

# ALGER

Inspired by Change, Driven by Growth.

Summer 2022

## Capital Markets: Observations and Insights

Revealing Recession Patterns



Alger is a signatory to the PRI and carbon neutral.

# Revealing Recession Patterns

Recessions may be the most feared events in economics and investing, but the most effective way to deal with them is to have a game plan. In this presentation, we deconstruct and analyze past recessions to reveal repeating economic and capital market patterns.

We also identify areas of investment that may be less impacted by recessions and may be able to grow through them. Our strategy for dealing with economic volatility is to invest in these kinds of companies that can control their financial destiny. Companies with solid balance sheets that gain market share can expand even as their end markets shrink. If we believe company fundamentals such as earnings and cash flow will grow through a recession, we can potentially mitigate the risk of valuation compression. While this is a risk to be sure, it is likely limited and quantifiable, unlike say an economically sensitive company that may see earnings decline to levels that make debt service or repayment difficult. Such a scenario may result in permanent loss of capital in a recession. Quality growth companies, on the other hand, are more likely to emerge from a recession stronger, with better competitive positions.

While we can't be sure when the next recession will occur, we have experience in managing through economic volatility. We have invested through eight recessions since our founding in 1964. Our firm has flourished despite these trying times, and we are confident that we will continue to do so, through both recession and expansion.



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



**Brad Neuman, CFA**  
Senior Vice President  
Director of Market Strategy

# Key Observations and Themes

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## Revealing Recession Patterns

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We analyze past recessions to reveal repeating economic and capital market patterns as well as identify areas of investment that may be less impacted by recessions.

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## What's Priced In?

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With investors focused on risk and asset prices down, we examine valuations to identify areas of the capital markets that may look attractive.

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## Economic Crosscurrents

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Strong labor market and balance sheets are being offset by headwinds from higher interest rates and less accommodative fiscal policy.

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## Enduring Themes

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Secular investment trends may transcend economic volatility, politics and central bank actions, producing compelling investment opportunities over the long term.

V

## Style Wars

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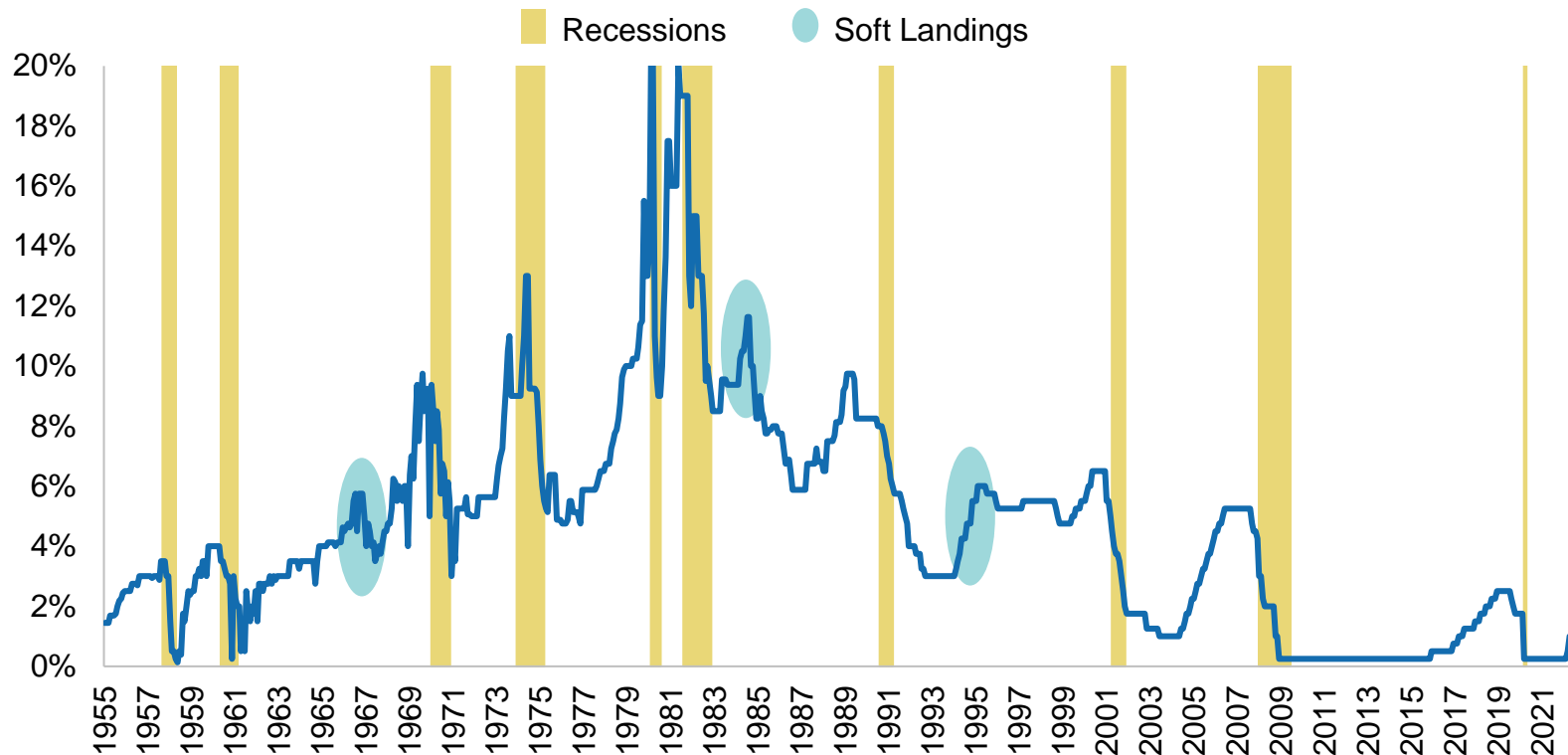
Powerful structural forces may keep the long-term trend of growth outperformance intact, in our view.

# Revealing Recession Patterns

## It Starts With The Fed

- Essentially every recession has been preceded by a rising Federal Funds rate
  - Only three instances of “soft landings” in the mid-60s, mid-80s, and mid-90s

### U.S. Federal Funds Rate Target



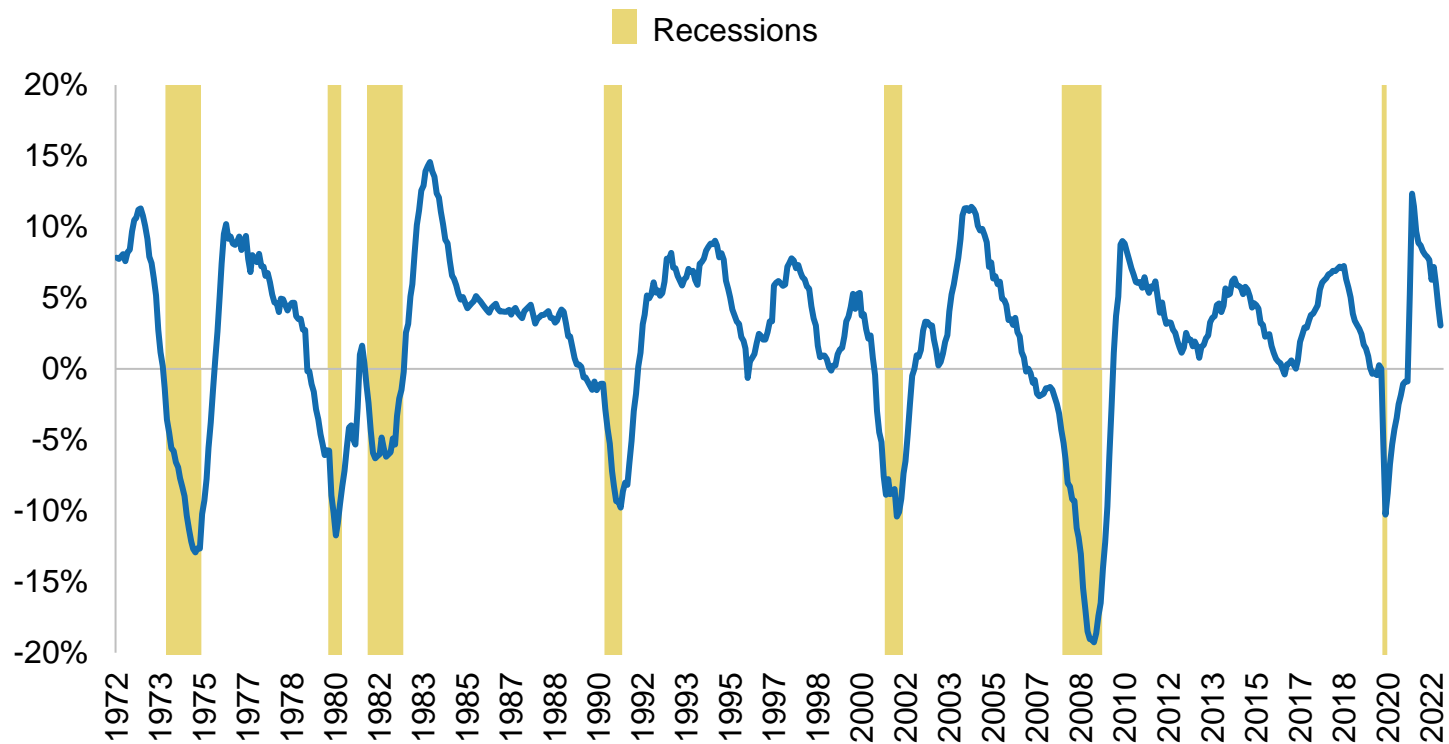
Source: Federal Reserve, National Bureau of Economic Research (NBER). FactSet as of June 30, 2022.

# Revealing Recession Patterns

## The Leading Edge

- The Leading Economic Index has typically declined preceding recessions
  - Its year-over-year change typically bottoms two months before the recession ends

### Leading Economic Index Year-Over-Year Change

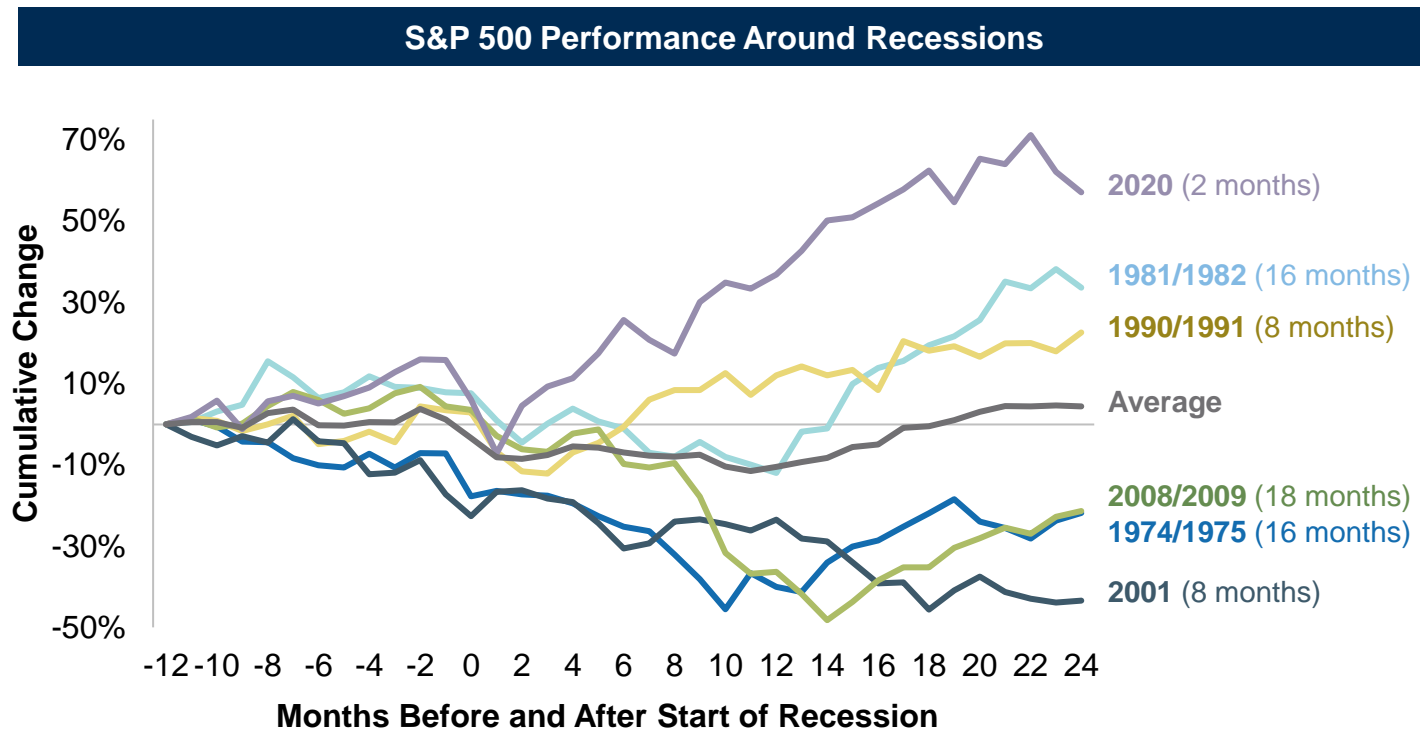


Source: The Conference Board as of May 31, 2022, NBER. The Leading Economic Index (LEI) is a monthly index of 10 economic components used to predict the direction of global economic movements in future months.

# Revealing Recession Patterns

## How May Equities Perform?

- Equities have historically peaked several months before recessions start and often bottom prior to the end of recessions



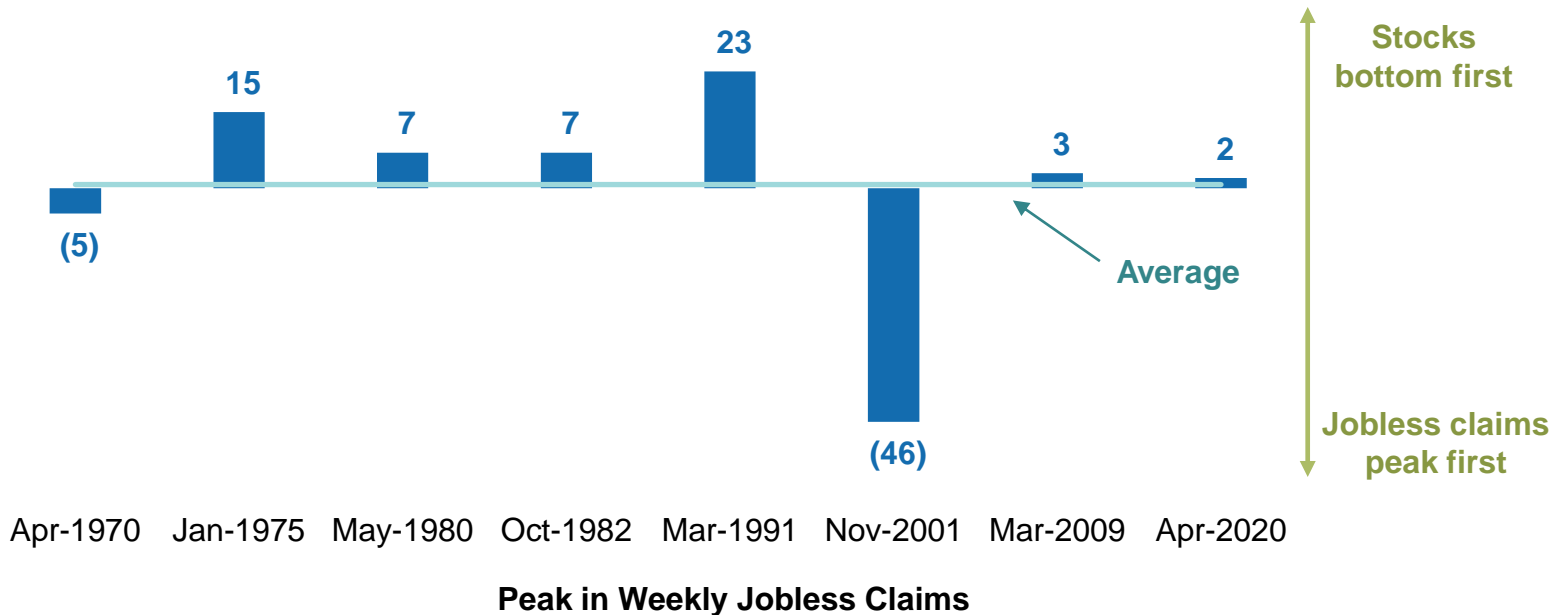
Source: FactSet and Alger analysis. Data calculated monthly. Duration in parentheses signifies length of recession. The performance data quoted represents past performance, which is not an indication or a guarantee of future results.

# Revealing Recession Patterns

## Economic Bottom Signals

- Stock market troughs have typically occurred within weeks of jobless claims peaking

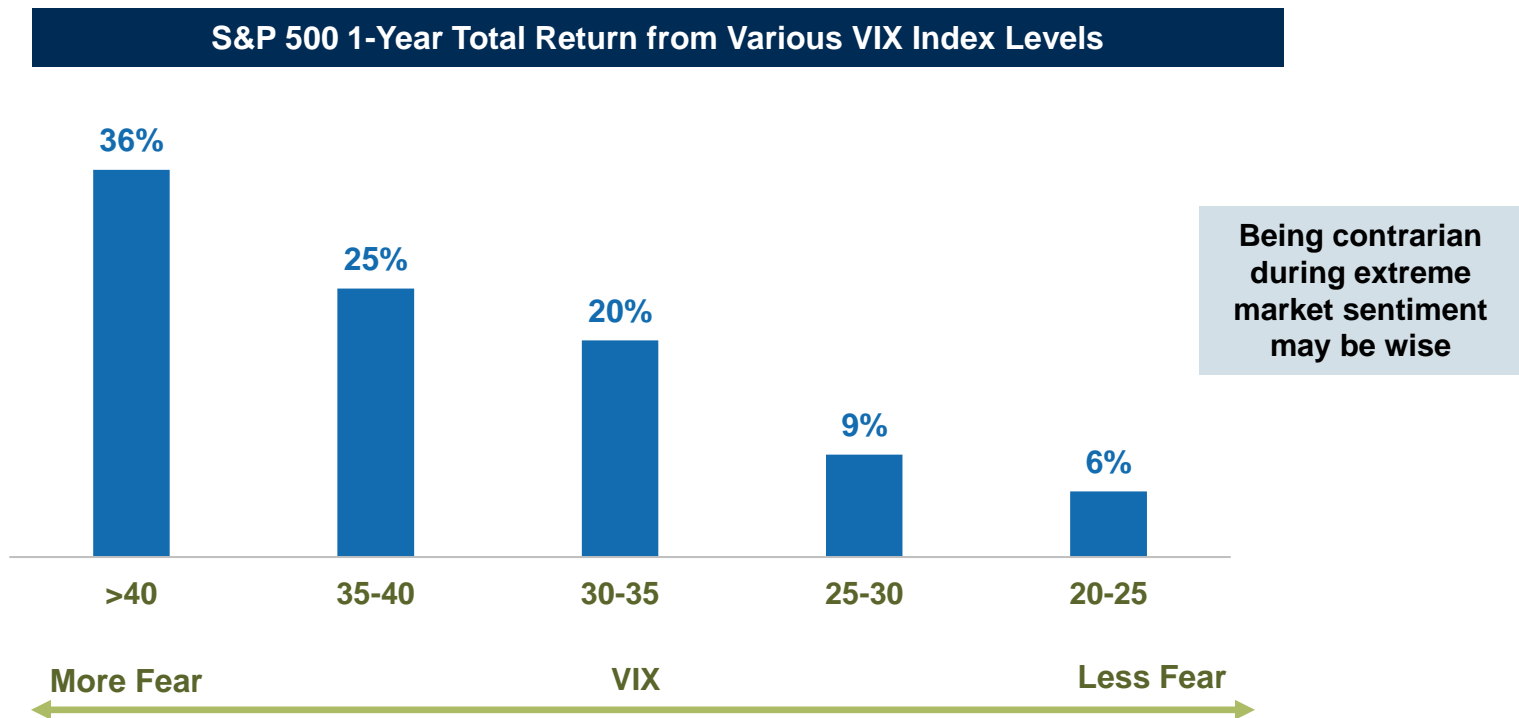
Weeks Between S&P 500 Bottom and Jobless Claim Peak



# Recession Handbook

## Sentiment Bottom Signals

- Various sentiment indicators such as fund flows, put-to-call ratios, insider buying and implied volatility (VIX) can help identify equity troughs
  - History shows that high levels of fear have led to strong equity returns



Source: FactSet and Alger. January 1990-June 2022. Ensuing returns have been measured from the day the VIX hit each level. The performance data quoted represents past performance, which is not an indication or a guarantee of future results.



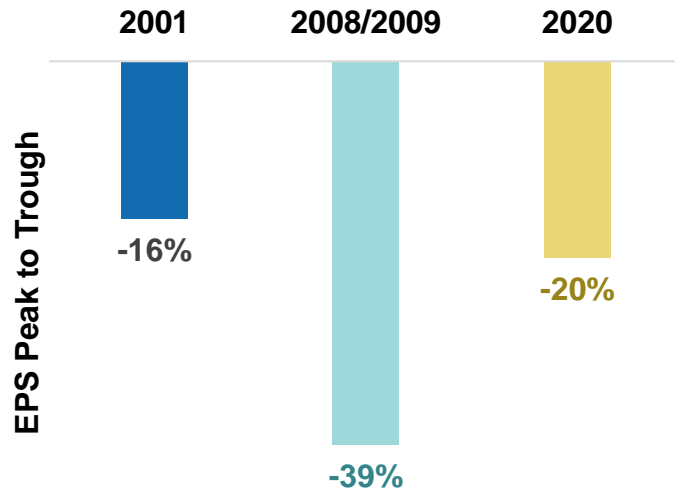
# Revealing Recession Patterns

## Fundamentals in Recessions

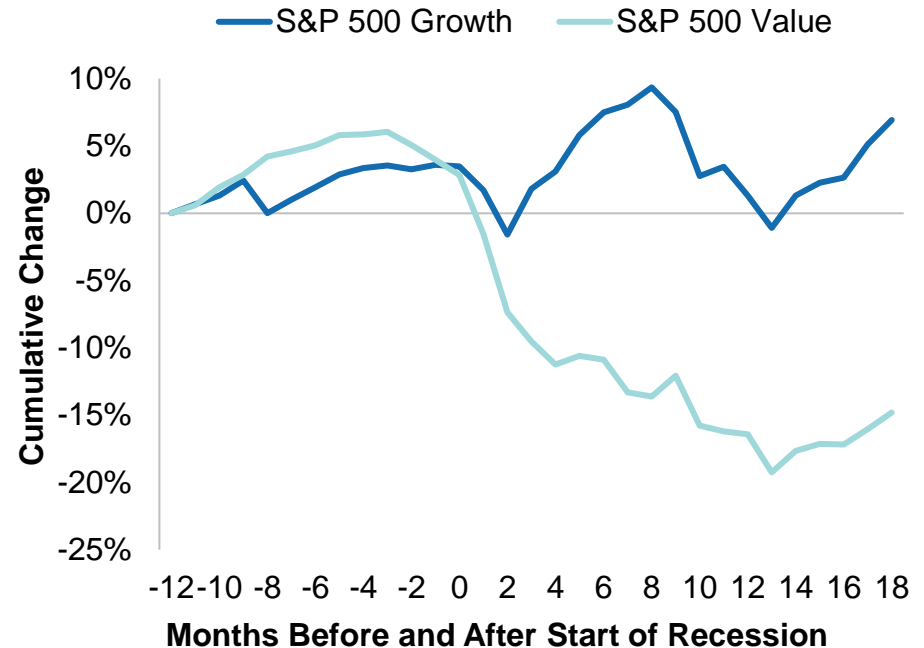
- In the last three recessions, the median S&P 500 EPS drawdown has been 20%

- Economically sensitive value stock fundamentals have done worse than those of growth stocks

### S&P 500 EPS Drawdowns Around Recessions



### But Growth EPS Has Held Up Better



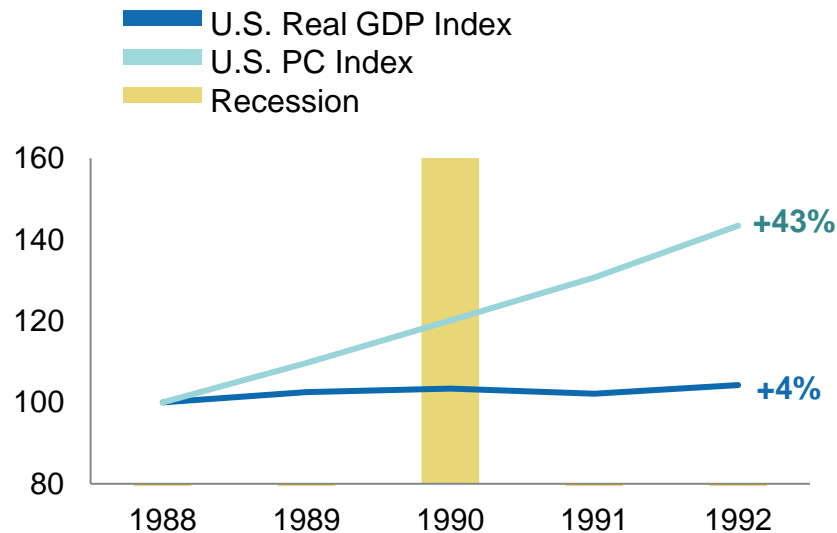
Source: FactSet and Alger analysis. S&P EPS Drawdowns are next 12-months, peak to trough. Growth and Value EPS based on average of last three recessions.

# Revealing Recession Patterns

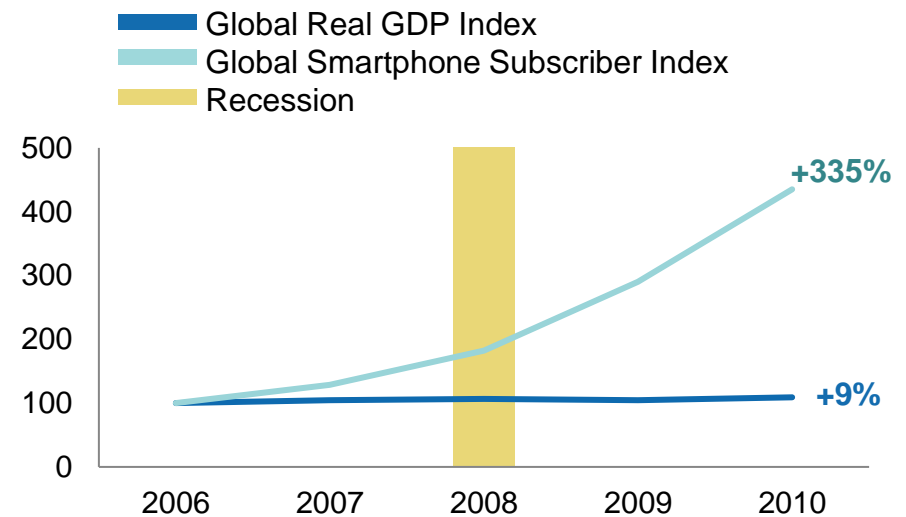
## Powering Through Economic Volatility

- Innovation flourishes while the economy languishes
  - Automobile ownership advanced in the Great Depression, and there was significant growth in PCs and smartphones during challenging economic periods

### Personal Computer Penetration Grew Through Early '90s Recession



### Global Smartphone Subscribers Grew Through Global Financial Crisis



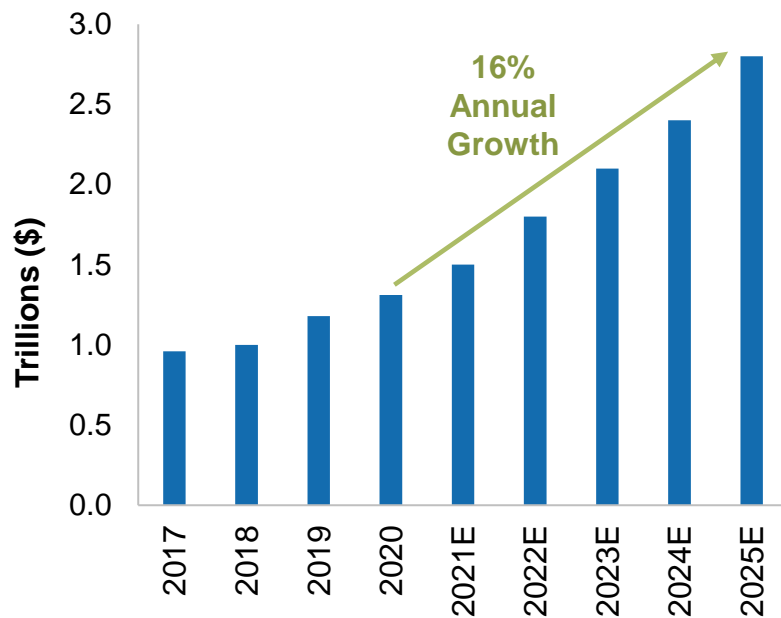
Source: NBER; Diego Comin and Bart Hobijn "Historical Cross County Technology Adoption Dataset"; U.S. Department of Transportation; GSM Association; FactSet.

# Revealing Recession Patterns

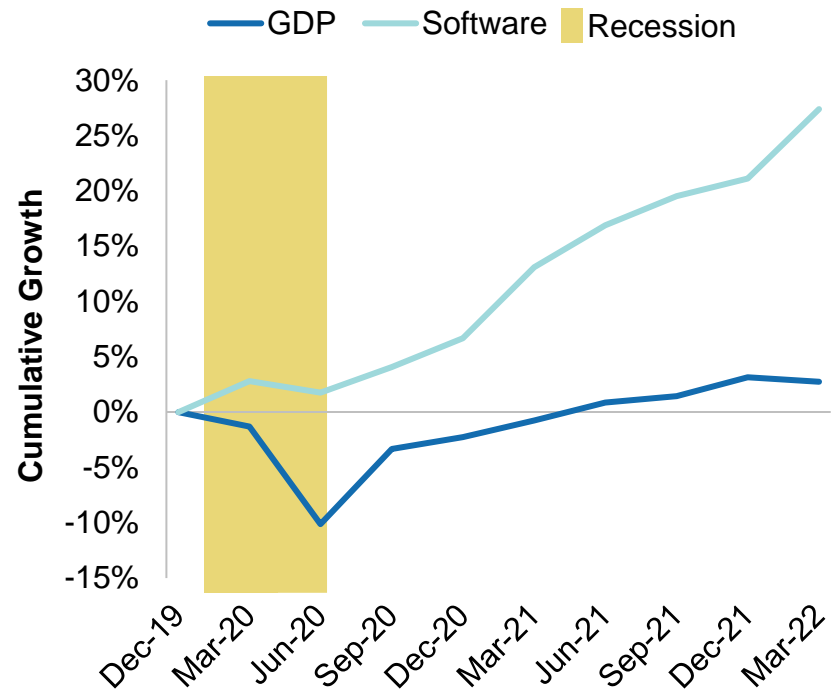
## Some Trends Are Larger Than Recession

- Digital transformation is an enterprise imperative, in our view
  - To keep up, companies must spend on areas like software which may make related end-markets recession resistant

### Worldwide Digital Transformation Spending



### Growth Through The Pandemic



Source: IDC, November 2021, U.S. Bureau of Economic Analysis, NBER.

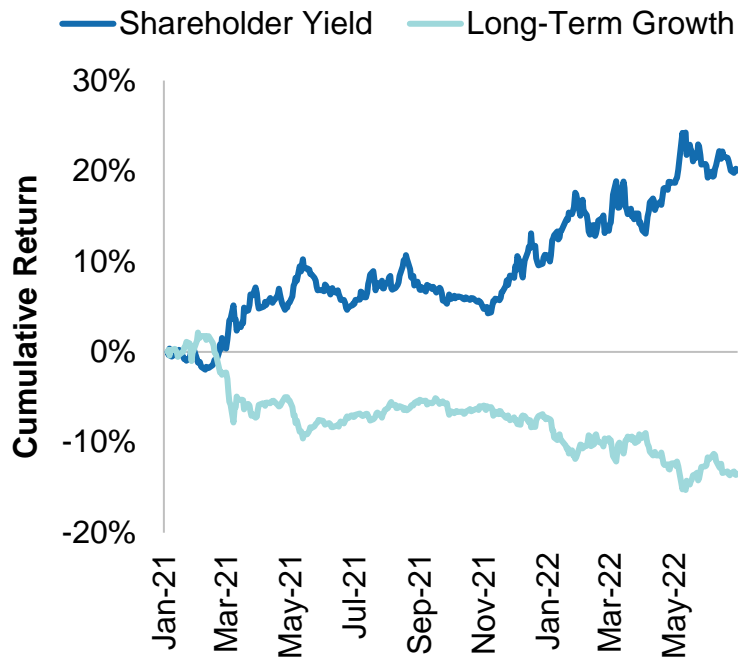


# What's Priced In?

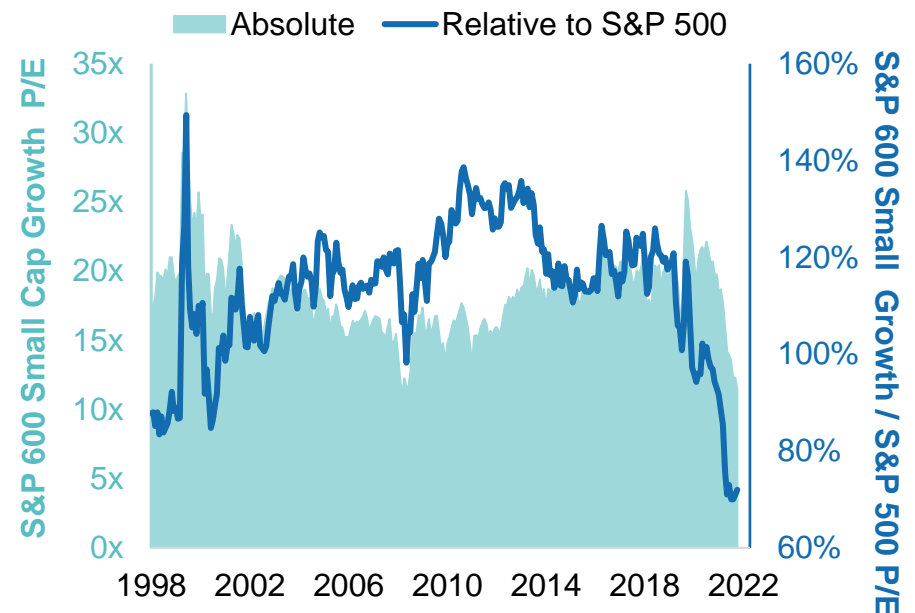
## Long Duration Appears Cheap

- The duration trade has driven investors to seek more current cash flows at the expense of growth...
- ...while pushing down valuations of longer duration, growth assets to attractive valuations, in our view

### The Duration Trade



### Small Growth Attractive Valuations?



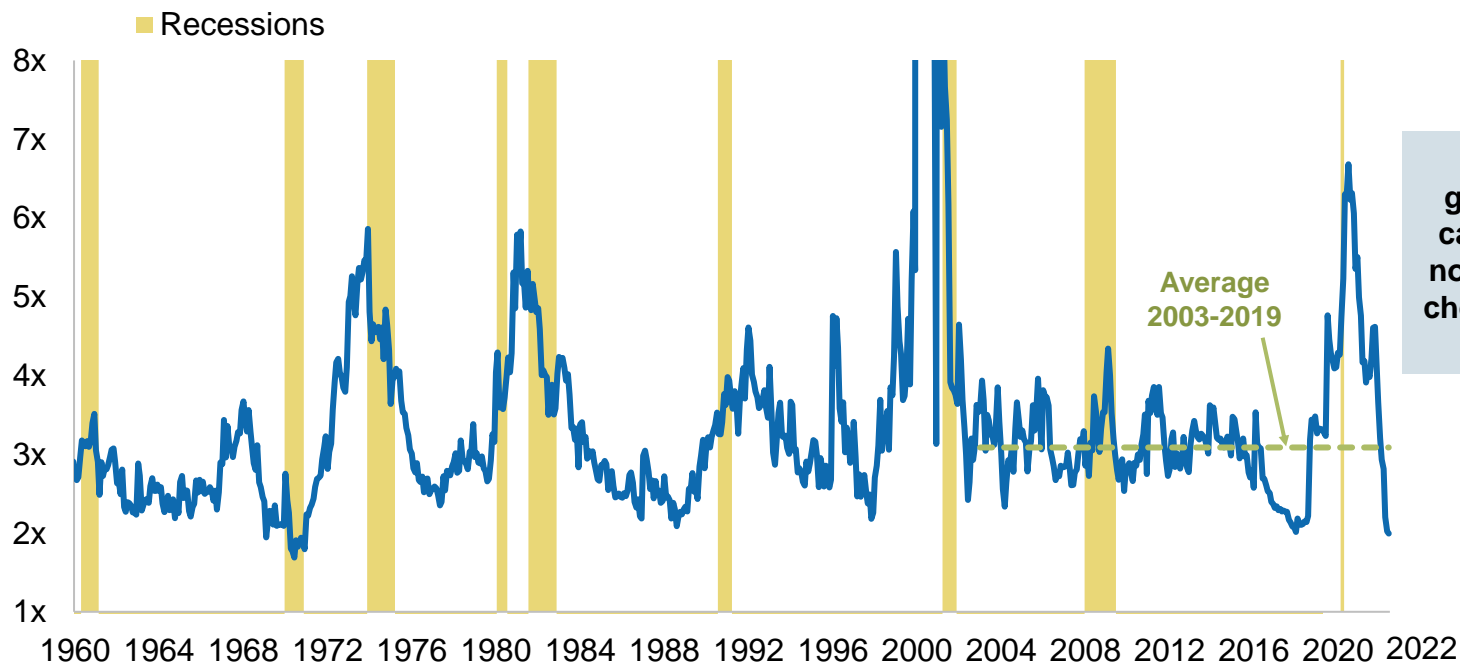
Source: Cornerstone Macro and FactSet as of June 30, 2022. Factor performance relative to the S&P 1500, which is sector neutral and is calculated by taking the relative performance of the top quintile of stocks against the bottom quintile of stocks for each factor. The constituents in the quintiles are rebalanced monthly. Shareholder Yield is [LTM Common and Preferred Stock Purchased - LTM Common and Preferred Stock Sold + LTM Total Common Dividends] / Market Capitalization. Long-term Growth is mean estimated 5-year EPS growth.



# What's Priced In? Fastest Growth at a Discount

- Valuations of the fastest-growing large stocks have fallen dramatically
  - First driven by expectations of the pandemic slowing and the economy reopening and then by rising discount rates

## The Fastest Growers Relative Price/Sales Ratio



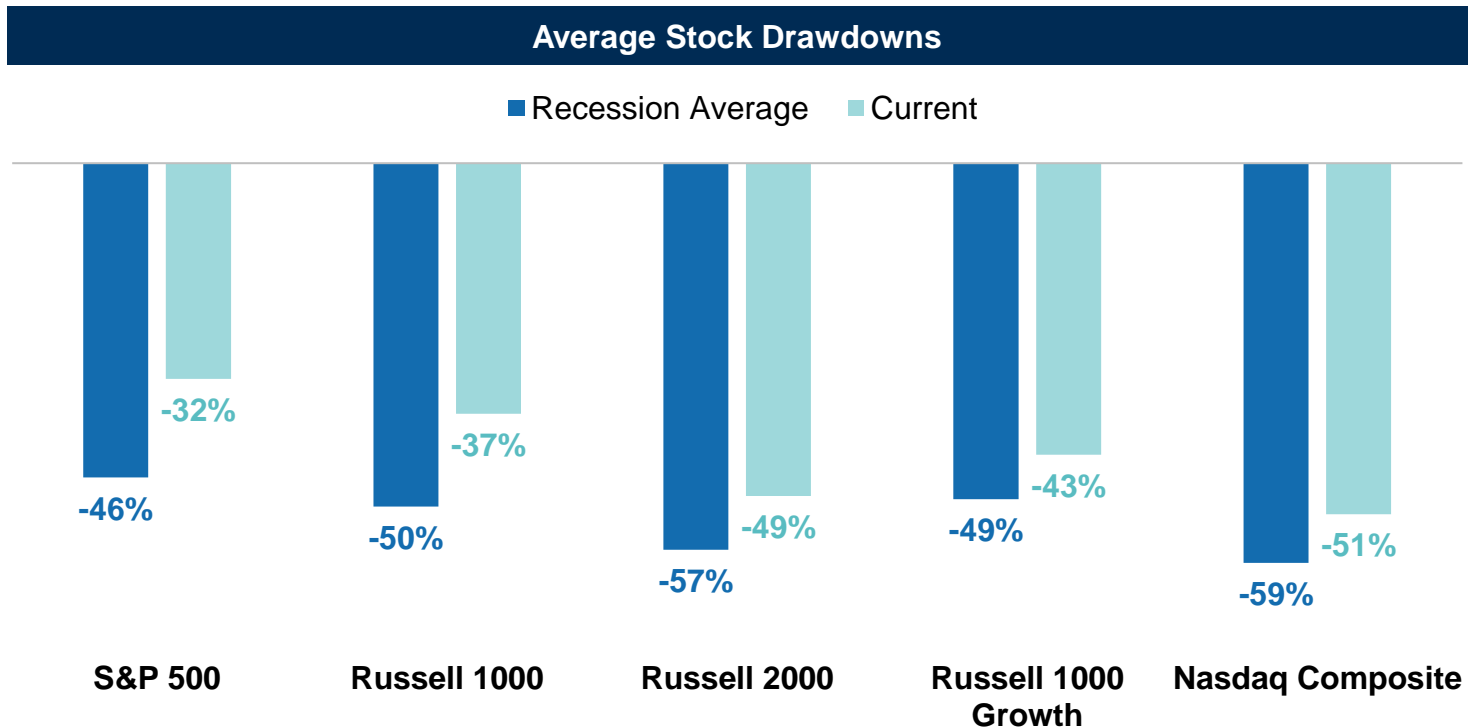
**The fastest growing large cap stocks are now historically cheap relative to the market**

Source: NBER, Empirical Research Partners. Equally weighted data. Fastest growers are the top 10% or 75 of stocks of the largest 750 U.S. public equities based on a scoring methodology including forecasted revenue growth, trailing revenue growth, stability of revenue growth, and return on equity. Data through June 2022.



## What's Priced In? Dissecting Drawdowns

- Some areas of the stock market are discounting a recession more than others, based on historical drawdowns
  - Small caps and growth stocks seem to be pricing in a recession more than other areas of the equity market

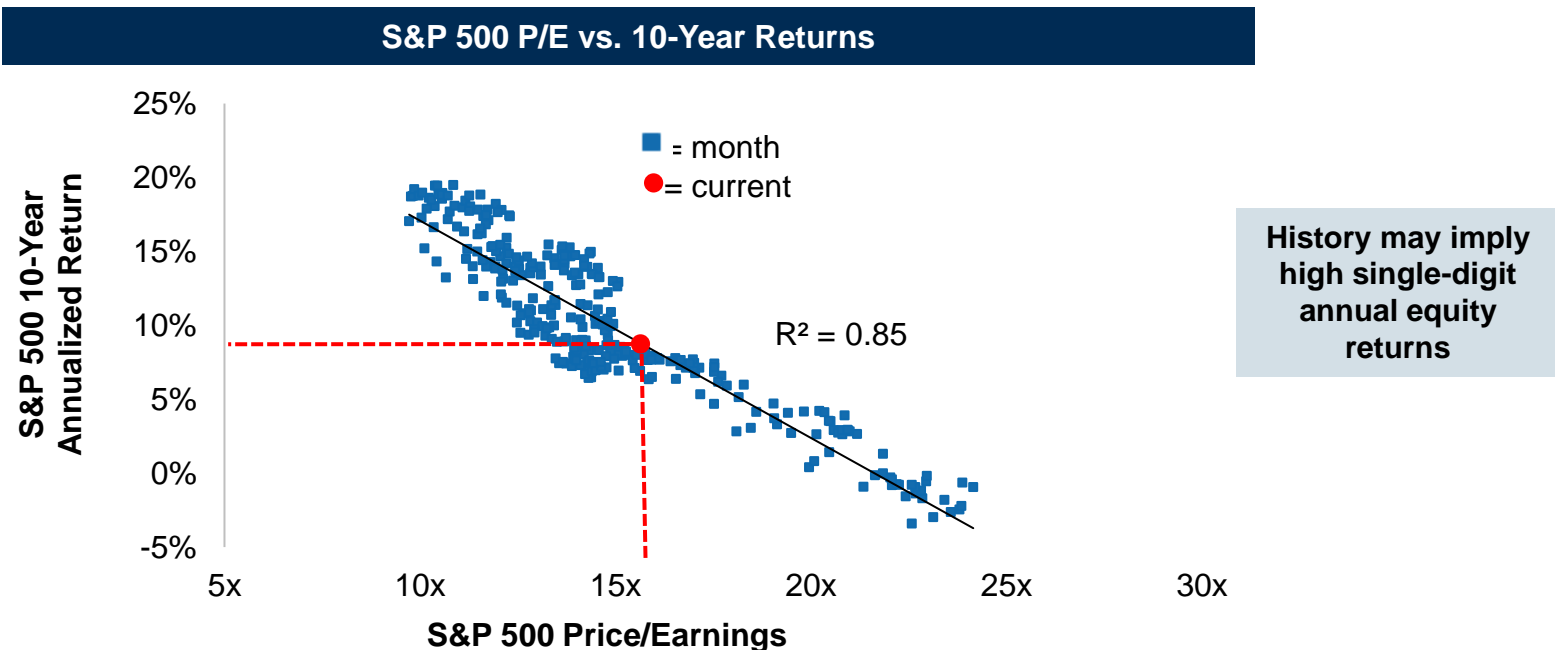


Source: J.P. Morgan. As of June 2022. Based on 12-month drawdowns. Recession average uses past four recessions.



## What's Priced In? Many Happy Returns?

- There is a strong relationship between starting equity valuations and ensuing 10-year returns
  - Current valuations suggest stocks should produce solid returns, in excess of Treasury bond yields



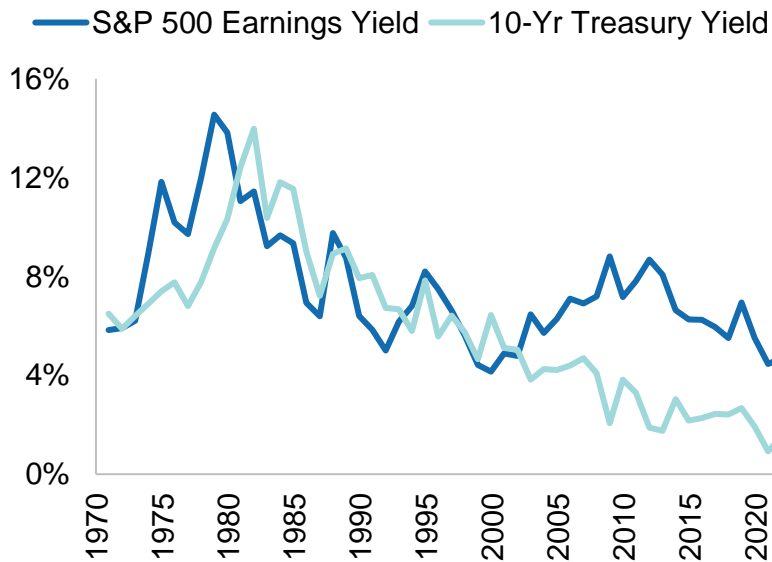
Source: FactSet. Each dot represents the P/E during that month and the returns generated over the subsequent 10 years. The starting P/E ratio is the price divided by the next 12-month earnings per share estimate at the start of each 10-year period measured. Monthly data through June 2022 and beginning in January 1986. R-squared is a statistical measure used to analyze how differences in one variable can be explained by the difference in a second variable. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**



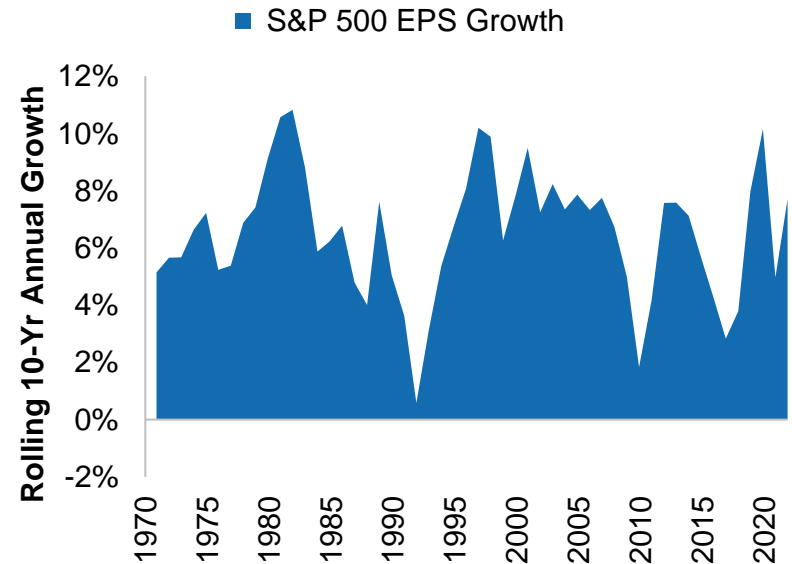
# What's Priced In? Stocks vs. Bonds

- Even with the rise in interest rates, stocks “yield” significantly more than bonds
  - Over 10-year periods in the past half century, S&P 500 EPS has always grown, averaging nearly 7% annually, while bond coupons do not grow

## Equity “Yield” Is Attractive Relative to Treasuries...



## ...And Equity EPS Can Grow!



Source: FactSet, Robert Shiller, Alger. Notes: periods used were annual. Treasury “P/E” is inverse of yield to maturity. Earnings per share (EPS) is the portion of a company's earnings or profit allocated to each share of common stock.

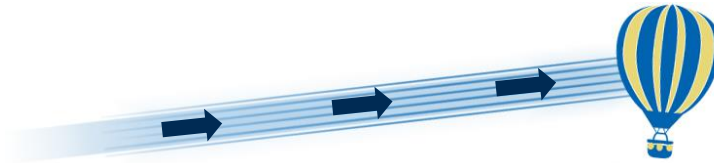




# Economic Crosscurrents

## Mounting Headwinds

### Tailwinds



- Strong labor market
- Healthy corporate and consumer balance sheets
- Recovery in depressed economic areas
- Supply chain pressures easing

### Headwinds



- Tightening monetary policy
- High Inflation
- Geopolitical conflict
- Less accommodative fiscal policy

I

II

III

IV

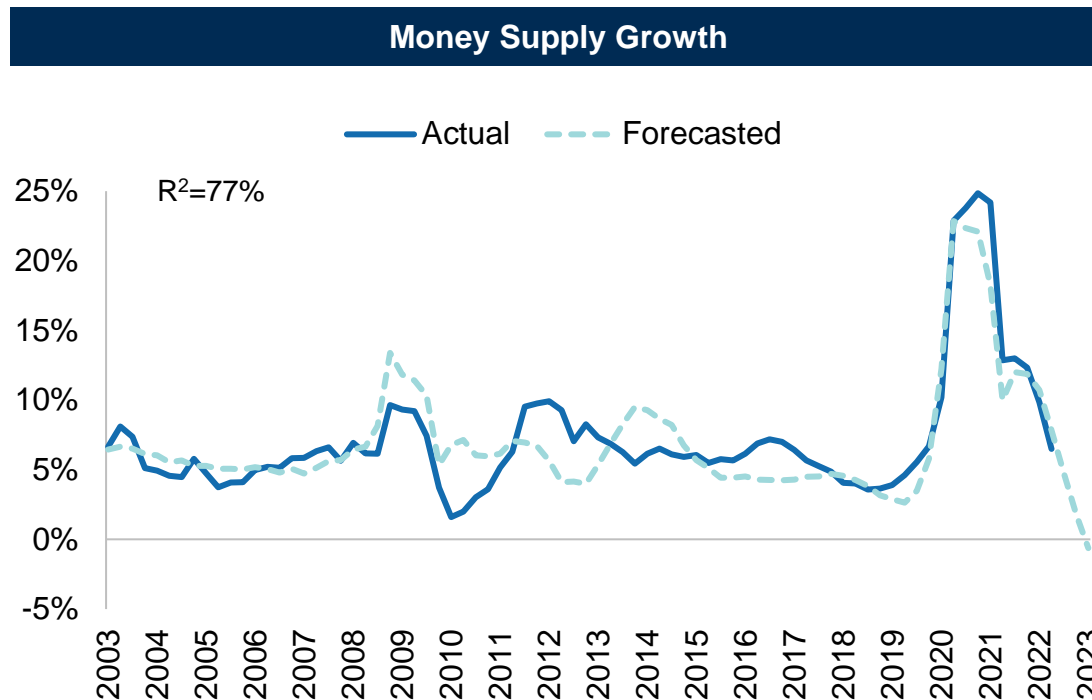
V



## Economic Crosscurrents

### Slowing Money Supply

- The increase in the Federal Funds rate, decrease in the Federal Reserve's assets, and slowdown in government spending is constricting money supply growth and moderating economic activity



**Money supply may shrink for the first time since the 1930s**

Source: Piper Sandler and Alger. Last actual data point is May 2022. Forecast based on year-over-year change in Federal Funds rate, Federal Reserve's assets, and U.S. Federal Expenditures.

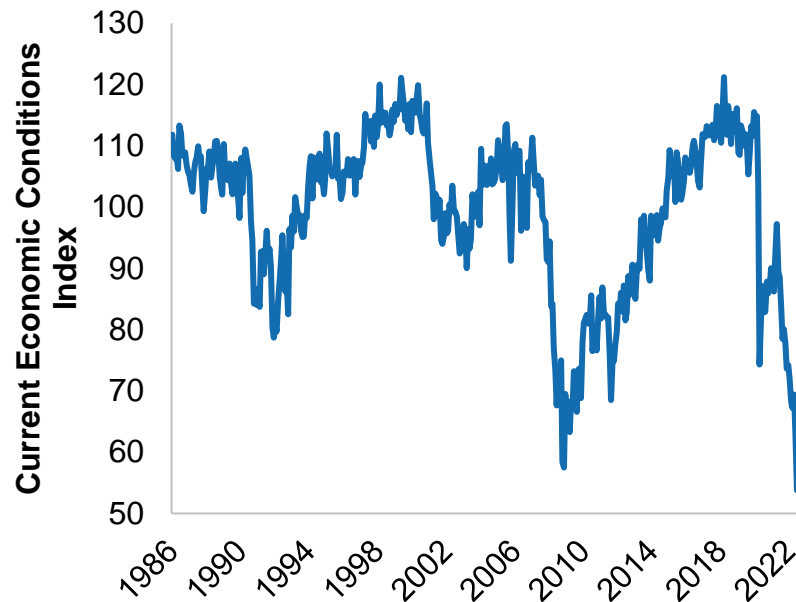


# Economic Crosscurrents

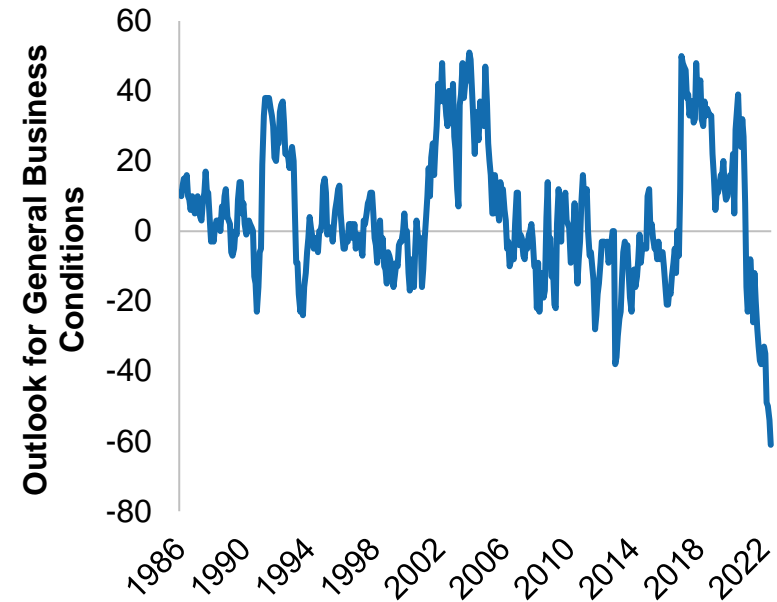
## High Inflation Hurting Confidence

- High prices and interest rates have driven down confidence levels amongst consumers and business executives which is likely to weigh on future spending, in our view

### Consumer Confidence Hit Record Low



### Businesses Are Worried



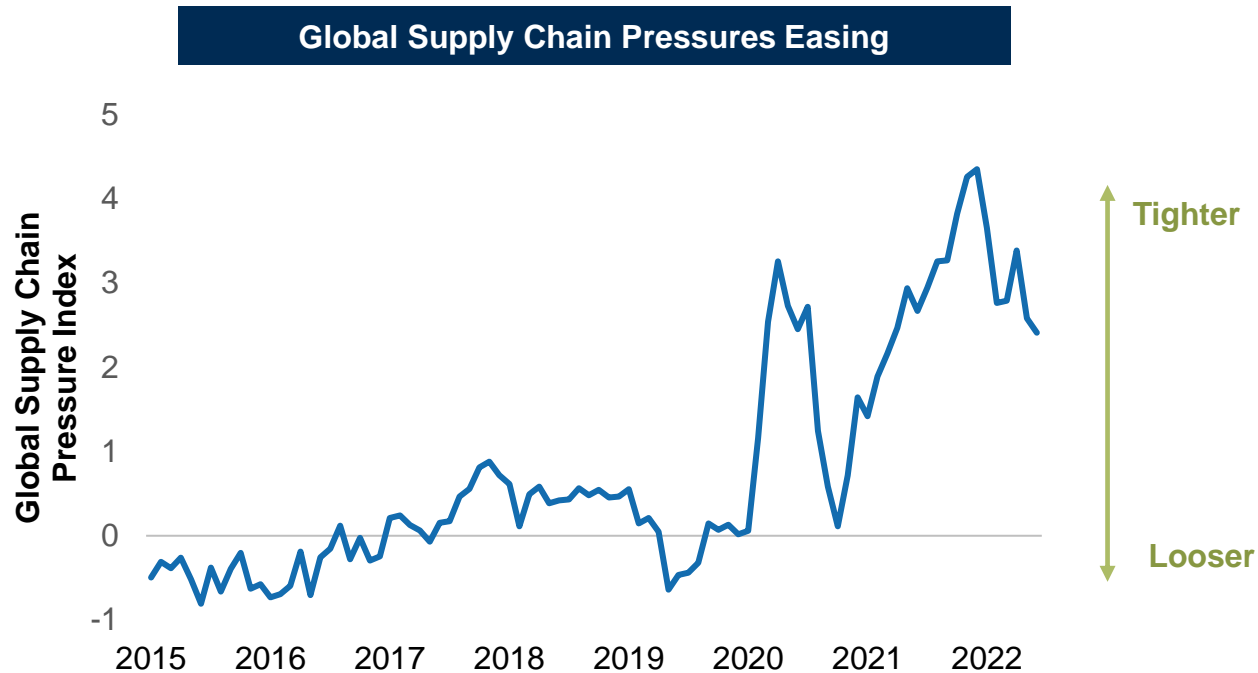
Source: University of Michigan (Current Economic Conditions show how U.S. consumers assess current economic conditions in the country; the index is calculated monthly), and National Federation of Independent Business (component of the NFIB Small Business Optimism Index, which is a monthly survey of small and independent business owners). As of 6/30/22.



## Economic Crosscurrents

### Supply Chain Pressures Easing

- Consensus assumes that inflation needs to moderate via demand weakness but what if supply constraints ease?
  - That could help lower inflation and potentially cause the Fed to be less aggressive



Source: Federal Reserve Bank of New York Liberty Street Economics. The Global Supply Chain Pressure Index (GSCPI) is global measure that encompasses several indicators used to capture supply chain disruptions. Consensus is earnings estimates as determined by a consensus of analysts at financial services firms and provided by FactSet. As of 6/30/22.

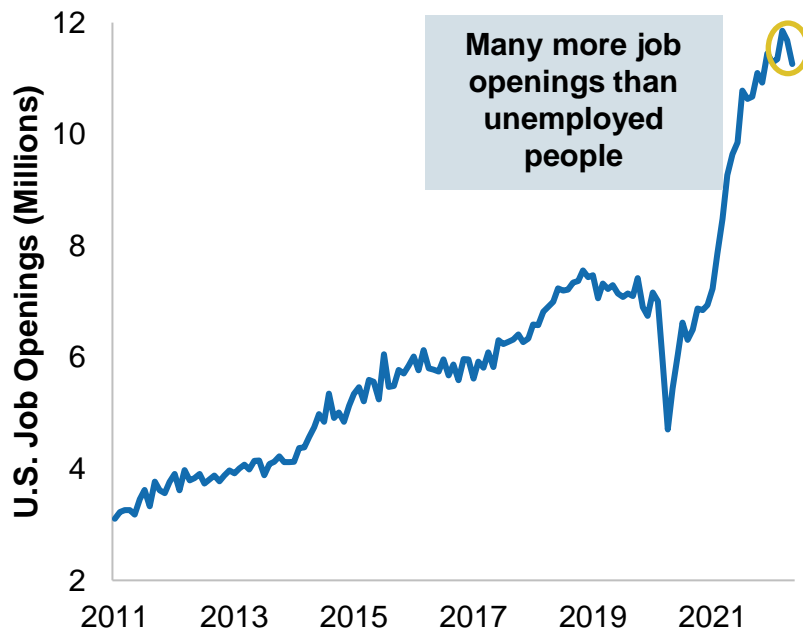


# Economic Crosscurrents

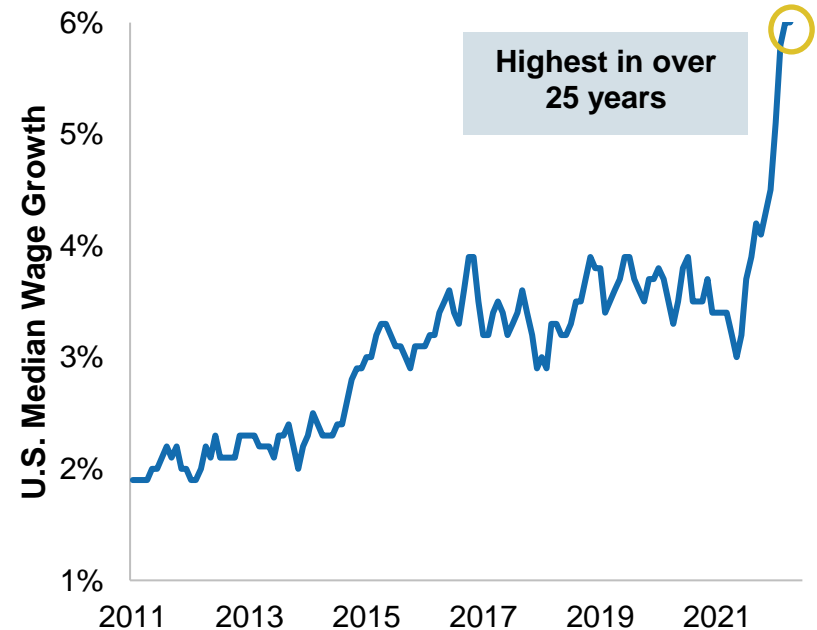
## Still Tight Labor Market

- The labor market is one of the key drivers for Fed tightening and it remains strong
- Wage growth has accelerated – supporting spending but also inflation

### Still Elevated Job Openings...



### ...Driving Strong Wage Growth



Source: U.S. Bureau of Labor Statistics, Federal Reserve Bank of Atlanta. Note that wage growth is reported as a 3-month moving average. As of 5/31/22.

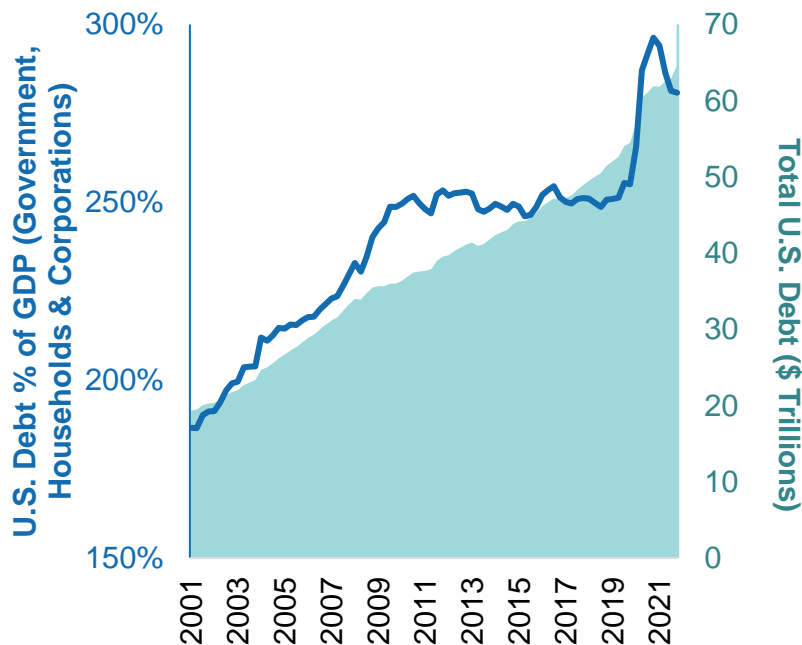


# Economic Crosscurrents

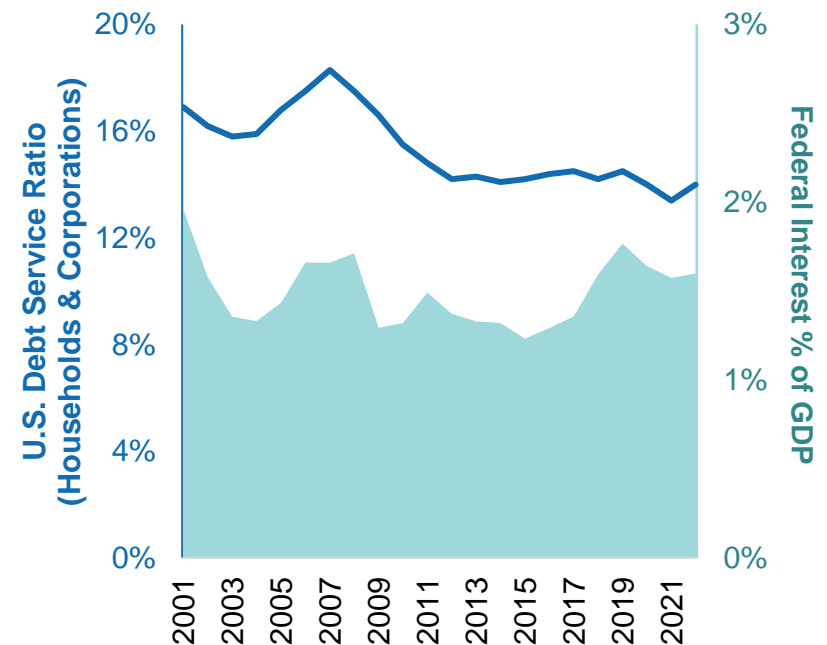
## Solid Balance Sheets

- Huge fiscal stimulus and easy financial conditions drove a surge in U.S. debt
- However, the cost to service the private and federal debt is not high relative to history

### U.S. Debt Levels Are High...



### ...But The U.S. Debt Service Burden Is Not



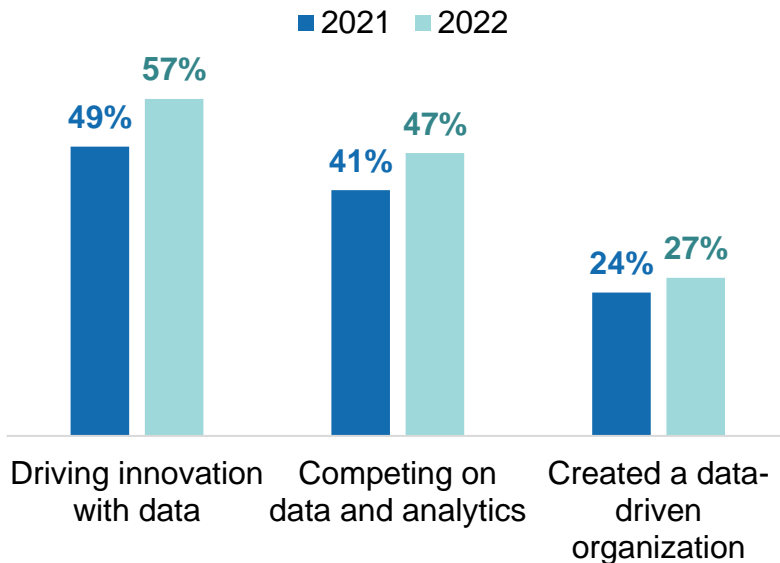
Source: Bank for International Settlements, Congressional Budget Office, and Alger estimates. The debt service ratio reflects the share of income used to service debt (interest and principal).

# IV

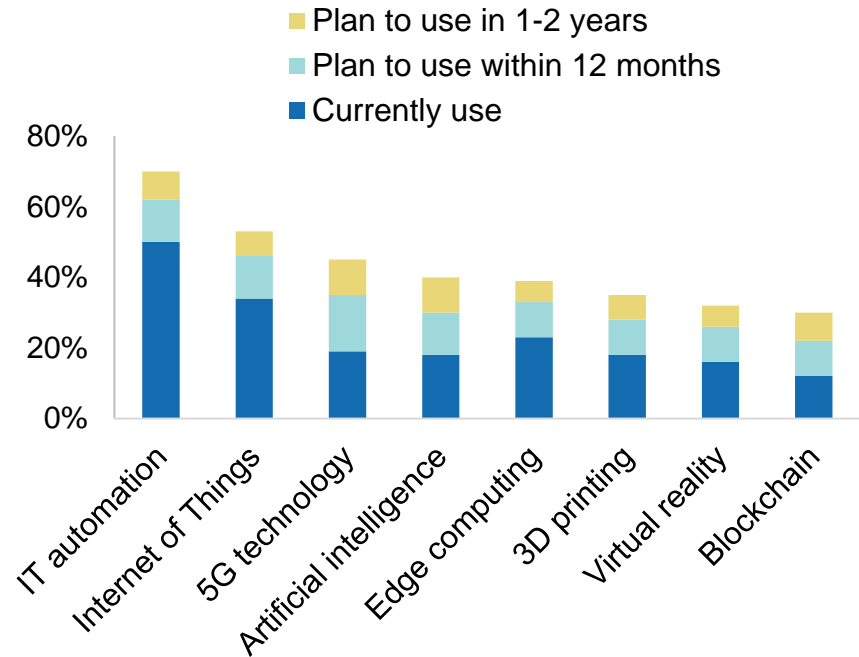
## Enduring Themes Age of Connected Intelligence

- We believe we are in a new technological revolution where intelligent computing will be ubiquitous and pervasive.
  - Data is the new oil and advances in cloud computing and AI will turn this now abundant raw material into better decision making for companies and individuals

### Big Data Adoption in Global Organizations



### Organizational Adoption of Technologies



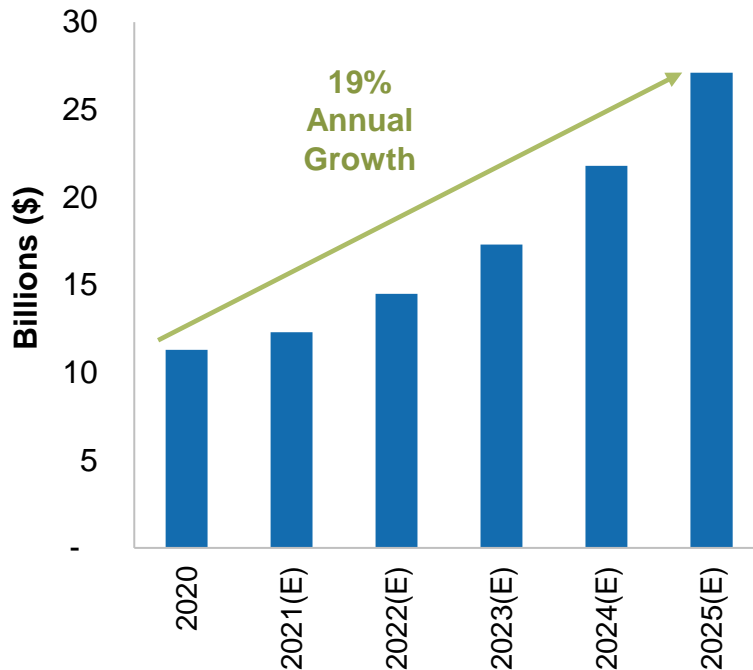
Source: NewVantage Partners survey of 94 Fortune 1000 or industry leading firms, December 2021; Spiceworks, The 2022 State of IT, October 2021, survey of more than 1000 technology buyers in companies across North America and Europe.

# IV

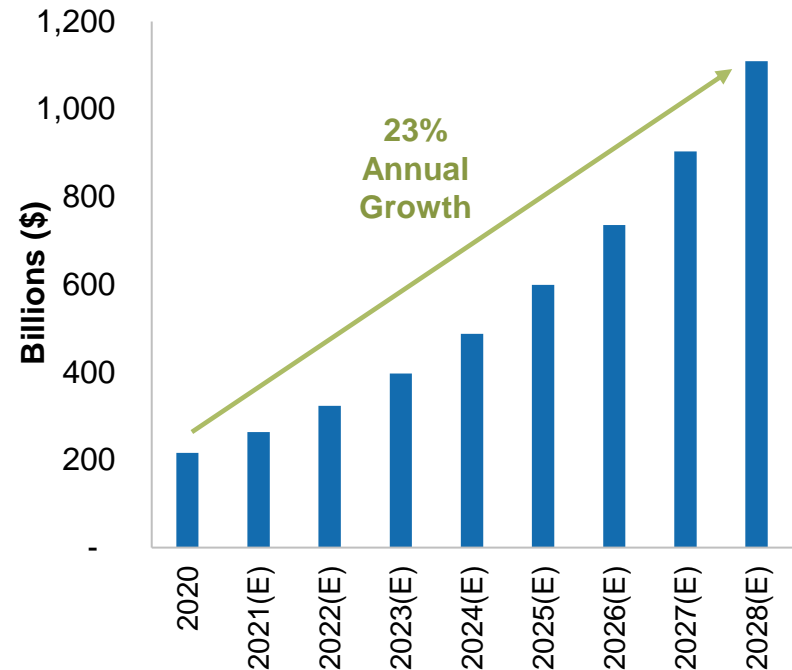
## Enduring Themes Internet of Things

- The explosion in connected devices is creating the “Internet of Things” or IoT, transmitting valuable and actionable information
  - Drivers of IoT spending include security, data analytics, efficiencies, reliability, customer service, improved ROI and compliance

### Global IoT Connected Devices



### Global Industrial IoT Market Size



Source: IOT Analytics, September 2021, and Grand View Research, March 2022.

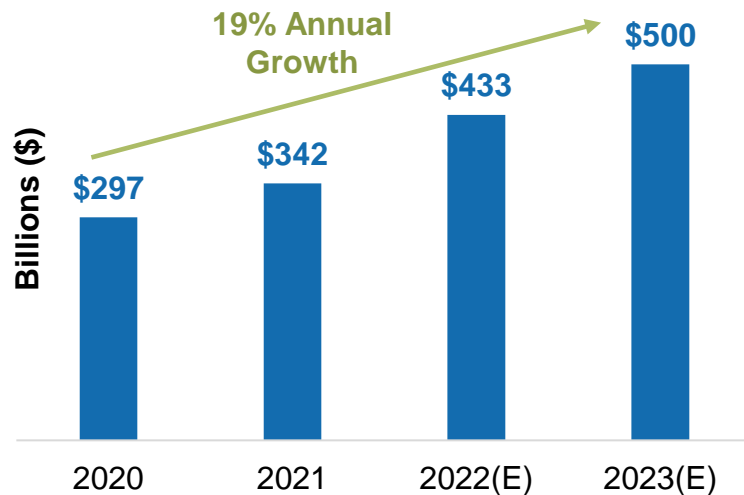


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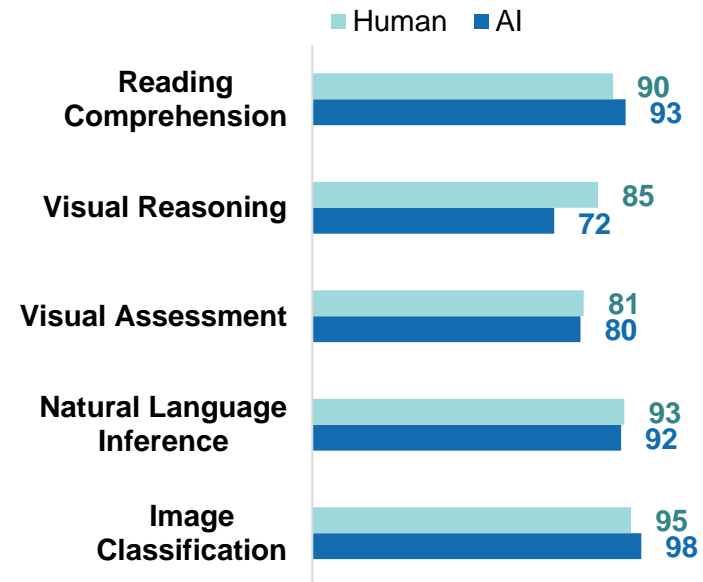
## Enduring Themes Artificial Intelligence

- Companies providing AI-based software services and hardware have a large opportunity
- Exhibiting exponential progress, AI capabilities are now close to, or superior to, humans in various tests

### Global AI Market



### AI vs. Humans – Accuracy (%)



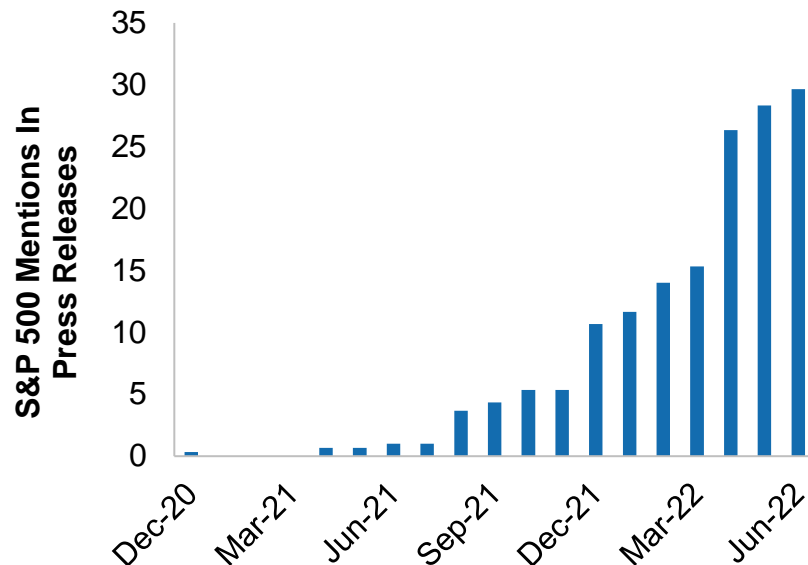
Source: AI market size estimate from IDC, February 2022. Artificial Intelligence Index Report 2022.

# IV

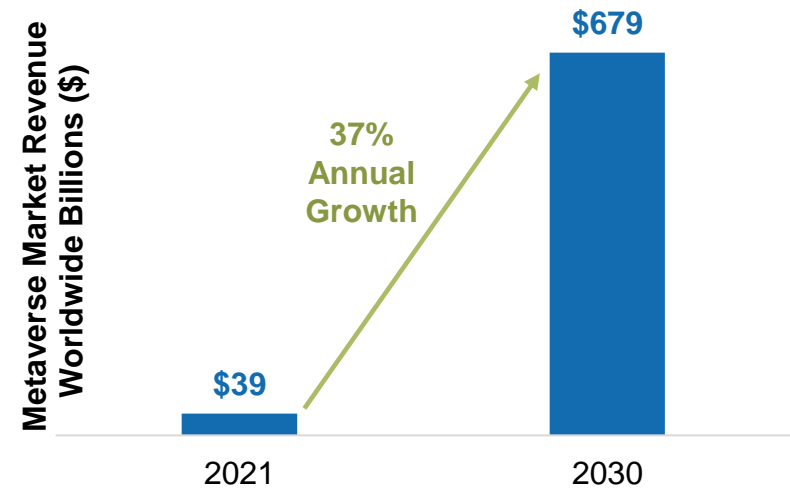
## Enduring Themes Metaverse

- The metaverse may usher in a huge addressable market with a new digital world including an economy where people can earn, trade and shop for digital assets, as well as have social lives and partake in education and entertainment

### Growing Metaverse Conversation



### Large Software and Hardware Opportunity

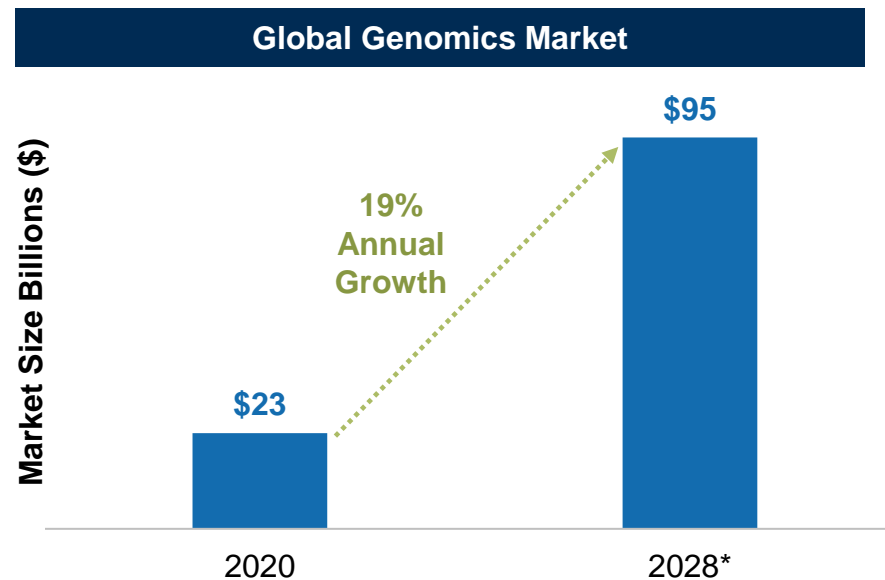


Source: FactSet, June 2022 and Grand View Research, March 2022. Metaverse mentions are based on 3-month moving average.

# IV

## Enduring Themes Genomics Innovation

- Genetic analysis and manipulation will increasingly impact the practice of health care
  - Turning sick care into preventive health care by giving insight into predisposed diseases
  - Delivering more efficacious treatments via targeted therapies (e.g., immuno-oncology)

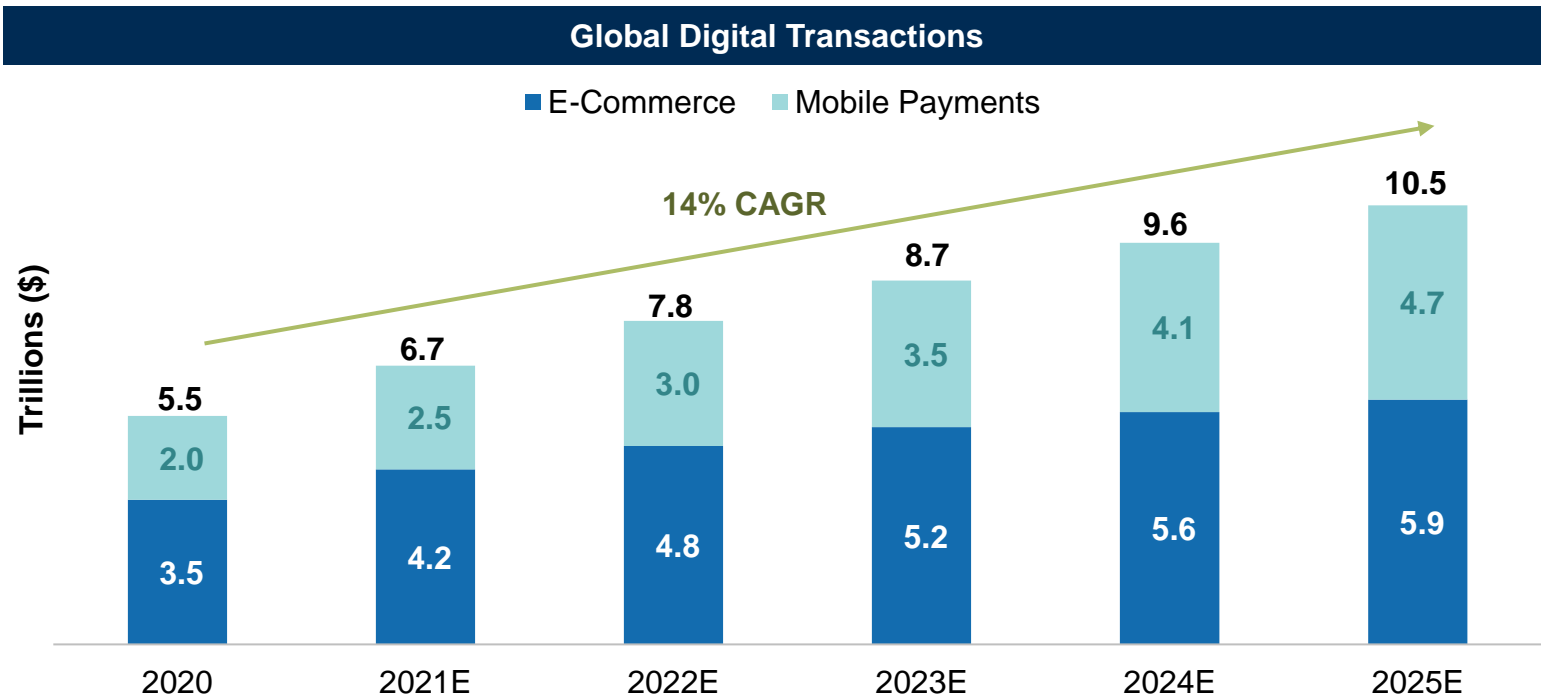


Source: Fortune Business Insights, January 2022. \*Estimated.

# IV

## Enduring Themes Digital Payments

- Digital payments continue to outgrow the broad economy as they gain penetration, driven by increasing e-commerce and mobile payments
  - China has the largest volume of digital payments and Europe is growing fastest
- Payment networks, processors and software companies can capitalize on the trend

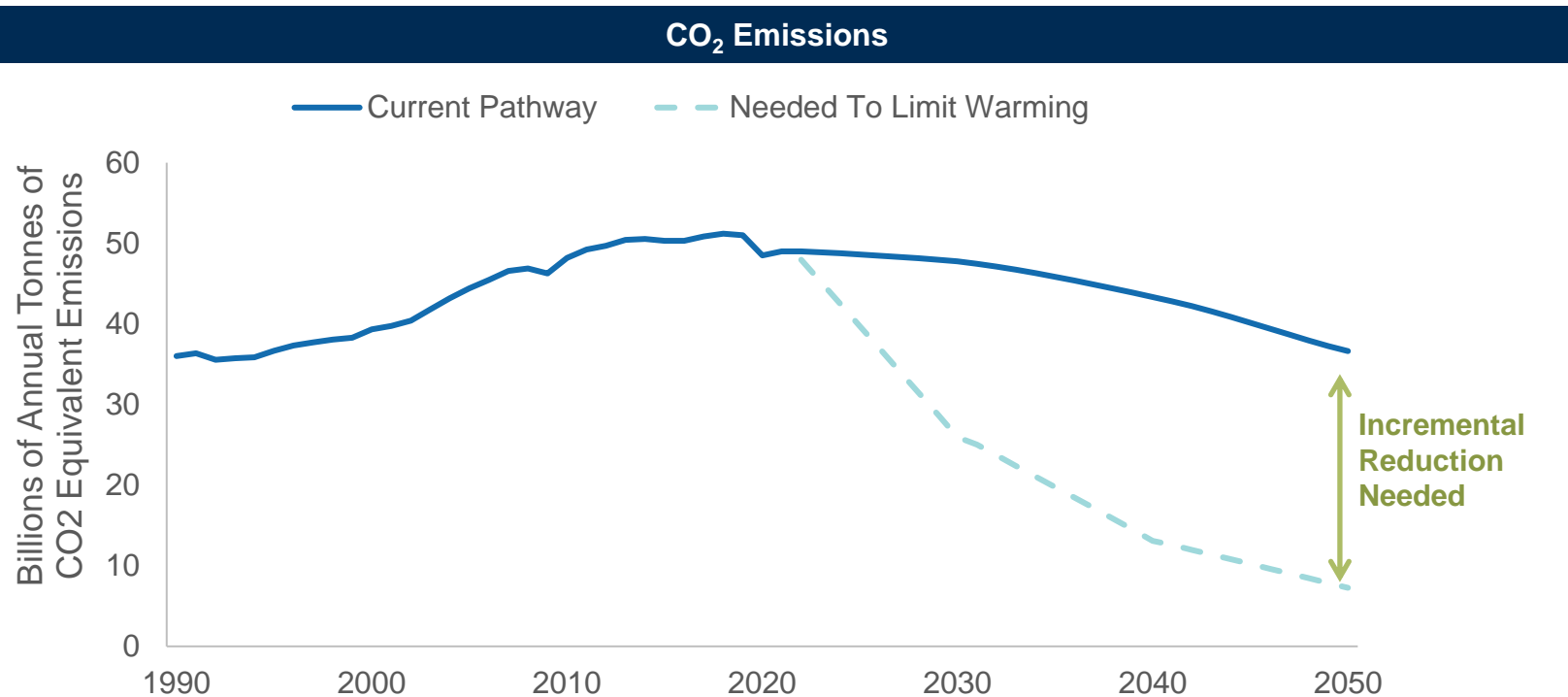


Source: Statista Digital Market Outlook 2021. CAGR is compound annual growth rate, the rate of return required for a quantity to grow from its beginning balance to its ending balance. Mobile payments occur when smartphones are used to process transactions using wireless communication or scan QR barcodes.

# IV

## Enduring Themes Emission Reductions

- The rate of CO<sub>2</sub> emissions is not sustainable in our view and current emission targets need to be reduced further
- Reducing emissions may provide opportunities in alternative energy sources and in electric vehicles and related products and services



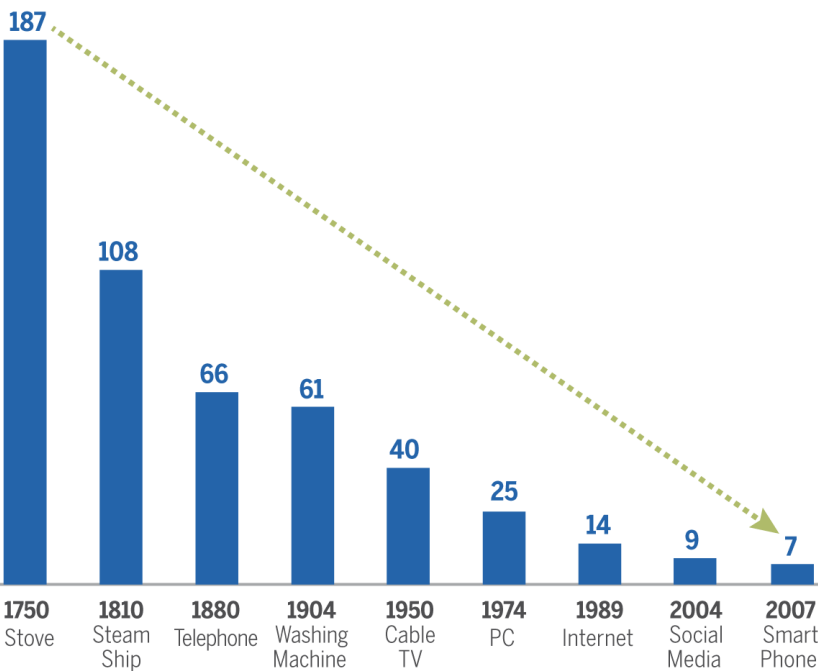
Source: Climate Action Project, May 2021. Current pathway represents average of high and low “pledges and targets” scenario while needed to limit warming is based on median to achieve 1.5 degrees Celsius warming.

# V

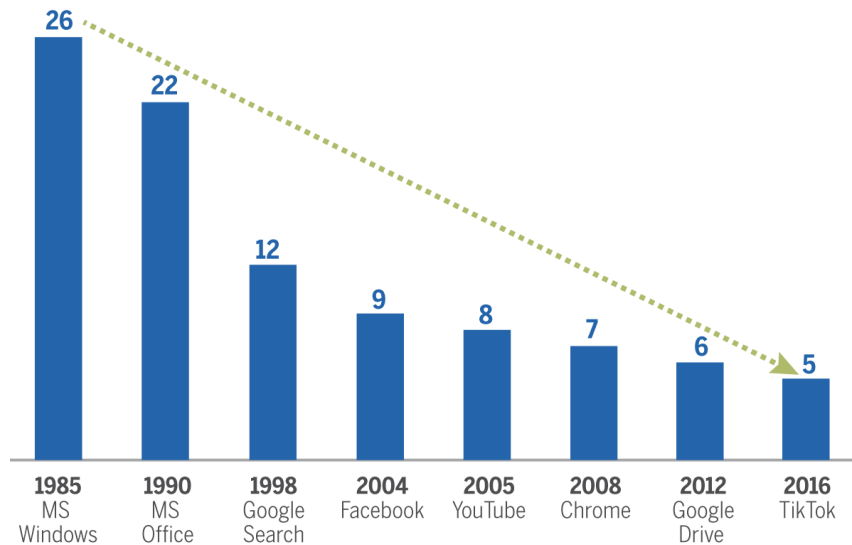
## Style Wars Accelerating Change

- Innovation is accelerating across many areas of the economy, causing new products and services to diffuse through society faster and disrupt businesses at a greater pace
- This may be a tailwind to growth companies, which we believe are the drivers of innovation, and a headwind to value stocks, which may be victims of change

### Years from Market Entry to 50% Penetration



### Years to Reach 1 Billion Users

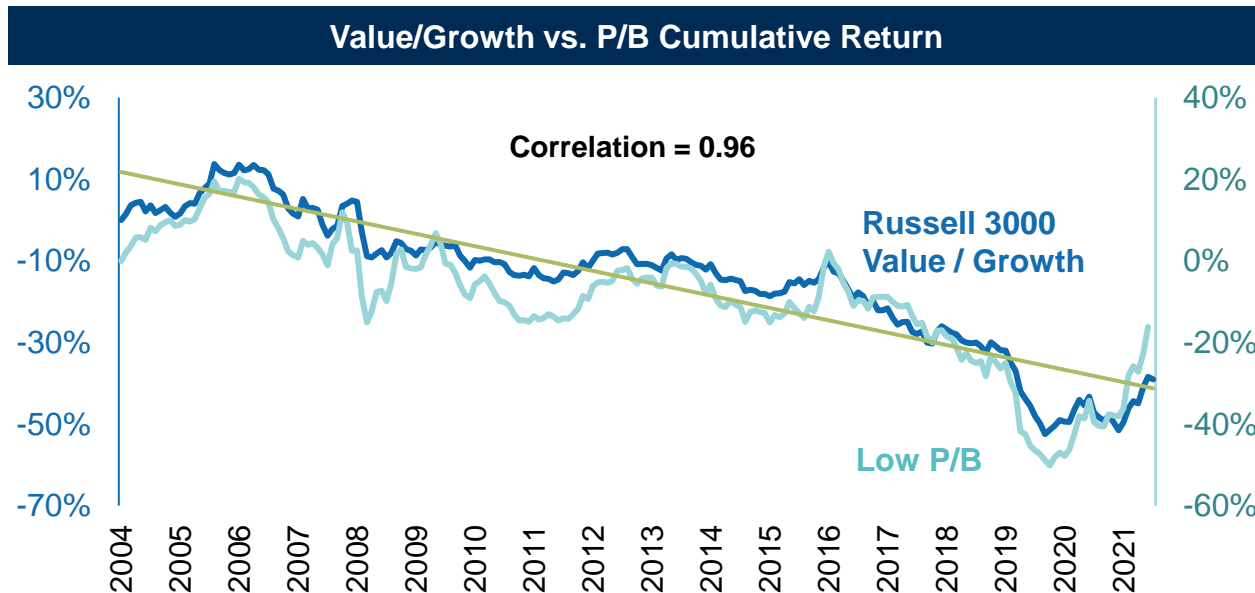


Source: Asymco, Visual Capitalist, company disclosures, Alger estimates.

# V

## Style Wars Structural Issues Driving Growth vs. Value

- Although many value stocks have outperformed over the past year, growth stocks have significantly outpaced value stocks over the past decade
- The driver has been the very weak performance of the price-to-book valuation metric, 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)



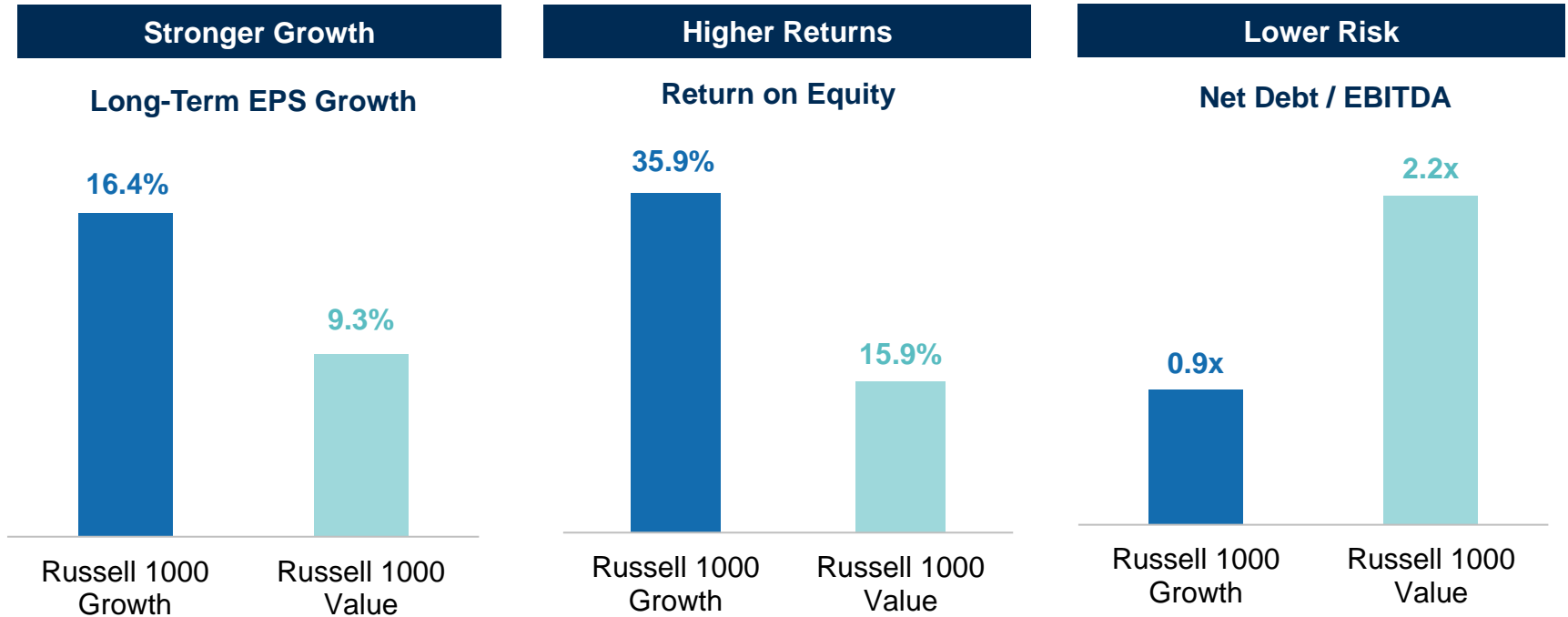
**Style classification too dependent upon outdated book value**

Source: FactSet, Kenneth R. French, and Alger through May 2022. Low price-to-book returns are based on the B/P Frama/French factor for the CRSP universe which includes US firms listed on the NYSE, AMEX, or NASDAQ. Correlation measures a relationship estimate between two variables. **The performance data quoted represents past performance, which is not an indication or a guarantee of future results.**

# V

## Style Wars The Growth Advantage

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



Source: FactSet as of June 2022. Growth represents consensus long-term analyst estimates and actual future EPS growth rates might be materially different than the forecasts shown.

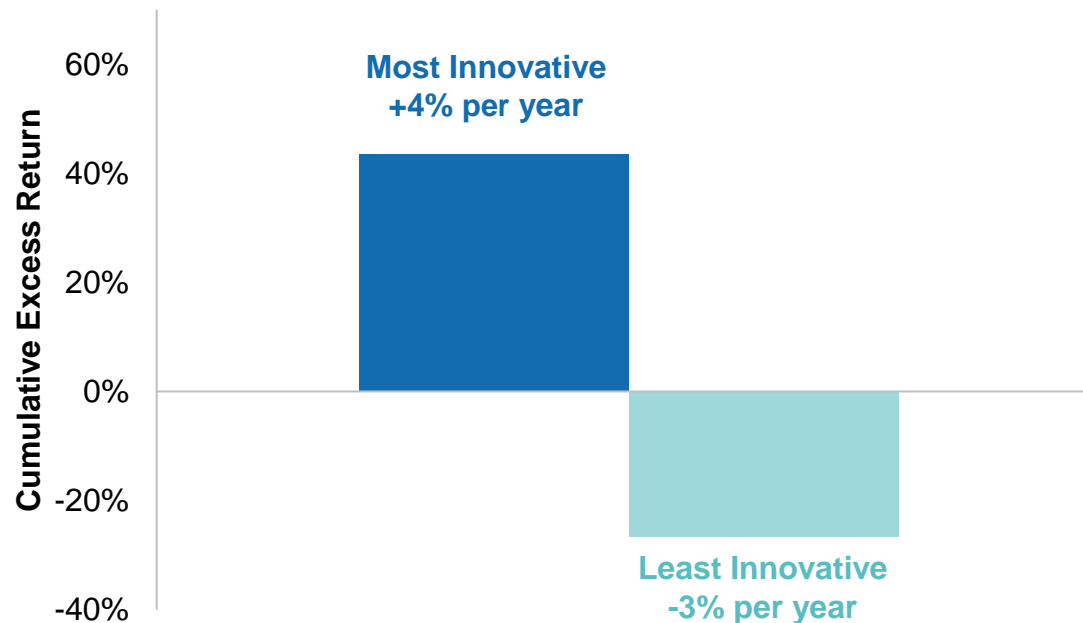


# V

## Style Wars A Powerful New Investing Factor?

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

### Innovative Companies Have Outperformed Over the Past Decade



Source: FactSet. Excess performance of the quintiles of R&D as a percentage of revenue with the most innovative being top quintile and the least innovative being bottom quintile of the stocks in the S&P 1500 index. Stocks were divided into quintiles based on R&D spending-to-revenue and calculated monthly for the 10-year period ended May 2022. \*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.** Innovative companies may be defined as those companies with a high ratio of annual R&D investment to revenue. Investing in innovation is not without risk and there is no guarantee that investments in research and development will result in a company gaining market share or achieving enhanced revenue.

# Disclosure

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