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Invesco

White Paper | Invesco Solutions

# Building more resilient DC equity exposures

## Helping plan participants better weather changing economic cycles through a dynamic multifactor approach to equity investing

Invesco's Dynamic Multifactor strategy offers defined contribution (DC) plan sponsors a practical, cost-efficient way to help potentially smooth out equity market uncertainty for participants. By taking a macro-regime approach to managing equity risk exposures, these innovative offerings seek to equip retirement portfolios with a dynamic, flexible framework striving to help better navigate both strong and challenging markets. This process can be applied to a broad range of equity benchmarks, providing a systematic equity solution that is designed to help better prepare portfolios to deliver optimized risk-adjusted performance potential throughout the entire market cycle.

Plans can apply these benefits as a potential return enhancer and diversifier as part of a white label equity option or custom target date strategy. The strategy may also be viable for consideration as a standalone investment. In any structure, Invesco's Dynamic Multifactor approach can help provide another investment tool to help strengthen long-term outcome potential by pursuing:

- Differentiated equity performance characteristics, including stronger full-cycle performance versus traditional indices
- A potential defense against macro shocks
- A cost-efficient, active risk/return profile

This paper presents how the strategies seek to navigate the fundamental challenges of effectively addressing changing macroeconomic cycles, including global financial shocks and risks, through its innovative, dynamic portfolio design.

### Managing macroeconomic risk in portfolio exposures

The complexity of the global economy can be felt most acutely by those seeking to hedge its inherent risks. Broader cycles and investment conditions naturally evolve over time; however, macro shocks and market shifts can arise unexpectedly and very quickly. They also tend to be complex and rarely unilateral.

Adequately solving for them by focusing on single data points should be approached with caution. A timely example is the inflation shock post-COVID-19 that prompted many investors to consider adding inflation hedges, such as Treasury Inflation Protection Securities (TIPS) and real assets, into their asset allocation mixes. However, this type of focused, reactive approach can be problematic at a number of levels.

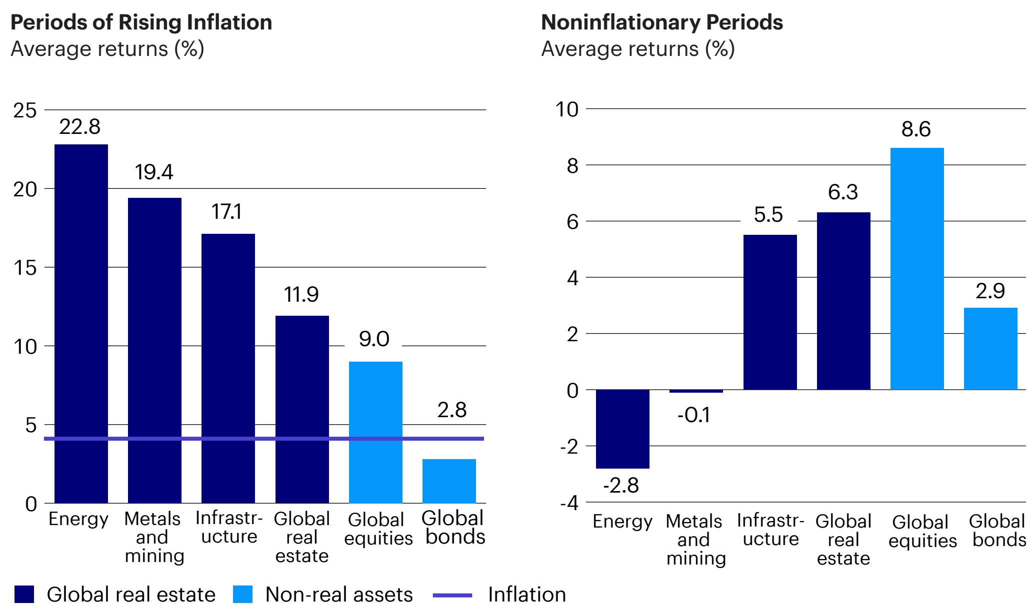
1. **It may lead to unintended outcomes and can be confusing to participants.** TIPS were a prime example. Intuitively, it would seem that these securities would have helped to protect portfolios against the inflation spikes experienced throughout 2022. However, their embedded interest-rate risk caused the sharp move in real rates during the year to overwhelm their inflation-hedging potential, ultimately delivering a negative annual return to investors despite inflation hitting a 40-year high. The reality is that a broader set of market forces were at play, not just inflation, ultimately pressuring the asset class. Additionally, research shows that participants appear confused by these types of offerings, as evidenced by their extremely low usage. Approximately 31% of DC plans currently offer a TIPS strategy on their menu, but the amount of overall plan assets invested in these offerings is a minuscule 0.4%.[1]

2. **It may weigh on performance when economic conditions evolve or normalize.** Commodities, for instance, historically have been an effective inflation hedge, but from a long-term investment perspective, they can be a potential drag on performance during periods of either stable inflation or disinflation. Other real assets, such as infrastructure and real estate, also have broadly offered portfolio protection in inflationary environments, but their returns have only matched or fallen short of traditional assets like stocks and bonds when inflationary concerns have subsided (Exhibit 1).

3. **It is frequently applied after the fact.** These types of defensive allocation decisions are often made after macro shocks occur, potentially mitigating the protective attributes and elevating the entry purchase valuations for these assets.

Our research shows that a broader assessment of macroeconomic and market data may provide a greater chance of navigating macro uncertainty by leveraging the predictive power in anticipating the future state of economic growth.[2] In other words, a better roadmap for identifying the macro landscape and positioning exposures accordingly can ideally provide DC plans with an added portfolio-mitigation lever against macro shocks and risk.

**Exhibit 1: Real assets and traditional assets performance in inflationary and noninflationary periods**



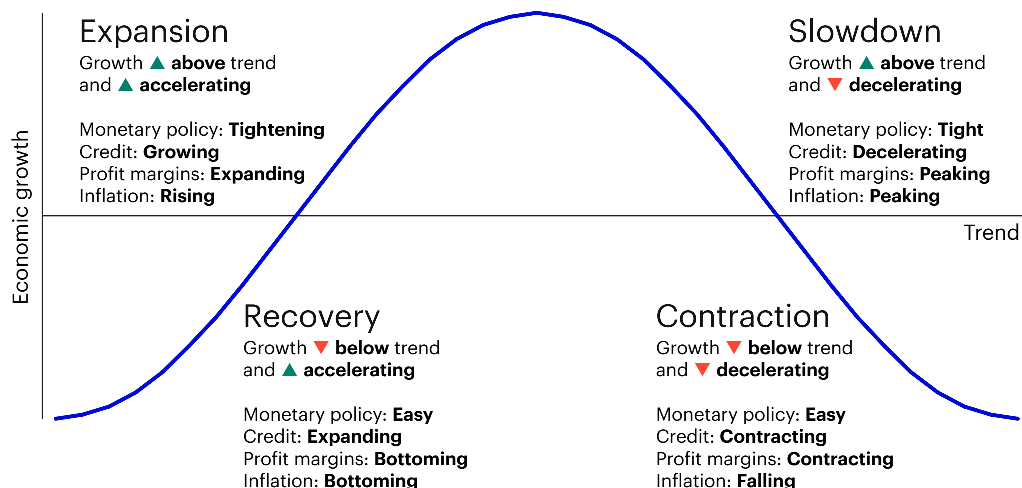

Sources: Invesco Real Estate, IMF, S&P, MSCI, FTSE EPRA Nareit, Dow Jones and Bloomberg using data from January 1, 2003 - December 31, 2022. Total returns shown in USD. Annual update with latest available data. Periods of world inflation acceleration include January 1, 2004 – December 31, 2004, January 1, 2006-December 31, 2007, January 1, 2010-December 31, 2011, January 1, 2016 - December 31, 2017 and January 1, 2021 - December 31, 2022. Rising inflation defined by the annual increase in World consumer prices (end of period) as reported by the IMF. Past performance is not indicative of future results. An investment cannot be made directly into an index. Note: Metals & mining represented by MSCI World Metals and Mining Index; Infrastructure represented by Dow Jones Brookfield Global Infrastructure Index; Energy represented by MSCI World Energy Sector Total Return Index; Global real estate represented by FTSE EPRA Nareit Developed Index; Global equities represented by MSCI World Index; Global bonds represented by Bloomberg Global Aggregate Index.

### Equity investing built around the economic cycle

Our solution is a forward-looking, macro-regime framework for dynamically adjusting portfolio exposures, which takes a comprehensive approach to distilling the complexities of the broad economy. At a high level, it is based on four stages of the economic cycle: recovery, expansion, slowdown and contraction. Broadly speaking, each of these historically has tended to exhibit certain distinct characteristics in areas such as monetary policy, credit, profit margins and inflation, all of which collectively can be key drivers of asset prices and risk exposures (Exhibit 2).

By focusing on forward-looking indicators, we aim to anticipate turning points in economic activity and financial markets' performance. We can then recalibrate underlying portfolio exposures to help better navigate anticipated cycle changes.

**Exhibit 2: Invesco's macro-regime framework defines four stages in the economic cycle, based on the expected level and change in economic growth**




For illustrative purposes only.

**Step 1: Anticipating economic and financial market turning points**

Traditionally, economists rely on indicators such as changes in GDP growth, industrial production or unemployment rates to perform historical analysis of economic cycles. However, these measures may be impractical for real-time investment decisions as they are released at a lag and often subject to revisions. Plus, financial markets tend to lead to real economic activity, not the other way around. By the time non-leading economic data is available, it tells us more about the past than the future direction of asset prices.

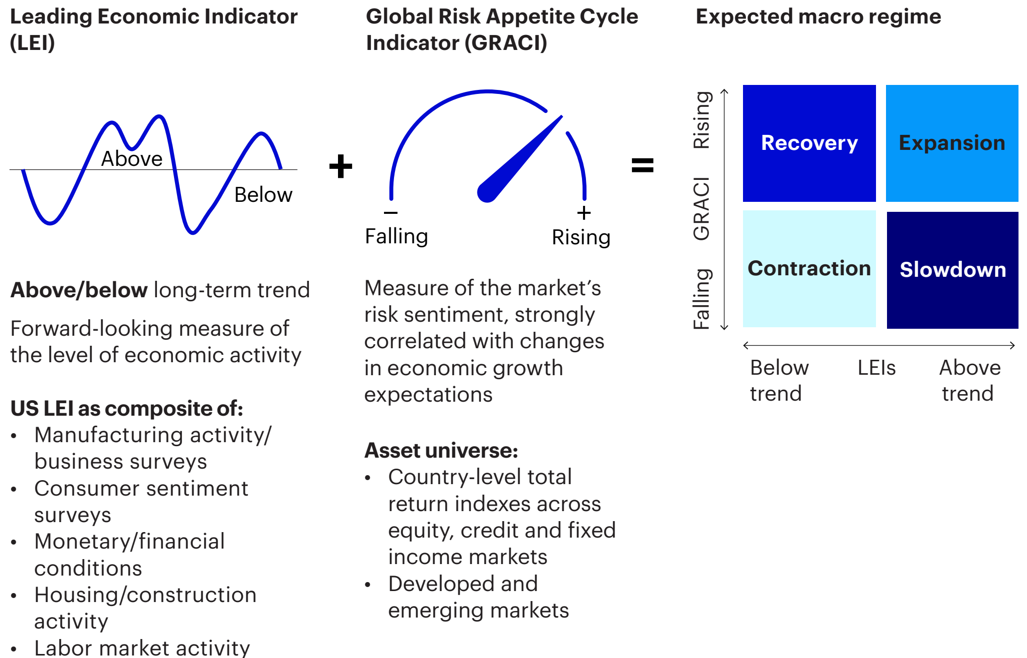
To help overcome these problems, we construct a **Leading Economic Indicator (LEI)** input using high frequency economic and financial data available at least monthly, and not subject to revisions. LEI equally weights seven to 10 local indicators (region dependent) across five broad categories (manufacturing, consumer sentiment, monetary/financial conditions, housing and the labor market) to create one composite indicator that measures the expected level of economic activity – above or below – its long-term trend.

To help enhance its predictive power, the framework also incorporates a **Global Risk Appetite Cycle Indicator (GRACI)**, which seeks to estimate future directional changes in economic growth from cyclical fluctuations in global risk appetite. While strongly correlated, the two indicators often behave differently, as investor confidence is influenced by other factors not directly related to the economic cycle. Our research indicates a high correlation between risk sentiment and changes in economic growth expectations, as investors discount information affecting future fundamentals in real time. GRACI seeks to capture this predictive signal by measuring relative risk-adjusted performance between riskier and safer asset classes, as measured by an equally weighted composite of approximately 80 global total return indexes. This data is used to understand if economic growth is rising or falling, completing the picture of current and emerging cycle placement.

Collectively, LEI and GRACI provide a monthly signal that is aligned to one of the economic stages (e.g., macro regimes). This process is highlighted in Exhibit 3.

## Exhibit 3: Invesco's forward-looking macro-regime framework

Anticipating changes in the economic cycle




**Above/below** long-term trend

Forward-looking measure of the level of economic activity

**US LEI as composite of:**
- Manufacturing activity/ business surveys
- Consumer sentiment surveys
- Monetary/financial conditions
- Housing/construction activity
- Labor market activity

Measure of the market's risk sentiment, strongly correlated with changes in economic growth expectations

**Asset universe:**
- Country-level total return indexes across equity, credit and fixed income markets
- Developed and emerging markets

Sources: de Longis, Alessio, "Dynamic Asset Allocation Through the Business Cycle: A Macro Regime Approach", Invesco Investment Solutions Manuscript (2019). de Longis, Alessio and Dianne Ellis, "Market Sentiment and the Business Cycle: Identifying Macro Regimes Through Investor Risk Appetite," Invesco Investment Solutions Manuscript (2019). Polk, Haghbin, de Longis. "Time-Series Variation in Factor Premia: The Influence of the Business Cycle." Journal of Investment Management 18, no. 1 (2020): 69–89.

This framework has demonstrated a high level of predictive power, as shown in exhibit 4, which highlights our estimated US macro regimes compared to US real GDP growth. In the last two contraction periods—February 2020 to April 2020 and December 2007 to June 2009—the model accurately identified the start of both stages as well as relatively near the endpoints when the recovery macro environments began.

### Chart highlights

**Actual macro regime based on real GDP growth**

December 2007—June 2009
February 2020—April 2020

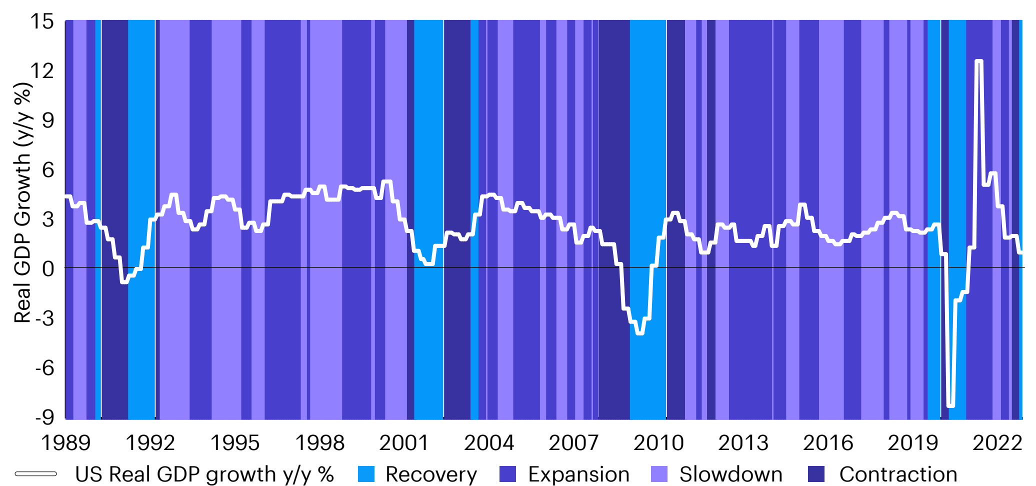
**Invesco forward-looking macro regime framework identifies: Contraction stage**

December 2007
February 2020

**Switch from contraction to recovery stage**

February 2009
June 2020

## Exhibit 4: Model-predicted economic cycle regimes versus realized GDP (US-based framework)[2]




Sources: US GDP from the Bureau of Economic Analysis. Sample data period: January 1989 - December 2021. Business cycle regimes are based on the composite business cycle regime model, using a combination of US leading economic indicators and global risk appetite indicators. US GDP data do not contribute to the calculation of the regimes, and they are illustrated for reference purposes only. Sample time-period dictated by data availability.

### Step 2: Mapping macro regimes to portfolio allocations

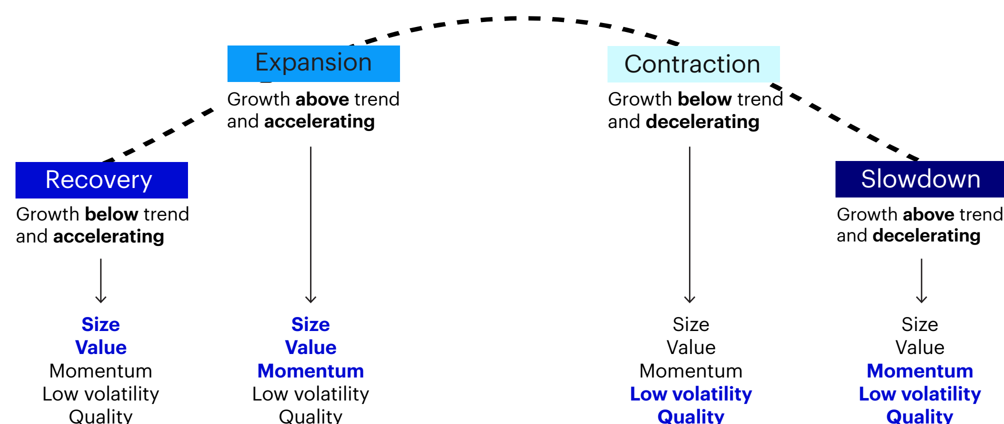
While the initial framework was developed from a multiple asset class perspective, we have found it has direct application to single asset class strategies as well. For example, equity allocations have been shown to benefit from adopting a regime-based framework for rotating into cyclical or defensive stocks as markets reward or penalize risk-taking.

Industry research further supports that style factors may be used as an effective and standardized way to classify these fundamental characteristics to help gain efficient exposure as the broader stock market moves through the economic cycle.

- **Size** and **value** have tended to be cyclical, with higher operating leverage and more reliance on external funding.
- **Quality** and **low volatility** have tended to be more defensive, with lower operating leverage and more reliance on internal cash flows.
- **Momentum** has been generally more transient and has tended to perform well in later stages of cyclical upturns and downturns.

With this in mind, we can reweight an equity index's exposures using anticipatory factor tilts through systematic rebalancing based on the identified macro regime. This can dynamically recalibrate and potentially strengthen overall risk/reward exposures compared to the original benchmark as macro conditions evolve. This process is illustrated in Exhibit 5.

**Exhibit 5: Actively adapting equity exposures to the macroclimate through factor tilts**



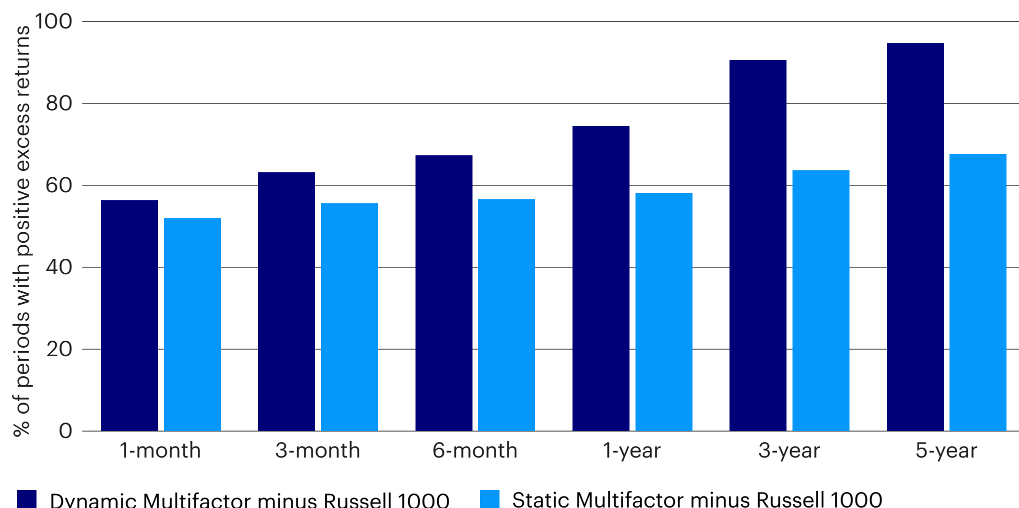

Source: Invesco Solutions. For illustrative purposes only.

### Delivering stronger outcome potential

By systematically applying this disciplined, rules-based methodology, Invesco's Dynamic Multifactor strategies have been actively able to adjust for changing macroeconomic risks, positioning for stronger full-cycle returns, seeking to outperform their parent market cap-weighted index, with similar levels of market volatility.[3]

This is demonstrated by the performance of our flagship Russell 1000 Invesco Dynamic Multifactor Index. While the strategy's macro model is updated on a monthly basis, the compounded benefits of its dynamic overlay have steadily accrued over time, with the probability of positive excess returns versus its parent index historically expanding over longer horizons (Exhibit 6).

**Exhibit 6: Russell 1000 Invesco Dynamic Multifactor Index excess returns versus Russell 1000 Index**




Source: Invesco as of 6/30/2023. Dynamic Multifactor is Russell 1000 Invesco Dynamic Multifactor Index. Static Multifactor is Russell 1000 Comprehensive Factor Index. Russell 1000 is Russell 1000 Index. Back-tested performance over the period December 1989 – October 2017 (i.e., calculations of how the Index might have performed over that time period had the Index existed) is subject to inherent limitations because it reflects retroactive application of an Index methodology and selection of Index constituents with the benefit of hindsight. Sample period chosen based on index data availability. Past performance is not a guarantee of future results. An investment cannot be made directly into an index.

The strategy has also been delivered from a risk mitigation perspective, as evidenced by its attractive upside/downside capture highlighted in Exhibit 7. Of note, it has helped provide historically strong defensive characteristics when investors have needed it most as markets have fallen.

**Exhibit 7: Russell 1000 Invesco Dynamic Multifactor Index upside/downside capture versus Russell 1000 Index, Oct. 31, 2017-June 30, 2023**

| | 3-year[4] | 5-year[4] | Since inception[4] |
|---|---|---|---|
| Upside | 101.85 | 96.66 | 95.93 |
| Downside | 78.09 | 82.56 | 81.31 |

Source: Morningstar Direct, as of 6/30/23. Since inception refers to the launch date of the Russell 1000 Invesco Dynamic Multifactor Index. Index returns do not represent strategy returns. An investment cannot be made directly in an index. Past performance does not guarantee future results.

## Conclusion

The changing economic cycle and elevated global macro risks of the past several years have helped to expose vulnerabilities in many DC equity options and allocations, particularly those largely reliant on passive strategies. The quick escalation of inflation and subsequent broad equity market losses prompted by aggressive monetary tightening of central banks around the globe may have been especially painful for participants nearing or in retirement, given the negative compounded losses in fixed income markets, too.

Against this backdrop, the topic of how to help provide participant portfolios with more dynamic and durable equity returns across the **entire** market cycle remains top of mind for many plan sponsors. Invesco's Dynamic Multifactor strategy may offer an innovative, time-tested solution that is well structured for the needs of DC plans. Invesco's macro regime framework acknowledges that markets and changing macro environments can be complex and seeks to equip participant portfolios with an adaptive, flexible equity strategy to help better potentially weather the next bout of market volatility or opportunity, where and whenever that may be.

For more information on the Invesco Solutions tactical asset allocation process covering our dynamic approach to factors, sectors, regions and asset classes, please review the following whitepapers:

- "Dynamic Asset Allocation through the Business Cycle," by Alessio de Longis, CFA
- "Market Sentiment and the Business Cycle," by Alessio de Longis, CFA
- "Dynamic Multifactor Strategies – A Macro Regime Approach" Parts 1 and 2, by Alessio de Longis, CFA and Mo Haghbin, CFA, CAI

1. Source: Plan Sponsor Council of America,"65th Annual Survey of Profit Sharing and 401(k) Plans 2022".
2. Source: National Bureau of Economic Research. The unofficial beginning and ending dates of recessions in the United States have been defined by the National Bureau of Economic Research (NBER), an American private nonprofit research organization. The NBER defines a recession as "a significant decline in economic activity spread across the economy, lasting more than two quarters, which is six months, normally visible in real gross domestic product (GDP), real income, employment, industrial production, and wholesale-retail sales". The recession is determined ex-post once data is available. Invesco's macro regime framework seeks to anticipate the level of economic growth in advance.
3. There can be no assurance that any investment process or strategy will achieve its investment objective.
4. Statistics calculated against Russell 100 Index. Since inception, risk data has been using monthly returns, which start on 10/13/17.

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