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# **Our Perspective**

The financial markets are entering 2022 much like they did the beginning of 2021: uncertain. Their newest uncertainty is perhaps the most significant: **inflation—which is why central banks are now pivoting away from their "easy money" regime**.

Our analysis suggests the economy and markets will be able to navigate the near term, but **those investors that are the most vulnerable to higher-than-normal inflation should act now** to inoculate against the risk that inflation poses.

Other issues will also be in investors' sights: COVID, consumer excess savings, and market concentration, among others. But **earnings growth will matter above all else** since it's the end result of every uncertainty and controversy. Markets will take notice if those earnings figures need to be revised lower...or higher from current consensus.

So, what's an investor to do?



Current analysis does not guarantee future results.



## **Snapshot: Key Economic and Market Forecasts**

- **Global Growth:** Growth will remain above-trend, but fiscal and monetary tightening will take their toll by slowing the pace vs. 2021.
- Inflation: Inflation is the key variable in 2022. The longer it stays elevated the tougher the job will be for central bankers to navigate the implications.
- **Monetary Policy:** We expect nearly all policy makers to tighten in 2022. The outliers are Japan and China.
- Bond Yields: We expect global rates to rise modestly and for yield curves to flatten (i.e. the more significant move will occur at the short end as policy tightens).
- **Earnings Growth:** Growth remains solid. Consensus growth expectations for S&P 500 earnings in 2022 are now 9%—still strong growth two years past the contraction. Early 2023 forecasts are for a similar pace.

AB I	Fore	cast
AB	⊦ore	cast

	2021	2022	2023
US GDP	6.1%	3.4%	1.9%
Global GDP	5.9%	4.1%	3.0%
10Y Treasury Rate	1.5% <sup>†</sup>	2.0%	2.0%
US Inflation	4.9%†	2.7%	1.9%
EUR/USD	1.14 <sup>†</sup>	1.05	1.02
S&P 500 EPS Growth*	45%	9%	10%

As of December 31, 2021.

Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.

\*Consensus expectation, not AB forecast,

<sup>†</sup>These are the actual figures for 2021, not forecasts. 2021 US Inflation is the12-month percent change through November 2021, the latest available CPI Source: FactSet and AB



# How destabilizing could inflation pressures become in 2022?

On average, rate hiking cycles are good for equities (+8%), but clear communication from the Fed will be key for continued market calm.

Past performance does not guarantee future results.



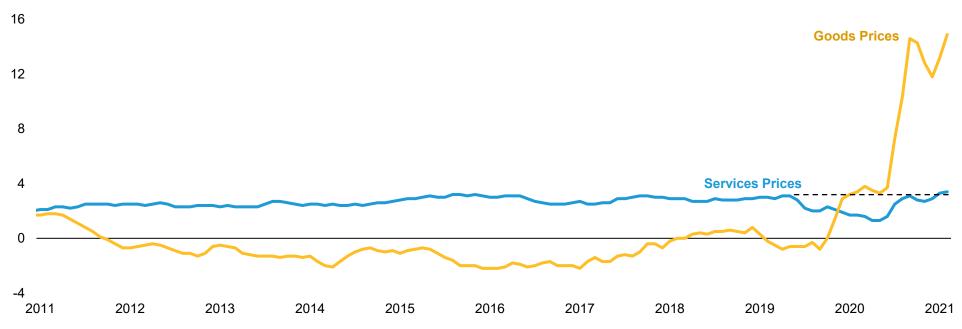
# Goods Prices Skyrocketed: Services Now Catching Up

Pressures are now more broad based than earlier this year

## **Goods and Services Inflation, Percent Change YoY**

Whereas the initial phases of the inflation acceleration were driven by supply chain issues...and then goods demand...services prices are now beginning to rise, led by measures of housing.

That matters, since services categories tend to be persistent and the increases suggest the ongoing inflation spike is unlikely to fade in the near term.



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Source: AB, Bloomberg

Modeled above is Core Inflation—Durable Goods and Services less Energy Services.



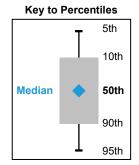
## Inflation Forecasts Are Highly Uncertain, Even Among Economists

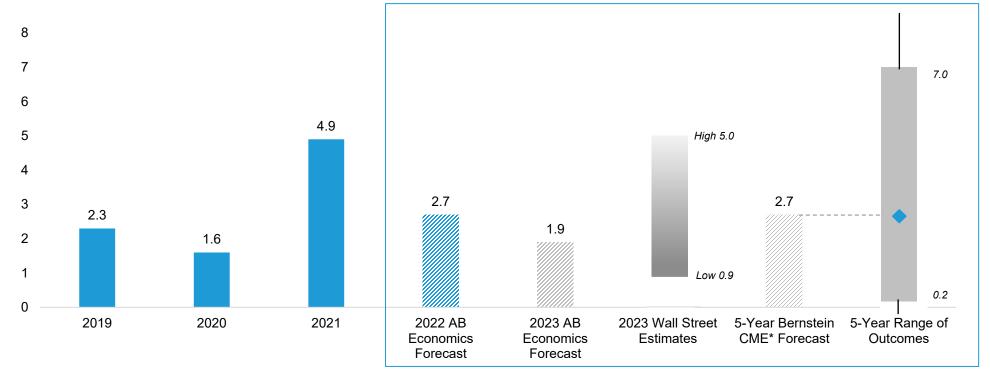
2023 Wall Street expectations range from disinflation to accelerating inflation

## **Core Inflation: Historic and Estimated (%)**

Inflation is always hard to predict, but even more challenging at the moment.

The range two years out is unusually wide among Wall Street economists.





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\*Capital Markets Engine

2021 is 12-month percent change through November 2021, the latest available CPI

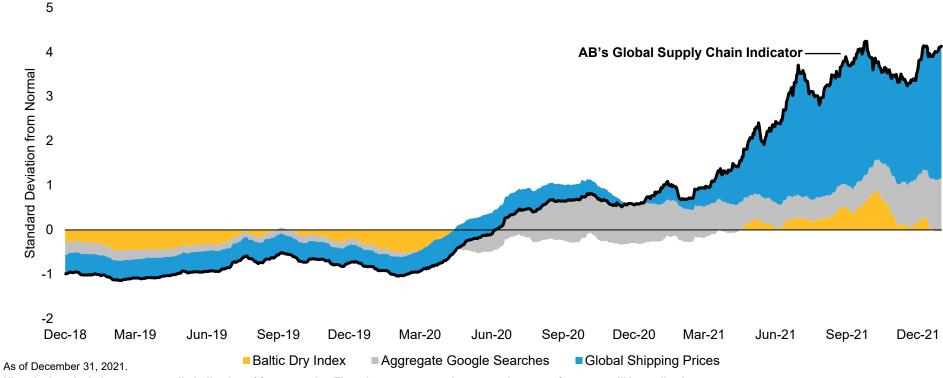
Source: AB, Bloomberg.

# We're Tracking the Global Supply Chain for Signs of Easing

An easing of shipping prices may be the first indication of relief

## **Contributions to AB's Global Supply-Chain Indicator**

Traditional measures of supply chain operations are less relevant and/or stale due to the fluidity of the pandemic's challenges. We've built our own real-time supply chain indicator to better understand when the pressures may ease.



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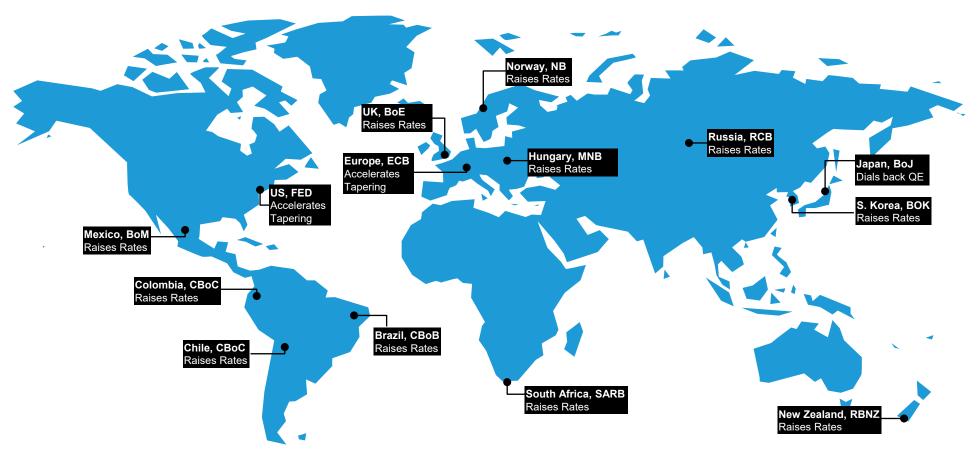
Aggregate Google Searches Comprise of: Food Shortages, Bottleneck, Supply Disruption, Supply Chain Disruption.

Source: AB, Bloomberg, Google, Baltic Exchange



# Central Banks Have Begun to Tighten to Stem Inflation Risks

Recent policy moves from major central banks



As of December 31, 2021.

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Note: China diverges from world trend, cutting Loan Prime Rate.

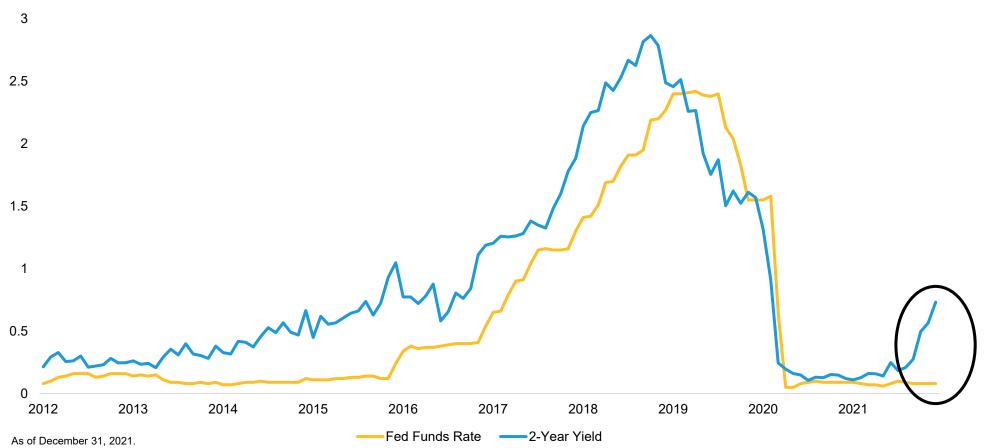
Source: AB



# The Market Is Baking in Fed "Lift Off" Already

Two-year yields are the best market indicator of Fed action

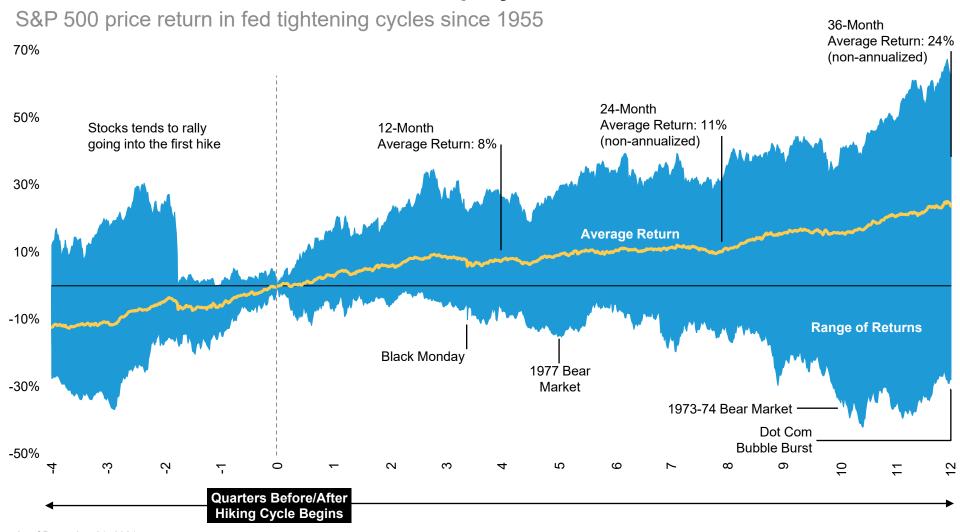
## US Federal Funds Effective Rate and 2-Year US Treasury Yield



Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB, Bloomberg



## What Could Rate Hikes Mean for Equity Returns?



As of December 31, 2021.

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Range of Returns composed of S&P 500 Price Return over 13 Historic Fed Tightening Cycles beginning on the following dates: 9/5/1955, 9/12/1958, 7/17/1963, 3/1/1972, 12/1/1976, 8/7/1980, 5/2/1983, 12/16/1986, 3/29/1988, 2/4/1994, 6/30/1999, 6/30/2005, 12/16/2015.

Source: AB, Bloomberg

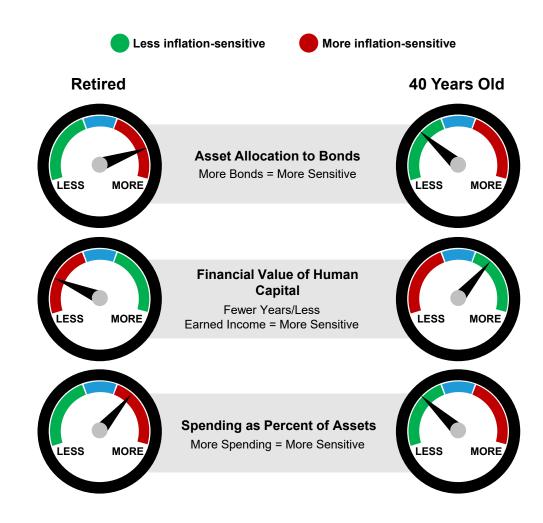


## Inflation Sensitivity Is Critical to the Asset Allocation Decision

# Key takeaways from our inflation sensitivity analysis:

- Most should benefit, over time and to some degree, from inflation protection, but it's more critical for some than for others
- Inflation is episodic so there will likely be a "cost" to the protection during sustained, non-inflationary environments





Hypothetical client profiles presented. Clients' risk tolerances and bond allocations may vary. Based on capital markets conditions as of June 30, 2021. Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB



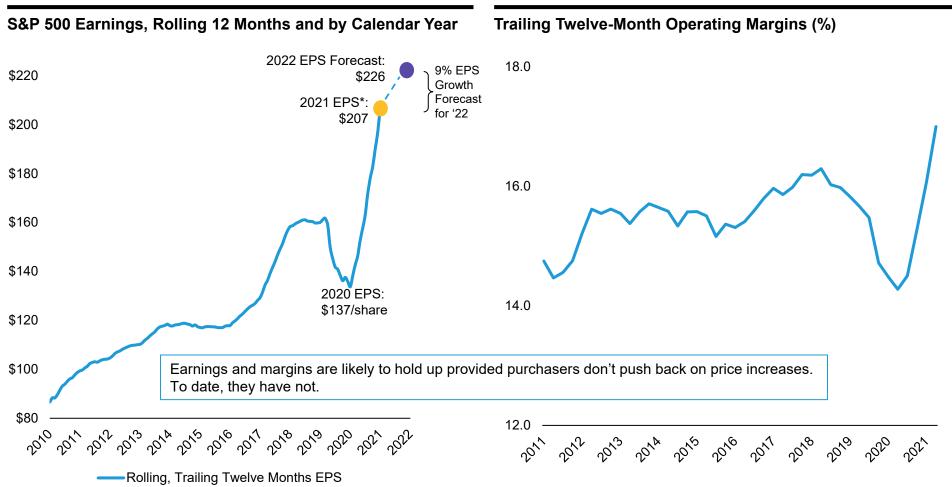
# What are the other key controversies to watch in 2022?

Profit growth, the consumer, market concentration, and valuations stand out as the other focal points for 2022.



## Can Earnings and Margins Hold Up as the Economy Slows?

2022 growth forecast now 9%: margins near 2018 peaks



As of December 31, 2021.

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\*As of December 31, 2021, Q4 earnings have not been reported

Source: FactSet, Bloomberg, Bernstein Analysis

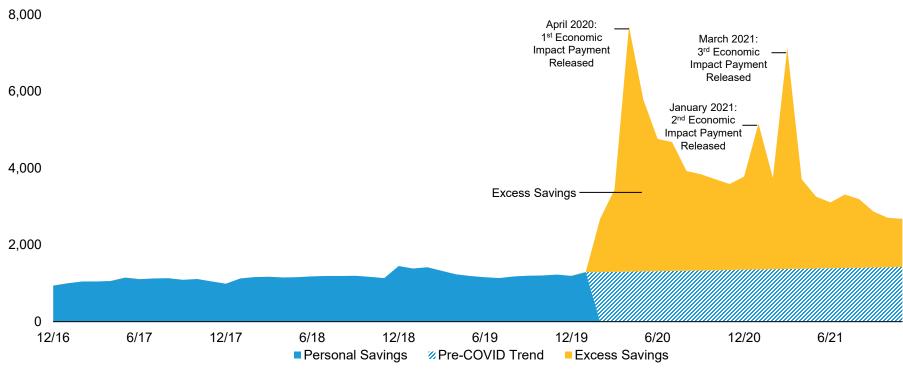


# Will Excess Savings Be Spent or Saved?

\$1.3T of excess savings could serve as an additional tailwind for the economy

### Personal Savings, Pre- and Post-Crisis

The spending of excess savings over the last two years has been a tailwind for the economy. It's likely the pace of spending slows...which should lead to slower 2022 growth, but may also ease some of the demand-driven inflationary pressures.



As of November 30, 2021.

Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB, Factset

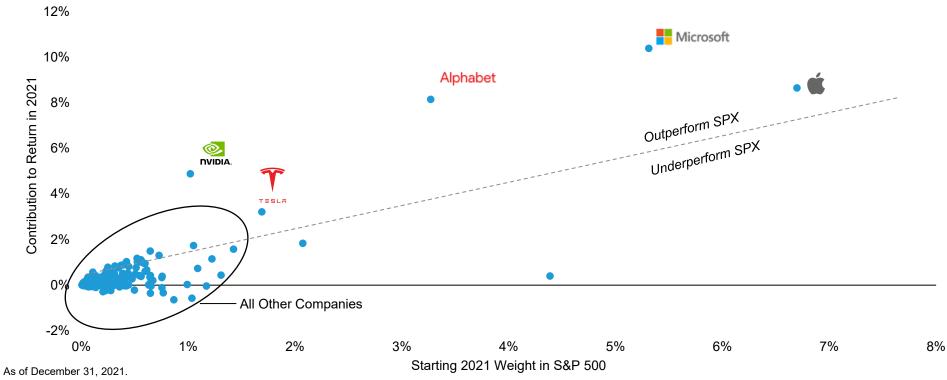


## Would an S&P Leadership Change Create Volatility...or Opportunity?

35% of the S&P 500's Return in 2021 came from 5 Stocks

#### Contribution to S&P 500 Return

A broadening of the market's performance leadership would be welcome news for investors and less disruptive than commonly feared.



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Source: AB, Bloomberg



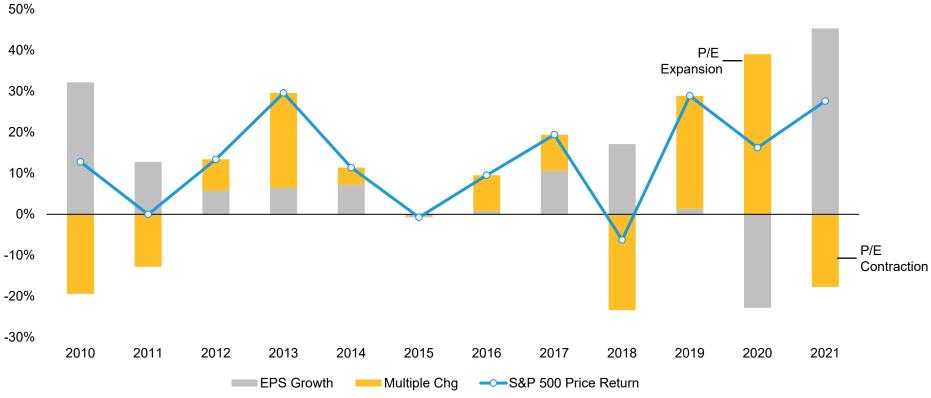
<sup>&</sup>quot;Standout" Underperformers to S&P 500 (Below Line, Outside Circle, Left to Right): Facebook, Amazon.

## Where to for Valuations?

Despite S&P total return of nearly 30% in 2021, PEs compressed

For P/Es to contract meaningfully in 2022, we believe interest rates would need to rise well above 2%.

We've penciled in a 10-Year Treasury yield at 2.0% by year end which should be digestible by investors.



As of December 31, 2021.

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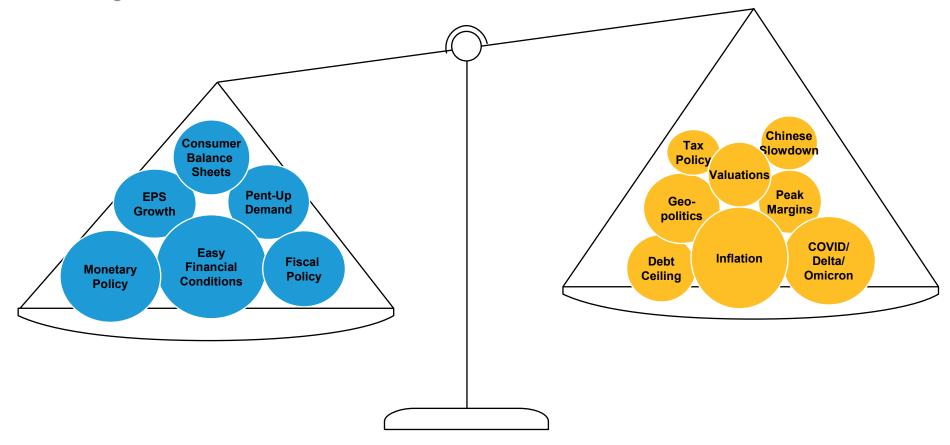
EPS Growth = YoY Change in EPS + Interaction Effect. (1 + EPS Growth) (1 + Multiple Change) = 1 + Price Return ⇒ Interaction Effect = Multiple Change \* EPS Growth.

Source: AB, Factset



# Opportunity Outweighs Risk, Suggesting Modestly Positive Outlook

Incremental gains should come as risks clear



Current risks are offset by highly accommodative policy, a recovering economy and above-average corporate earnings growth. That said, incremental returns may need to wait for some of the uncertainties to clear.

As of December 31, 2021.

Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB



# To what extent will the markets focus on COVID?

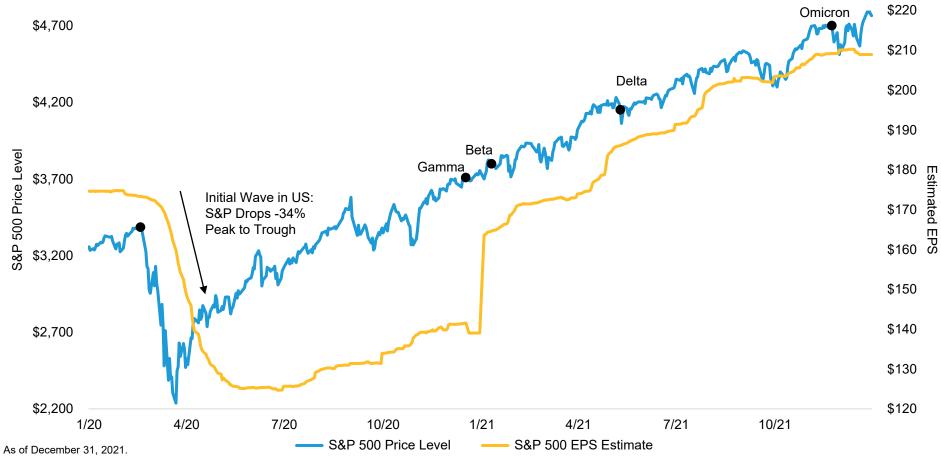
Since March 2020, the market has looked through all negative COVID news flow.



## **COVID's Declining Impact on Markets and Profits since Outbreak**

Equities and profit forecasts largely unaffected by COVID developments

### **S&P 500 Price Level and Consensus Earnings Estimates**

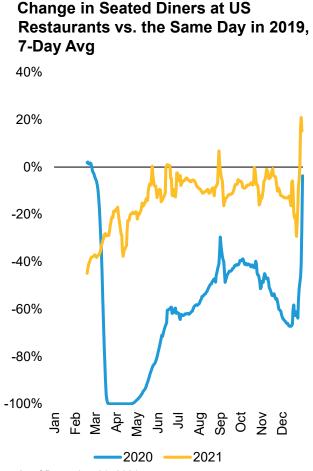


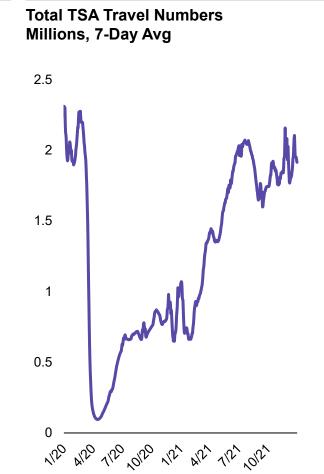
Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB, Bloomberg World Health Organization

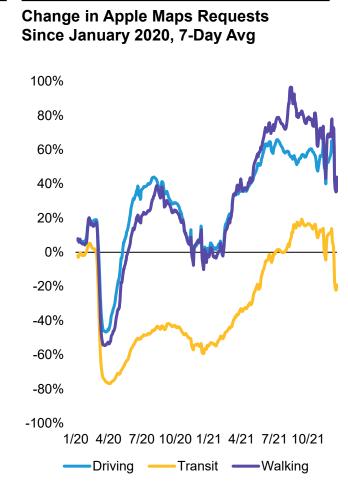


## **Economic Activity Remains Resilient Despite Pandemic's Duration**

Nearly back-to-normal activity across most metrics







As of December 31, 2021.

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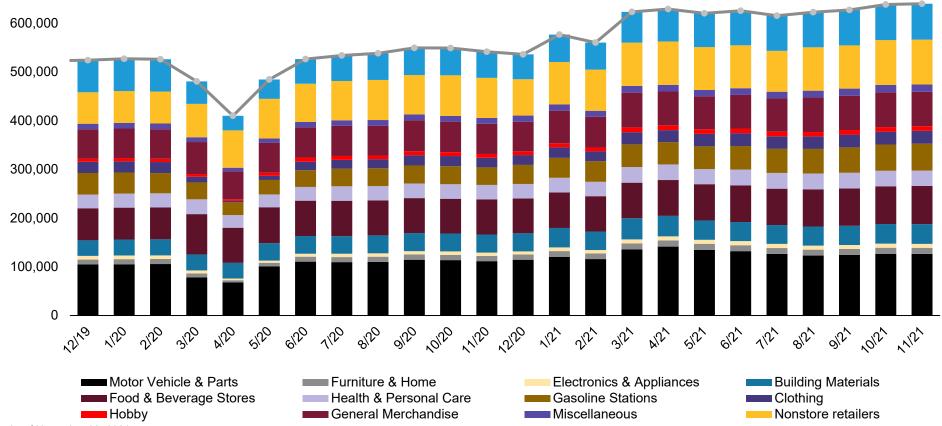
Sources: Open Table, Bureau of Economic Analysis, TSA, Apple, and AB



# Don't Discount the American Consumer's Willingness to Spend

Consumer spending has been buttressed by fiscal support and a reopened economy

## Sales for Retail and Food Service (USD Millions)



As of November 30, 2021.

Historical analysis is not necessarily indicative of future results.

Source: Census Bureau

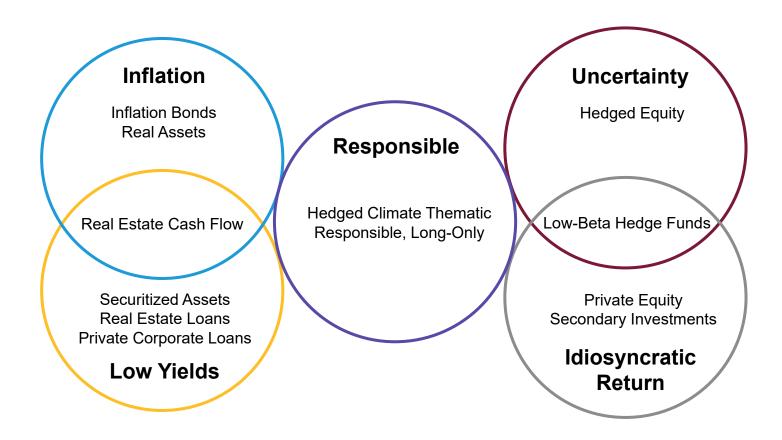


# What investment themes are notable for 2022?

Inflation, low yields, responsible investing, uncertainty, and idiosyncratic return.



# **Actionable Ideas Aligned with Our 2022 Outlook**



As of December 31, 2021.

Historical analysis is not necessarily indicative of future results.

Source: AB



# How can Bernstein be helpful in reaching my goals?



## Our 2022 Checklist: How We're Taking Action

Our priorities for clients for the balance of the year

- Aligning your financial objectives with your investment implementation
  - Ensuring that your allocation is consistent with the goals you've set
- Considering whether tax change would affect you and what actions may be appropriate in advance of legislation
  - We can help you explore a range of wealth transfer tax and income tax planning strategies
- Analyzing your inflation sensitivity
  Your allocation, spending level or income may
  be reason to initiate or increase an allocation
  to inflation sensitive assets
- Right-sizing your cash allocation
  We can explore a range of ideas, based on your return and risk objectives

- Maintaining your allocation to non-US equities Non-US stocks are now especially attractive, as the economies improve and valuations revert
- Revisiting your alternatives exposure
  Alternatives are a critical piece of a
  well-diversified puzzle
- Considering whether purpose-driven portfolios are appropriate

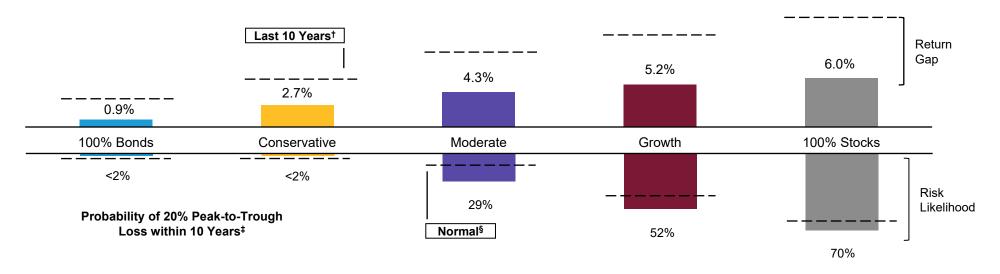
We have an array of services that can align your investments with your values

Bernstein does not provide tax, legal, or accounting advice. In considering this material, you should discuss your individual circumstances with professionals in those areas before making any decisions. Source: AB



## Returns Expected to Be Modest, Drawdowns More Likely Than Normal

Projected median 10-year annualized return\*



#### The most significant influences on our modest 10-year return expectations are:

For Equities: High US valuations and low non-US profit margins For Bonds: Low current interest rates & rising rates over time

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\*Based on Bernstein's estimates of the range of returns for the applicable capital markets over the next 10 years as of June 30, 2021.

Projected pretax 10-year compound annual growth rate. Conservative is 30% stocks/70% bonds; moderate is 60% stocks/40% bonds; growth is 80% stocks/20% bonds. Stocks are represented by the following allocation for a 100% stock allocation: 16.2% US value, 16.2% US growth, 12.0% US diversified, 6.0% US small-/mid-cap, 21.2% developed foreign markets, 8.1% emerging markets, 9.6% US Low Vol Equity, 10.7% high-risk international. Equity geography weights may shift in proportion to total return-seeking allocation. Bonds are represented by diversified intermediate-term municipal bonds in the proportions noted. Additional details regarding allocation available upon request.

†Reflects compound growth rates from July 1, 2011, through June 30, 2021. Stocks represented by 60% Russell 3000 Index and 40% MSCI ACWI ex US. Bonds represented by Lipper Short/Int Blended Muni Fund Avg. From left to right, those figures are 2.4%, 5.1%, 7.7%, 9.4%, 11.0%.

‡Probability of a 20% peak-to-trough decline in pretax, pre-cash-flow cumulative returns within the next 10 years. Because the Wealth Forecasting System uses annual capital-market returns, the probability of peak-to-trough losses measured on a more frequent basis (such as daily or monthly) may be understated. The probabilities depicted above include an upward adjustment intended to account for the incidence of peak-to-trough losses that do not last an exact number of years. §Normal refers to a market condition in which assets are fairly priced as in a long-term central case. The Normal peak-to-trough probability is as follows from left to right: <2%, <2%, 11%, 34%, and 56%.

See Assumptions and Notes on Bernstein Wealth Forecasting System in Appendix for further details.

Source: Lipper, MSCI, Russell, S&P, and AB.



# **Appendix**



## Addressing the Most Relevant Investment and Wealth Topics to You

## Timely insights

### **Blogs**



# The Times They Are a-Changin': Should Your Inflation Hedge Change, Too?

The transition to a low-carbon, service-based economy has major implications for inflation protection. Is your inflation hedge "next gen"...or behind the times?



## The Fed Taper is Here...Now What About Rate Hikes

The Federal Reserve kicks off its taper of US asset purchases later this month. But here's a meaningful gap between the market's inflation anxiety and the Fed's wait-and-see approach to what it still views as a transitory challenge.



## Will Real Estate Stocks Build on Brisk Recovery?

With key market segments improving, property stocks can serve as a diversifying source of returns and a hedge against inflation.



#### Sustainability and Investing: Lessons Learned in the Pandemic Era

The pandemic has prompted massive changes for countries, societies, people, and businesses, while reinforcing the role of sustainable investment strategies.



# Muni Investors: Stay Flexible as Rates Rise

Should muni investors worry about rising rates or welcome them? It depends on how flexible you are.



## One-Two Punch of Inflation and Taxes

Inflation and taxes can both hurt investors' returns, but the combination can be downright disastrous.

#### **Podcasts**



## Injecting Hope into the Climate Change Discussion

In launching a new tech-focused climate strategy, AB Portfolio Manager Dureka Carrasquillo shares what it feels like to bring hope to the problem of climate change.



#### In Search of Disruptors

What makes a technology truly disruptive and even more importantly, what makes it a good investment? Lei Qiu, the portfolio manager of AllianceBrenstein's Global Disruptors strategy shares her secrets.



## Building Scale with Sustainable Bonds

Whether it's project-based green bonds, social bonds, or sustainability-linked bonds, fixed income is increasingly becoming the "go-to" for mature companies looking to fund their transition to a sustainable future. Bernstein Sustainable Credit Portfolio Manager Shawn Keegan discusses the brave new world of sustainability-focused fixed income.

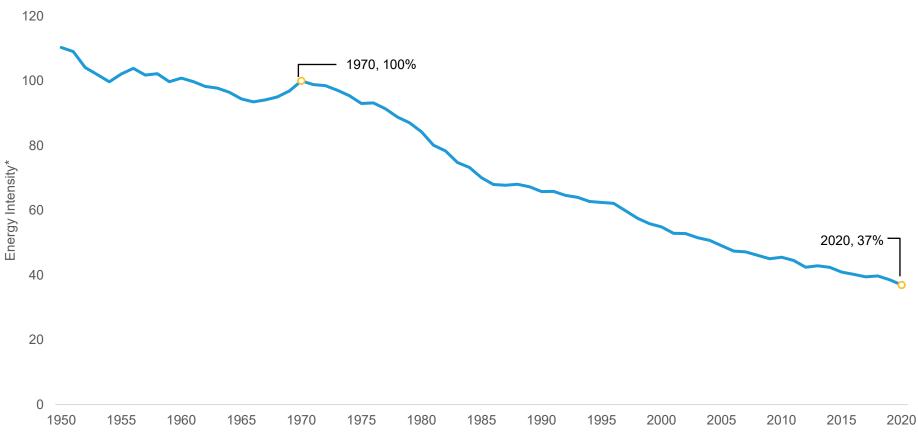
### Click on Any Image to Be Brought to Our Insights



## **US Energy Intensity: A Lot Lower Than It Was**

Energy required to produce one unit of GDP is 37% of what it was in 1970





As of February 25th, 2022.

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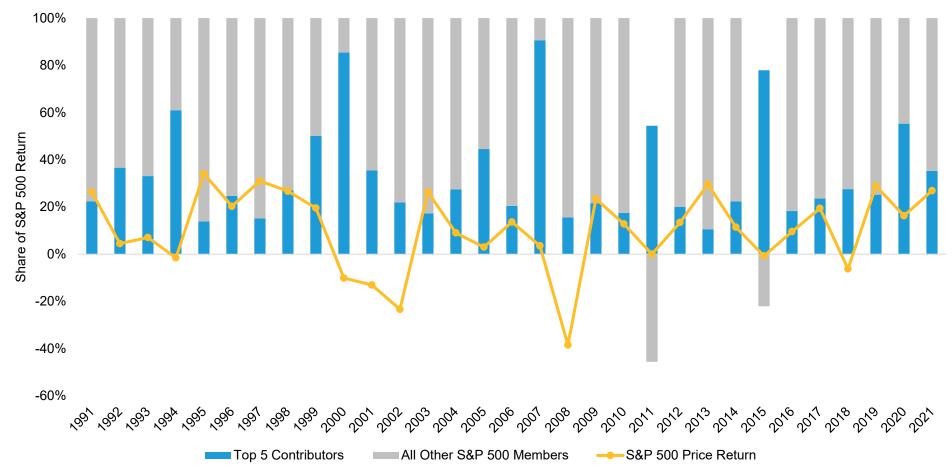
\*Energy Intensity = Total Primary Energy Consumption / Real GDP



Q4 2021 Macro and Markets Review

## A Handful of Stocks Have Periodically Driven S&P 500 Returns

Share of S&P 500 Return from 5 Largest Contributors



As of December 31st, 2021.

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Beginning in 2017 both share classes of Google are aggregated.

Source: Bloomberg, AB



# **Geopolitics: Events Rarely Have a Lasting Market Impact**

Select geopolitical events since 1970 and S&P 500 returns (%)

Event	First Trading Day	1 Week	1 Month	1 Quarter	1 Year
Watergate	6/19/1972	(0.1)	(1.4)	0.4	(3.0)
Yom Kippur War*	10/8/1973	1.4	(3.9)	(10.0)	(43.2)
Three Mile Island Accident	3/28/1979	(0.1)	(0.7)	(0.2)	(4.2)
Iran Hostage Crisis*	11/5/1979	(1.0)	3.6	12.3	24.3
Reagan Assassination Attempt*	3/30/1981	0.6	0.6	(1.6)	(16.9)
Challenger Space Shuttle	1/28/1986	3.2	9.3	16.8	32.0
Iran-Contra Affair	11/3/1986	0.7	2.1	12.3	3.2
Iraq Invades Kuwait*	8/2/1990	(4.7)	(8.9)	(12.8)	12.8
Desert Storm/First Gulf War*	1/17/1991	4.5	17.2	23.6	36.6
LA Riots	4/29/1992	2.0	2.3	2.8	10.2
WTC Bombing (1993)	2/26/1993	1.2	2.1	2.2	8.3
Oklahoma City Bombing	4/19/1995	1.4	3.1	11.3	30.5
Centennial Park Olympic Bombing	7/29/1996	4.3	4.6	10.8	50.6
Kenya/Tanzania Embassy Bombings	8/7/1998	(1.3)	(10.5)	5.1	21.0
USS Cole Bombing*	10/12/2000	(1.6)	0.2	(2.5)	(18.5)
Bush-Gore Hanging Chad*	11/7/2000	(5.6)	(5.5)	(5.3)	(20.9)
9/11*	9/17/2001	(4.9)	(0.9)	4.7	(15.5)
War in Afghanistan*	10/8/2001	1.9	3.0	9.8	(24.2)
· · · · · · · · · · · · · · · · · · ·					

**Key Takeaway**: Stocks have generally shrugged off geopolitical events, since they rarely have a lasting impact on the business cycle.

Event	First Trading Day	1 Week	1 Month	1 Quarter	1 Year
SARS†	2/11/2003	(0.1)	(3.2)	12.2	39.5
Second Gulf War	3/20/2003	(0.5)	2.4	14.3	29.2
Madrid Train Bombings	3/11/2004	0.0	1.5	1.5	9.5
Orange Revolution–Ukraine	11/22/2004	1.1	2.2	3.1	8.6
Asian Tsunami	12/27/2004	0.3	(3.4)	(2.7)	6.8
London Bombings	7/7/2005	2.4	2.7	0.2	8.6
Hurricane Katrina	8/29/2005	1.1	1.0	5.7	9.5
Arab Spring	12/17/2010	1.2	4.2	1.6	0.2
Hurricane Sandy	10/29/2012	1.1	(0.0)	7.0	27.3
Boston Marathon Bombing	4/15/2013	(2.1)	3.0	6.3	16.7
Russia/Ukraine/Crimea	2/27/2014	1.6	0.5	3.5	16.8
Greek Referendum	11/5/2015	(1.2)	(0.3)	(8.4)	1.4
Brexit	6/24/2016	(0.7)	3.1	3.0	17.8
Trump Surprise Election Win	11/8/2016	1.6	5.4	8.1	24.0
Hurricane Harvey/Irma/Maria	8/25/2017	1.4	2.8	7.2	20.2
US-China Trade War‡	1/22/2018	2.2	(2.6)	(3.7)	(3.1)
Coronavirus Outbreak	2/19/2020	(7.1)	(28.7)	(11.9)	18.2

Summary	1 Week	1 Month	1 Quarter	1 Year
Average	0.1	0.2	3.6	9.6
% of Events Negative	40	37	29	26
Conflict/War Avg.	0.7	1.7	4.7	4.7
Terrorism Avg.	(0.1)	0.7	4.4	12.4
Political Avg.	(0.2)	1.1	2.4	5.3
Environmental Avg.	0.8	(0.1)	3.4	11.9
Social Avg.	(0.3)	(3.9)	3.7	16.6

As of January 31, 2022. Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.

Source: FactSet, National Bureau of Economic Research, World Heath Organization, S&P, and AB



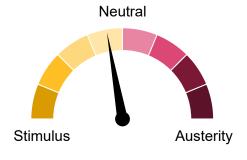
<sup>\*</sup>Denotes the geopolitical event occurred during a recession or six months prior to the start of a recession.

<sup>†\*\*</sup>Date that China officially notified the WHO of the outbreak.

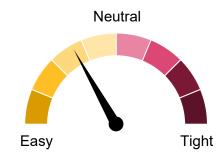
<sup>†‡</sup>Tariffs on imports of solar panels and washing machines imposed.

# 2022 Outlook For Key Macro Variables

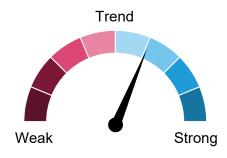
## **Fiscal Policy**



## **Monetary Policy**



## **Economic Activity**



### Inflation



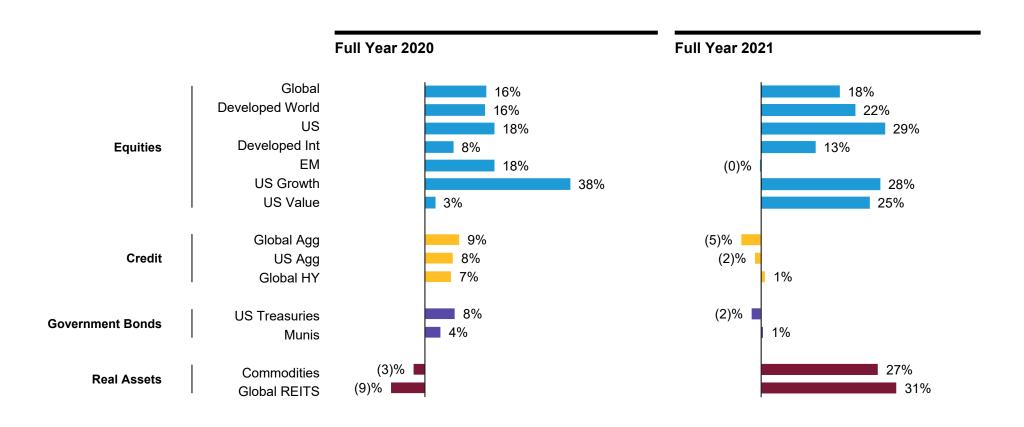
As of December 31, 2021.

Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Source: AB.



## **Cross-Asset Returns Dashboard—The Rally Continues**

Returns in US dollars



As of December 31, 2021.

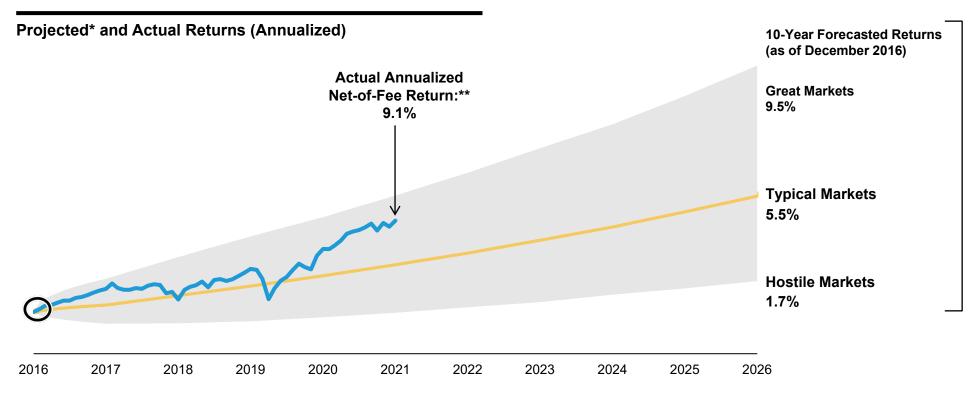
Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Asset classes represented as follows: (Equities)

Global—MSCI ACWI IMI Index, Developed—MSCI World Index, US—S&P 500 Index, Dev Int—MSCI World ex USA, EM—MSCI E merging Markets IMI Index, US Growth—Russell 1000 Growth Index, US Value—Russell 1000 Value Index, (Credit) Global Agg—Bloomberg Global Aggregate, US Agg—Bloomberg US Aggregate Index, Global HY—Bloomberg Global High Yield Index, (Government Bonds) US Treasuries—Bloomberg US Treasury Index, Munis—Bloomberg 1-10 Yr Municipal Bond Blend, Commodities—Bloomberg Commodity Index, Global REITS—S&P Global REIT Index.

Source: Bloomberg Barclays, MSCI, S&P and AB.



## Despite Sell-Offs, Long-Term Investors Remain Above Plan



Through December 31, 2021. Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.

Source: AB



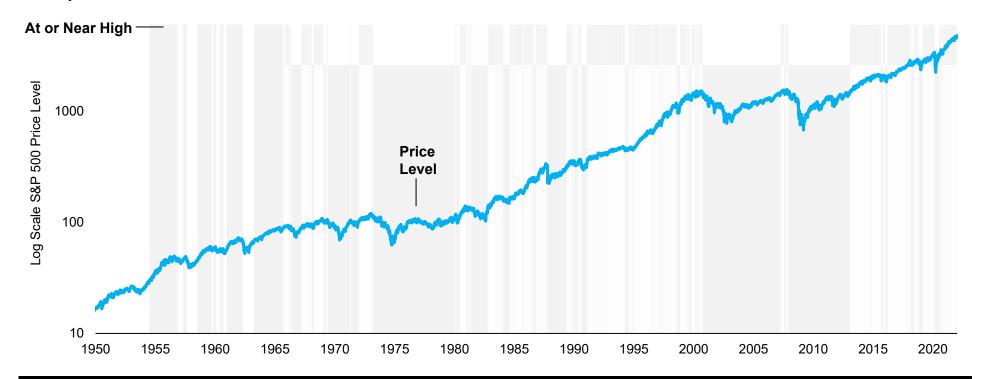
<sup>\*</sup>Great markets represents 10th percentile, typical markets represents 50th percentile, and hostile markets represents 90th percentile. Based on Bernstein's estimates of the range of returns for the applicable capital markets as of December 31, 2016, for a 60/40 stock/bond allocation. Stocks modeled as 21% US diversified, 21% US value, 21% US growth, 7% US Small/Mid-Cap, 22.5% developed international, and 7.5% emerging markets. Bonds modeled as intermediate-term diversified municipals. Data do not represent past performance and are not a promise of actual future results or a range of future results. See Notes on Bernstein Wealth Forecasting System in the Appendix for further details.

<sup>\*\*</sup>The hypothetical performance of the Moderate Portfolio Simulation (MPS) is a simulated portfolio intended to illustrate the investment experience of a Bernstein taxable client who was invested in a moderate growth allocation of Bernstein investment services. Represents monthly returns. Assumes no portfolio additions or withdrawals over the period. Results based on pretax returns and do not reflect the impact of taxes. It is presented for illustrative purposes only, and no representation is made that an investor will, or is likely to, achieve profits or experience losses similar to those shown. See Performance Disclosures at the end of this presentation for additional information regarding the simulation's composition and calculation methodology.

## **Markets Are Often Reaching New Heights**

## S&P 500 At or Near All-Time Highs\*

January 1950-June 2021



Since 1949, the S&P 500 has been at or near all-time highs 44% of the time.

As of December 31, 2021.

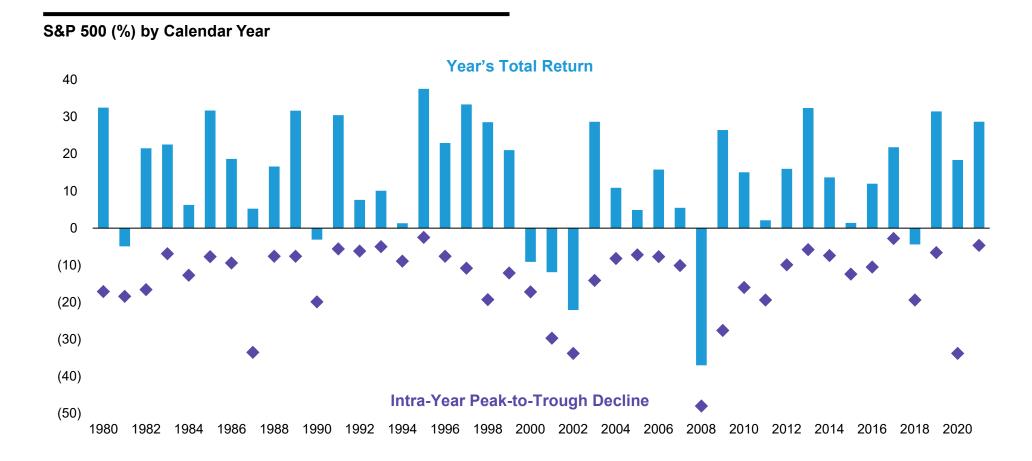
Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Past performance does not guarantee future results.

\*At or near all time high represents all price levels that are within 5% of the last all time high or are a new all time high.

Source: S&P, Bloomberg and AB.



# **Stocks Have Mostly Risen Despite Intra-Year Corrections**



As of December 31, 2021.

Past performance does not guarantee future results.

Source: Bloomberg, Standard & Poor's, Morningstar, AB Analysis



## **Inflation Expectations Remain Anchored Near 2%**

Expectations are one of most important determinants of future inflation levels

### **US 5Yr Forward Breakeven**



It's very difficult for inflation to increase over the long term if higher prices aren't expected in the future.

As of December 31, 2021.

Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.

Source: Bloomberg and AB



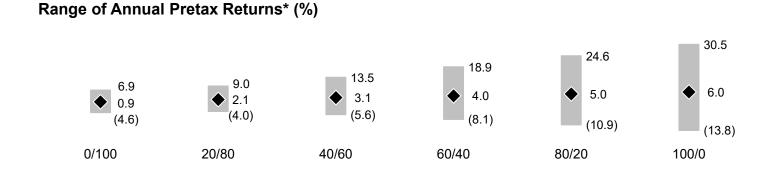
# **Ten-Year Capital Markets Projections: Asset Classes**

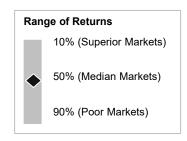
					40 V
	Median 10-Year Growth Rate	Mean Annual Return	Mean Annual Income	One-Year Volatility	10-Year Annual Equivalent Volatility
Cash Equivalents	1.3%	1.5%	1.5%	0.0%	3.7%
Short-Term Treasuries	2.0%	2.1%	2.1%	0.3%	3.0%
Short-Term Taxables	2.3%	2.5%	2.7%	0.8%	3.1%
Short-Term Diversified Municipals	1.5%	1.6%	1.5%	0.5%	2.1%
IntTerm Treasuries	1.2%	1.3%	2.5%	3.2%	2.9%
IntTerm Taxables	1.4%	1.6%	3.3%	3.8%	3.3%
IntTerm Corporates	1.5%	1.7%	3.8%	4.9%	4.0%
IntTerm Diversified Municipals	0.9%	1.0%	1.9%	3.2%	2.7%
Global IntTerm Taxables (Hedged)	1.0%	1.1%	1.9%	3.3%	3.4%
IntTerm TIPS	1.9%	2.4%	3.5%	2.8%	7.5%
High Yield	3.5%	4.2%	6.8%	11.7%	7.9%
Global Large-Cap (Unhedged)	5.6%	6.8%	2.0%	15.8%	15.0%
US Diversified	4.6%	6.1%	1.7%	16.5%	15.6%
US Value	5.0%	6.5%	2.0%	16.2%	15.4%
US Growth	4.1%	5.9%	1.5%	18.3%	17.1%
US Mid-Cap	5.0%	6.8%	1.4%	17.9%	17.2%
US Small/Mid-Cap	5.1%	7.0%	1.3%	18.7%	18.0%
US Small-Cap	5.2%	7.5%	1.2%	20.4%	19.9%
Developed International	6.8%	8.7%	2.6%	18.2%	17.1%
Emerging Markets	6.1%	9.2%	3.0%	23.1%	20.1%
Global REITs	5.3%	7.1%	3.5%	18.4%	17.1%
Real Assets	5.8%	6.9%	2.4%	13.3%	14.4%
Diversified Hedge Fund	4.0%	4.3%	1.5%	11.1%	15.3%
Inflation	2.8%	3.2%	n/a	1.5%	6.6%

Based on 10,000 simulated trials each consisting of 10-year periods. Reflects AllianceBernstein's estimates and the capital-market conditions of June 30, 2021. For hedge fund asset classes, "Mean Annual Income" represents income and short-term capital gains. **Data do not represent past performance and are not a promise or a range of future results.** 

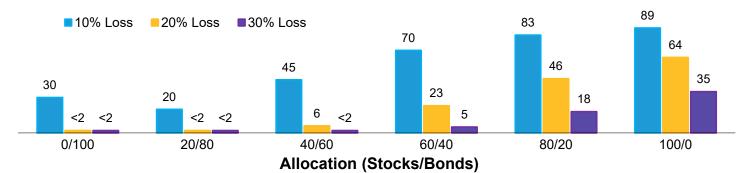


## Projected Returns and Volatility—over 10 Years (Taxable)





### Probability of Peak-to-Trough Losses\*\* (%)



Data do not represent past performance and are not a promise of actual or range of future results. See Assumptions and Notes on Bernstein Wealth Forecasting System in Appendix for further details. Globally diversified stocks are represented by the following allocation for a 100% return-seeking allocation: 16.2% US value, 16.2% US growth, 12.0% US diversified, 6.0% US small-/mid-cap, 21.2% developed foreign markets, 8.1% emerging markets, 9.6% US Low Vol Equity, 10.7% high-risk international. Equity geography weights may shift in proportion to total return-seeking allocation. Bonds are represented by diversified intermediate-term municipal bonds in the proportions noted. Additional details regarding allocation available upon request. \*Based on Bernstein's estimates of the range of returns for the applicable capital markets over the next 10 years as of June 30, 2021. First-year volatility of the portfolios: 0/100 = 3.2%, 20/80 = 4.3%, 40/60 = 7.0%, 60/40 = 10.0%, 80/20 = 13.0%, 100/0 = 16.0%. The annual equivalent volatility of the portfolios over the entire 10-year analysis: 0/100 = 2.7%, 20/80 = 3.8%, 40/60 = 6.3%, 60/40 =

9.1%, 80/20 = 12.0%, 100/0 = 14.9%. Annual equivalent volatility differs from the first-year volatility because the expectation and distribution of asset-class returns change over time. \*\*Data indicate the probability of a peak-to-trough decline in pretax, pre-cash-flow cumulative returns of 10%, 20%, or 30% over the next 10 years. Because the Wealth Forecasting System uses annual capital-market returns, the probability of peak-to-trough losses measured on a more frequent basis (such as daily or monthly) may be understated. The probabilities depicted above include an upward adjustment intended to account for the incidence of peak-to-trough losses that do not last an exact number of years.



## **Estimated Spending Rate and Core Capital Amounts: Based on Age**

### Sustainable Spending Rate\*

Allocation	0/100	20/80	40/60	60/40	80/20	100/0
Age 55	1.1%	1.5%	1.8%	2.0%	2.0%	2.0%
Age 65	1.7	2.0	2.3	2.5	2.6	2.6
Age 75	2.5	2.9	3.2	3.4	3.4	3.6

### Estimated Core Capital—Spending \$100,000

**USD Millions** 

Allocation	0/100	20/80	40/60	60/40	80/20	100/0
Age 55	\$8.8	\$6.5	\$5.5	\$5.0	\$4.9	\$5.1
Age 65	6.0	4.9	4.3	4.0	3.9	3.9
Age 75	4.0	3.4	3.1	2.9	2.9	2.8

<sup>\*</sup>These spending rates are for couples and assume an allocation of globally diversified stocks. Asset allocations assume globally diversified stocks. Globally diversified stocks are represented by the following allocation for a 100% return-seeking allocation: 16.2% US value, 16.2% US growth, 12.0% US diversified, 6.0% US small-mid cap, 21.2% developed foreign markets, 8.1% emerging markets, 9.6% US Low Vol Equity, 10.7% high-risk international. Equity geography weights may shift in proportion to total return-seeking allocation. Bonds are represented by diversified intermediate-term municipal bonds in the proportions noted. Additional detail regarding allocation available upon request.

Spending is a percentage of initial value of portfolio and is grown with inflation; spending rates assume maintaining spending with a 90% level of confidence. Based on Bernstein estimates of the range of returns for the applicable capital markets over the periods analyzed as of June 30, 2021. Data do not represent past performance and are not a promise of actual future results. See Notes on Wealth Forecasting at the end of this presentation for further details. All information on longevity and mortality-adjusted investment analyses in this study are based on mortality tables compiled in 2000. To reflect that high-net-worth individuals live longer than average, we subtract three years from each individual's age (e.g., a 55-year-old would be modeled as a 52-year-old). In our mortality adjusted analyses, the lifespan of an individual varies in each of our 10,000 trials in accordance with mortality tables.

Source: Society of Actuaries RP-2000 mortality tables and AllianceBernstein



## **Notes on Bernstein Wealth Forecasting System**

#### 1. Purpose and Description of Wealth Forecasting Analysis

Bernstein's Wealth Forecasting Analysis is designed to assist investors in making their long-term investment decisions as to their allocation of investments among categories of financial assets. Our planning tool consists of a four-step process: (1) Client-Profile Input: the client's asset allocation, income, expenses, cash withdrawals, tax rate, risk-tolerance level, goals, and other factors; (2) Client Scenarios: in effect, questions the client would like our guidance on, which may touch on issues such as when to retire, what his/her cash-flow stream is likely to be, whether his/her portfolio can beat inflation long-term, and how different asset allocations might affect his/her long-term security; (3) The Capital-Markets Engine: our proprietary model that uses our research and historical data to create a vast range of market returns, which takes into account the linkages within and among the capital markets, as well as their unpredictability; and (4) A Probability Distribution of Outcomes: based on the assets invested pursuant to the stated asset allocation, 90% of the estimated ranges of returns and asset values the client could expect to experience are represented within the range established by the 5th and 95th percentiles on "box-and-whiskers" graphs. However, outcomes outside this range are expected to occur 10% of the time; thus, the range does not establish the boundaries for all outcomes. Expected market returns on bonds are derived taking into account yield and other criteria. An important assumption is that stocks will, over time, outperform long bonds by a reasonable amount, although this is in no way a certainty. Moreover, actual future results may not meet Bernstein's estimates of the range of market returns, as these results are subject to a variety of economic, market, and other variables. Accordingly, the analysis should not be construed as a promise of actual future results, the actual range of future results, or the actual probability that these results will be realized. The information prov

#### 2. Retirement Vehicles

Each retirement plan is modeled as one of the following vehicles: Traditional IRA, 401(k), 403(b), Keogh, or Roth IRA/401(k). One of the significant differences among these vehicle types is the date at which mandatory distributions commence. For traditional IRA vehicles, mandatory distributions are assumed to commence during the year in which the investor reaches the age of 72. For 401(k), 403(b), and Keogh vehicles, mandatory distributions are assumed to commence at the later of: (i) the year in which the investor reaches the age of 72, or (ii) the year in which the investor retires. In the case of a married couple, these dates are based on the date of birth of the older spouse. The minimum mandatory withdrawal is estimated using the Minimum Distribution Incidental Benefit tables as published on www.irs.gov. For Roth IRA/401(k) vehicles, there are no mandatory distributions. Distributions from Roth IRA/401(k) that exceed principal will be taxed and/or penalized if the distributed assets are less than five years old and the contributor is less than 59½ years old. All Roth 401(k) plans will be rolled into a Roth IRA plan when the investor turns 59½ years old, to avoid Minimum Distribution requirements.

### 3. Rebalancing

Another important planning assumption is how the asset allocation varies over time. We attempt to model how the portfolio would actually be managed. Cash flows and cash generated from portfolio turnover are used to maintain the selected asset allocation between cash, bonds, stocks, REITs, and hedge funds over the period of the analysis. Where this is not sufficient, an optimization program is run to trade off the mismatch between the actual allocation and targets against the cost of trading to rebalance. In general, the portfolio is expected to be maintained reasonably close to the target allocation. In addition, in later years, there may be contention between the total relationship's allocation and those of the separate portfolios. For example, suppose an investor (in the top marginal federal tax bracket) begins with an asset mix consisting entirely of municipal bonds in his personal portfolio and entirely of stocks in his/her retirement portfolio. If personal assets are spent, the mix between stocks and bonds will diverge from targets. We put primary weight on maintaining the overall allocation near target, which may result in an allocation to taxable bonds in the retirement portfolio as the personal assets decrease in value relative to the retirement portfolio's value.



## **Notes on Bernstein Wealth Forecasting System**

### 4. Expenses and Spending Plans (Withdrawals)

All results are generally shown after applicable taxes and after anticipated withdrawals and/or additions, unless otherwise noted. Liquidations may result in realized gains or losses, which will have capital-gains tax implications.

### 5. Modeled Asset Classes

The following assets or indexes were used in this analysis to represent the various model classes;

Asset Class	Modeled As	<b>Annual Turnover</b>
Cash Equivalents	3-month US Treasury bills	100%
Short-Term Treasuries	US Treasuries of 2-year maturity	50
Short-Term Taxables	Taxable bonds of 2-year maturity	50
Short-Term Diversified Municipals	AA-rated diversified municipal bonds of 2-year maturity	50
IntTerm Treasuries	US Treasuries of 7-year maturity	30
IntTerm Taxables	Taxable bonds of 7-year maturity	30
IntTerm Corporates	US investment-grade corporate debt of 7-year maturity	30
IntTerm Diversified Municipals	AA-rated diversified municipal bonds of 7-year maturity	30
Global IntTerm Taxables (Hedged)	50% sovereign and 50% investment-grade corporate debt of developed countries of 7-year maturity	30
IntTerm TIPS	US TIPS of 7-year maturity	30
High Yield	Taxable bonds of 7-year maturity with credit characteristics of CSFB High Yield Index II	30
Global Large-Cap (Unhedged)	MSCI World Index (NDR) Index	15
US Diversified	S&P 500 Index	15
US Value	S&P/Barra Value Index	15
US Growth	S&P/Barra Growth Index	15
US Mid-Cap	Russell Mid-Cap Index	15
US Small-/Mid-Cap	Russell 2500 Index	15
US Small-Cap	Russell 2000 Index	15
Developed International	MSCI EAFE Index (Unhedged)	15
Emerging Markets	MSCI Emerging Market Index	20
Global REITs	NAREIT Index	30
Real Assets	1/3 NAREIT, 1/3 MSCI ACWI Commodity Producer Index, 1/3 DJ-UBS Commodity Futures Index	30
Diversified Hedge Fund	Diversified Hedge Fund Asset Class	33



## **Notes on Bernstein Wealth Forecasting System**

#### 6. Volatility

Volatility is a measure of dispersion of expected returns around the average. The greater the volatility, the more likely it is that returns in any one period will be substantially above or below the expected result. The volatility for each asset class used in this analysis is listed on the Capital-Market Projections page before these Notes. In general, two-thirds of the returns will be within one standard deviation. For example, assuming that stocks are expected to return 8.0% on a compounded basis and the volatility of returns on stocks is 17.0%, in any one year it is likely that two-thirds of the projected returns will be between (8.9)% and 28.8%. With intermediate government bonds, if the expected compound return is assumed to be 5.0% and the volatility is assumed to be 6.0%, two-thirds of the outcomes will typically be between (1.1)% and 11.5%. Bernstein's forecast of volatility is based on historical data and incorporates Bernstein's judgment that the volatility of fixed-income assets is different for different time periods.

#### 7. Technical Assumptions

Bernstein's Wealth Forecasting System is based on a number of technical assumptions regarding the future behavior of financial markets. Bernstein's Capital-Markets Engine is the module responsible for creating simulations of returns in the capital markets. These simulations are based on inputs that summarize the current condition of the capital markets as of the date in the footnotes of that page. A description of these technical assumptions is available on request.

#### 8. Tax Implications

Before making any asset-allocation decisions, an investor should review with his/her tax advisor the tax liabilities incurred by the different investment alternatives presented herein, including any capital gains that would be incurred as a result of liquidating all or part of his/her portfolio, retirement-plan distributions, investments in municipal or taxable bonds, etc. Bernstein does not provide tax, legal, or accounting advice. In considering this material, you should discuss your individual circumstances with professionals in those areas before making any decisions.

#### 9. Tax Rates

Bernstein's Wealth Forecasting System has used various assumptions for the income tax rates of investors in the case studies. See the assumptions in each case study (including footnotes) for details. The federal income tax rate is Bernstein's estimate of either the top marginal tax bracket or an "average" rate calculated based upon the marginal rate schedule. For 2014 and beyond, the maximum federal tax rate on investment income is 43.4% and the maximum federal long-term capital-gains tax rate is 23.8%. Federal tax rates are blended with applicable state tax rates by including, among other things, federal deductions for state income and capital-gains taxes. The state tax rate generally represents Bernstein's estimate of the top marginal rate, if applicable.

### 10. Core Capital Analysis

The term "core capital" means the amount of money necessary to cover anticipated lifetime net spending. All noncore capital assets are termed "surplus capital." Bernstein estimates core capital by inputting information supplied by the client, including expected future income and spending, into our Wealth Forecasting System, which simulates a vast range of potential market returns over the client's anticipated life span. From these simulations, we develop an estimate of the core capital the client will require to maintain his/her spending level over time. Variations in actual income, spending, applicable tax rates, life span, and market returns may substantially affect the likelihood that a core capital estimate will be sufficient to provide for future expenses. Accordingly, the estimate should not be construed as a promise of actual future results, the actual range of results, or the actual probability that the results will be realized.



### **Index Descriptions**

The **Dow Jones–UBS Commodity Index** is a rolling index composed of futures contracts on physical commodities.

The FTSE EPRA/NAREIT Global Real Estate Index is a market-capitalization-weighted index that tracks the performance of listed real estate companies and REITs across a range of property types worldwide.

The FTSE NAREIT Equity Index is an unmanaged, market-capitalization-weighted index that tracks the performance of publicly traded REITs across a range of US geographies and property types.

HFRI Fund of Funds Composite Index is an equal-weighted performance index that includes more than 650 constituent fund of funds that report their monthly net-of-fee returns to Hedge Fund Research, Inc. and have at least \$50 million under management and have been actively trading for at least 12 months.

**HFRI Fund Weighted Composite Index** is an equal-weighted performance index that includes more than 2,000 constituent funds that report their monthly net-of-fee returns to Hedge Fund Research, Inc. and have at least \$50 million under management and have been actively trading for at least 12 months.

The Lipper Intermediate Municipal Debt Funds Index tracks funds that invest in municipal debt issues with dollar-weighted average maturities of five to 10 years.

The Lipper Short/Intermediate Municipal Debt Funds Index tracks funds that invest in municipal debt issues with dollar-weighted average maturities of one to five years.

The Lipper Short Municipal Debt Funds Index tracks funds that invest in municipal debt issues with dollar-weighted average maturities of less than three years.

The Lipper TASS Hedge Fund Index provides monthly net-of-fee returns on an equal-weighted basis of those funds that report returns to the Lipper TASS database.

The **Lipper TIPS Fund Index** tracks funds that invest primarily in inflation-indexed fixed-income securities issued in the United States. Inflation-indexed bonds are fixed-income securities that are structured to provide protection against inflation.

The MSCI All-Country World Index (ACWI) is a market-capitalization-weighted index designed to provide a broad measure of equity market performance throughout the world.

The MSCI ACWI Commodity Producers Index is a free-float-adjusted market-capitalization-weighted index that is designed to track the performance of global listed commodity producers.

The MSCI EAFE (Europe, Australasia, Far East) Index is a free-float-adjusted, market-capitalization-weighted index that is designed to measure developed-market equity performance, excluding the US and Canada.

The MSCI Emerging Markets Index is a free-float-adjusted, market-capitalization-weighted index that is designed to measure equity market performance in the global emerging markets.

The MSCI USA Index is a free-float-adjusted, market-capitalization-weighted index that is designed to measure large- and mid-cap US equity market performance.

The MSCI USA Minimum Volatility Index aims to reflect the performance characteristics of a minimum variance strategy applied to the US large- and mid-cap equity universe. The index is calculated by optimizing the MSCI USA Index, its parent index, for the lowest absolute risk (within a given set of constraints). Historically, the index has shown lower beta and volatility characteristics relative to the MSCI USA Index.

The MSCI World Index is a free-float-adjusted, market-capitalization-weighted index that is designed to measure global developed-market equity performance.

The Russell 1000® Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.\*

The Russell 1000® Value Index measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.\*

The unmanaged **S&P 500 Index** comprises 500 large-capitalization US stocks and is a common measure of the performance of the US stock market.

<sup>\*</sup>The Russell Index methodology results in some companies appearing in both the growth and value indices.



### **Glossary**

Active Management: Managing a portfolio through security selection designed to outperform the portfolio's benchmark.

**Active Share:** The degree of difference between a portfolio and its benchmark index, calculated using the weight of individual securities in the portfolio relative to the benchmark. Active share varies between 0% (a portfolio that mirrors its benchmark) and 100% (a portfolio totally different from its benchmark).

Central Bank Policy: The monetary stance taken by a country's central bank, which can vary from extremely accommodative (keeping short-term interest rates very low, typical when economic growth is slow or negative) to extremely tight (raising rates to high levels, typical when inflation is very high).

**Correlation:** The degree to which two or more securities, asset classes, and/or benchmarks perform in the same direction and magnitude; a lower correlation is generally favorable for active management, and a higher correlation for passive management.

**Dispersion (of returns):** The difference in return, often between the best- and worst-performing security in a given asset class or investment category. Generally, the higher the dispersion, the more favorable for active management.

**Distressed-Credit Hedge Fund:** A hedge fund that invests in the debt of companies in financial trouble, including companies that may file for bankruptcy in the near future. If the company emerges from its distress, its debt will sell far above the price paid by the fund.

**Duration:** For bonds, a measure of interest-rate risk akin to, but more sensitive than, maturity. For every year of a bond's duration, its price can be expected to fall 1% with every one-percentage-point increase in interest rates, or rise 1% with every one-percentage-point decrease in rates.

**Dynamic Asset Allocation:** Bernstein's research-based tactical-risk-management service (see below), designed to reduce the volatility of a balanced-asset portfolio without sacrificing return.

**Event-Driven Hedge Fund:** Event-driven strategies take advantage of transaction announcements and other one-time events; one example are merger-arbitrage funds which buy the stock of a target company and hedge the purchase by selling short the stock of the acquiring company.

Global Macro Hedge Fund: A hedge fund that bases its holdings primarily on overall economic and political views of various countries.

**Hedging (currency):** Using futures and other contracts to exchange one currency for another; for US investors, hedging is generally exchanging a non-US currency for dollars.



## **Glossary (cont.)**

**Inflation-Protected Bonds:** Bonds whose values are indexed to inflation, normally adjusted on a semiannual basis. The most well known are Treasury Inflation-Protected Securities, or TIPS. Inflation-protected bonds are designed to shield investors from the negative impact of inflation.

**Liquidity:** The ease with which assets can be traded; the degree of liquidity for any given asset class or security depends on the prevailing market conditions, dealer inventories, and other factors.

Long/Short Hedge Fund: A hedge fund that takes "long" positions—positions of securities bought in the expectation that they will appreciate in value—as well as short-selling other positions, anticipating that they will decline in value. In short selling, the investor generally sells a borrowed security in the expectation that its price will decline and hence can be bought back at a lower price.

Passive Management: Managing a portfolio to essentially duplicate its benchmark index.

**Price-to-Book Ratio:** A stock's current price divided by its book value: its total tangible assets minus its liabilities. A lower price-to-book ratio indicates a low price for a stock relative to the value of its underlying assets.

**Price-to-Earnings Ratio:** A stock's current price divided by the company's historical or projected earnings per share. A lower price-to-earnings ratio indicates a low price for a stock relative to its earnings history or potential. The **cyclically adjusted or Shiller P/E**, usually applied to the broad S&P 500 market, generally uses the average of the past 10 years of earnings, adjusted for inflation.

Real Assets: Assets that have tangible value, or are based on assets with tangible value, such as real estate, commodities, and commodity futures.

**Roll (bonds):** The tendency of a bond to sell for premium returns before maturity as long as the yield curve (see below) is upward-sloping, since its coupon rate is normally competing with lower rates as it "rolls down the yield curve." Roll is a component of bond returns that active managers can exploit.

Tactical Risk Management: Varying the allocation of asset classes in a portfolio in line with generally short-term forecasts of risk and return.

**Yield:** The income return from an investment, typically based on the interest paid by a bond or the dividends paid by a stock; usually expressed as a percentage based on the security's cost, market value, or face value.

**Yield Curve:** The relationship between the yields being offered by bonds at any given time and their maturity; normally, the curve is upward-sloping, but flat or inverted yield curves are not uncommon. Different yield-curve shapes suggest different optimal maturity configurations for a portfolio.



## **Disclosures and Important Information**

Hypothetical, back-tested or simulated performance has many inherent limitations only some of which are described herein. The hypothetical performance shown herein has been constructed with the benefit of hindsight and does not reflect the impact that certain economic and market factors might have had on the decision-making process. No hypothetical, back-tested or simulated performance can completely account for the impact of financial risk in actual performance. Therefore, it will invariably show better rates of return. The hypothetical performance results herein may not be realized in the actual management of accounts. No representation or warranty is made as to the reasonableness of the assumptions made or that all assumptions used in constructing the hypothetical returns have been stated or fully considered. Assumption changes may have a material impact on the returns presented. This material is not representative of any particular client's experience. Investors should not assume that they will have an investment experience similar to the hypothetical, back-tested or simulated performance results and actual results subsequently achieved by any investment strategy. Prospective investors are encouraged to contact the representatives of the investment manager to discuss the methodologies (and assumptions) used to calculate the hypothetical performance shown herein.

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