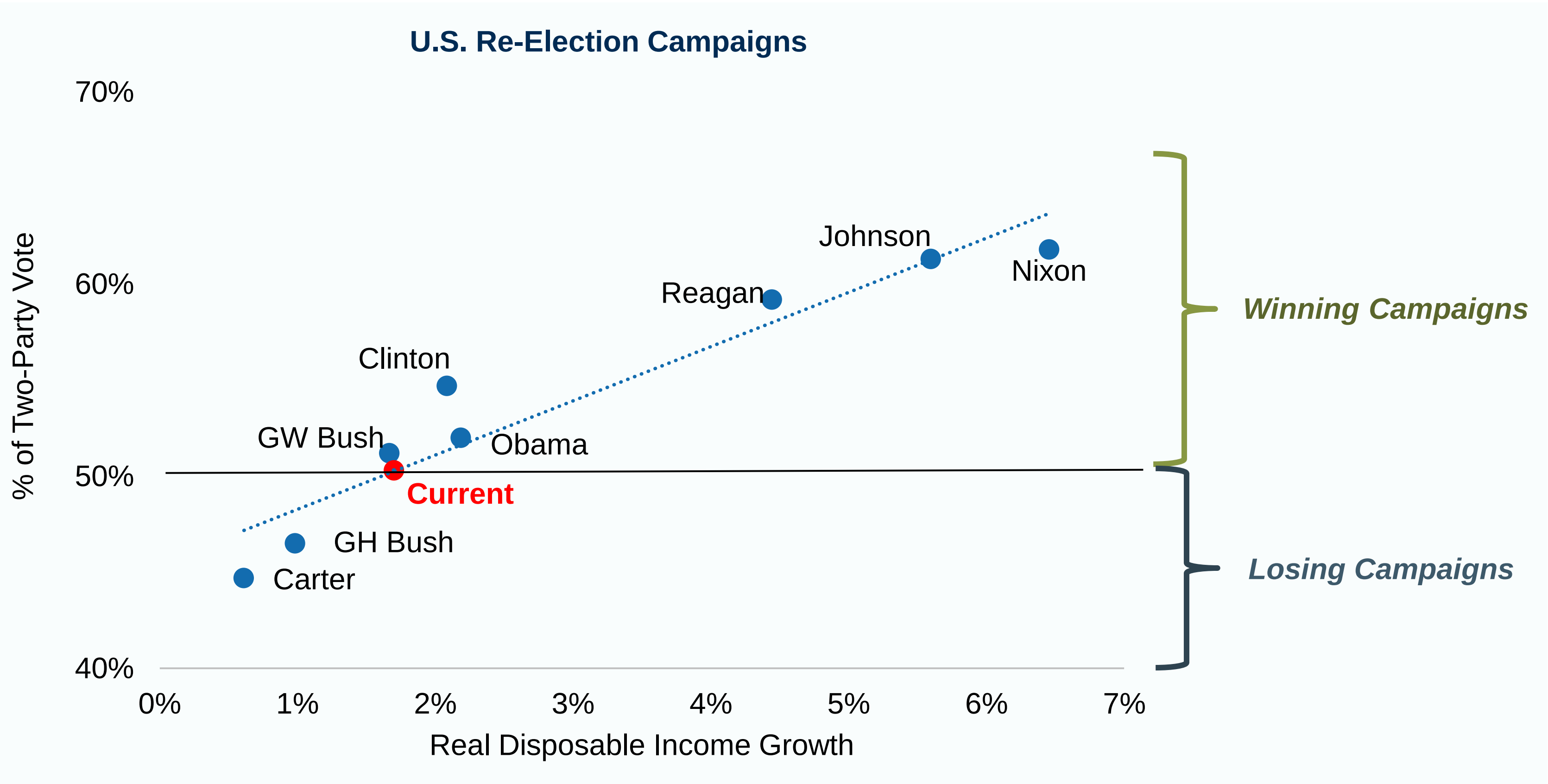
- A year and a half ago we called for an acceleration in productivity
- Today productivity is improving, which drives higher sustainable growth for the economy
- In our view, productivity should continue to accelerate based on robust innovation and solid business spending



Source: FactSet as of June 2019.

Additional Insights
Election by the Numbers

- Over the past half century in presidential elections involving incumbents, a strong correlation has existed between disposable income growth and percentage of votes won
- Historically, disposable income growth of nearly 2% has been needed for re-election, which is currently where it is running

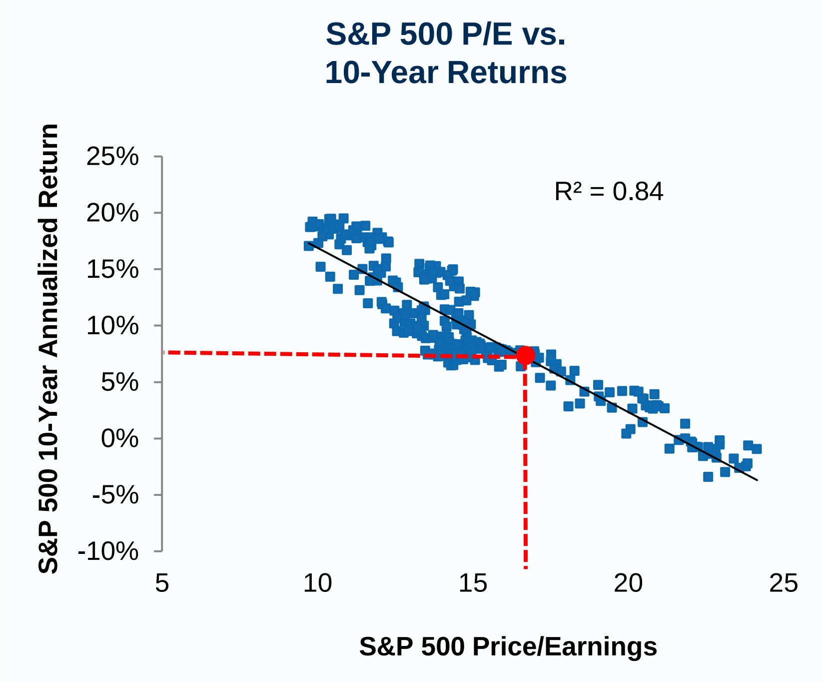


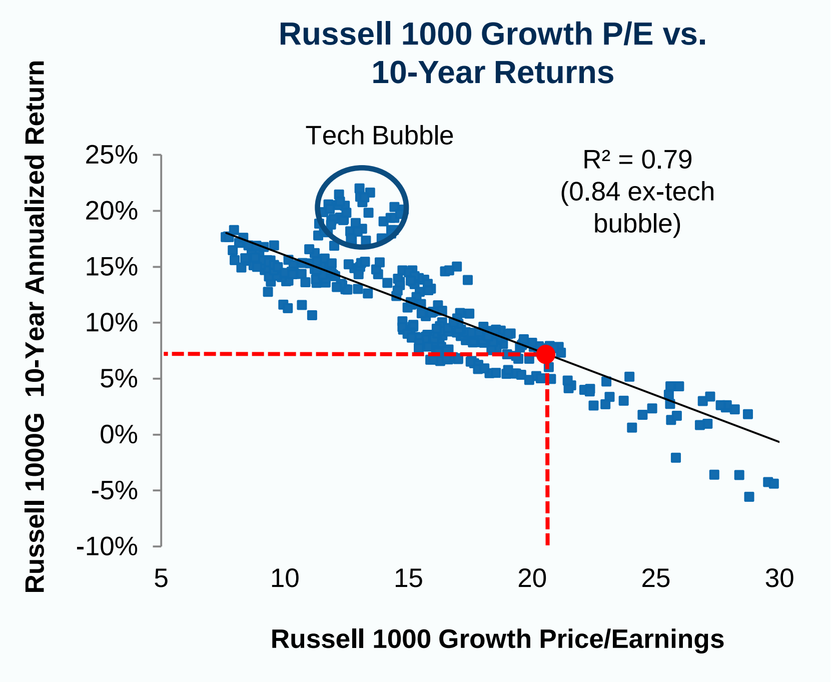
Source: Strategas and Alger. Historical income growth is December to October of election year, annualized, while current data point is YoY growth for May 2019.

Additional Insights
Framework for Forecasting Returns

- There is a strong relationship between starting valuations and ensuing 10-year returns
- Current valuations suggest equities should produce returns lower than their historical average, but materially outperform bonds over the coming decade

■ = Month ● = Current





Source: FactSet. Each dot represents the P/E during that month and the returns generated over the subsequent 10 years. The starting P/E ratio is the price divided by the next 12-month earnings per share estimate at the start of each 10-year period measured. Monthly data through June 2019 and beginning in January 1986 (S&P 500) and December 1978 (Russell 1000 Growth). The tech bubble, represented by the 10-year returns beginning in April 1987-March 1990 and ending in April 1997-March 2000 skewed the regression by resulting in higher returns for given valuations than the historical relationship would imply. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

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