

## When Should Equity Investors be Defensive?

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A few years ago, SECOR published a paper on downside protection: “A Practical Guide to Downside Protection Strategies.”<sup>1</sup> That paper focused on the “how” as we surveyed various downside protection techniques. In this paper, we explore the “when” – when is it most important to be defensive?

Before we do so, we acknowledge that one can’t time the equity market with 100% accuracy – anyone claiming so deserves our skepticism. We all understand the “sin” of market timing and the career risk associated. Indeed, like everyone else we believe the normal state for investors should be a well-diversified strategic asset allocation.

Nonetheless, we also know that avoiding a large (20% or more) and prolonged drawdown is an important task for certain investors. While not everyone needs to worry about a market correction, a severe and extended market downturn can cause permanent damage to the plan sponsor, especially if the current funded status is low or there are net cash outflows. For such funds, we believe it is prudent and necessary to monitor and take actions to avoid equity downside risk.

As we discussed in our paper on downside management strategies, most defensive approaches have somewhat negative expected returns on average, and other side effects. Since we can’t know for certain what will cause the next downturn, if an allocator is particularly vulnerable to downturns, it might be prudent to have a permanent defense, despite the potential drawbacks. But some allocators have the flexibility and governance to be more selective about when defense is applied to the portfolio.

<sup>1</sup> <https://www.secor-am.com/wp-content/uploads/2018/08/WP-DownsideProtectionSummary.pdf>

And in general, investors can benefit if they have a good framework for determining when the risk of a large, prolonged slump in equity prices is the highest.

Historically, the major equity bear markets have occurred when there is a decline in economic growth. For instance, for S&P 500 investors, all the large (25% or more) and prolonged stock market declines in the last 75 years were at the time of a US recession<sup>2</sup>. Hence, the most useful metrics for equity downside risk assessment have been those which help indicate whether economic growth is declining. The framework outlined here is based on *equity price trend, plus the following*:

- *Economic growth*
- *Earnings growth*
- *Credit spreads*
- *Valuation metrics*
- *Volatility*

It may be controversial that we start with equity price trend in this framework. Trend following (CTA) strategies were superstars in the Global Financial Crisis, providing much needed diversification and positive returns when the other high-risk investments were plunging in value. CTA strategies surged in popularity as a result. Unfortunately, continued disappointing performance since then has prompted many investors to question: “***Is trend following dead?***”

The commentaries on “is trend following dead?” focus on capacity, trade crowding, central banker market intervention, etc. We won’t repeat those arguments here. Instead, we focus on what equity price trend tells us. The main reasons why we utilize equity price trend in this framework are:

- Equity price trend usually provides a fairly accurate view of the trend in economic growth
- When equity price trend is positive, investors seem to be able to overlook negative information, and may be correctly anticipating improvements
- When equity price trend is negative and confirming information is also negative, our downside risk is highest

For investors, developing an assessment of the outlook for equities can be like “the blind men and the elephant”. Economists provide daily commentary about GDP growth, employment data, PMI surveys, etc. Messages from bond managers cover yield curve, credit spreads and central bank policy. Equity managers discuss earnings growth, sales growth, profitability and valuation metrics. Quantitative managers also tell us about value metrics, as well as trend, momentum and volatility. This plethora of information from different viewpoints is meant to address the same questions: How attractive is the equity market today? How much should we worry about downside risk? In the analysis below, we attempt to demonstrate that these various perspectives are all related in a circular fashion, and it makes sense to include price trend information as part of our overall effort to understand broader economic conditions and equity downside risk.

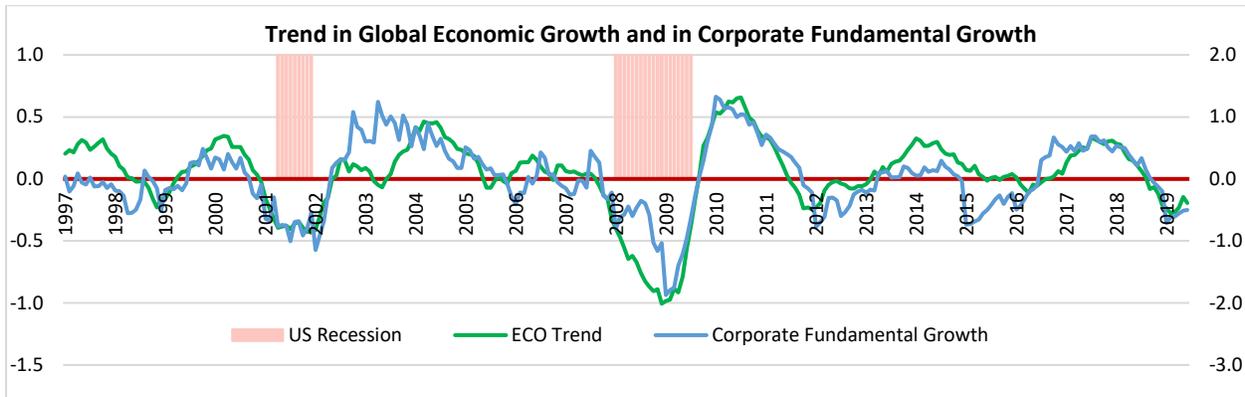
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<sup>2</sup> Source, Bloomberg, Robert Shiller data (<http://www.econ.yale.edu/~shiller/data.htm>), NBER. The Oct 1987 crash was more than 25%, but was not prolonged, since a steady recovery began within two months and full recovery in two years.

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## The global economy and corporate fundamentals

We start with global economy. In the chart below, the green line is the GDP-weighted composite of the trend of the major economic data<sup>3</sup>. Below zero means the composite has declined in the past year – global growth is slowing. The common critique in using economic information is that they are lagged data; we don't know a recession has begun until well after the fact. We have found that the **trend of economic data** – “getting better or worse” (rather than the level – “are data good or bad”) – provides a better indication of what's next for the economy and its potential knock-on effect on stock markets.



Source: Bloomberg, SECOR analysis as of May 31, 2019

The blue line in the chart indicates the trend in the growth rate of fundamentals (earnings, sales, etc.) for the companies represented in the global equity indices<sup>4</sup>. The line is below zero if the growth rate is falling. We can see the very tight alignment between these series – the correlation since 1996 is nearly 0.8. We can logically infer that most of the change we observe in corporate fundamentals corresponds with changes in global economic growth.

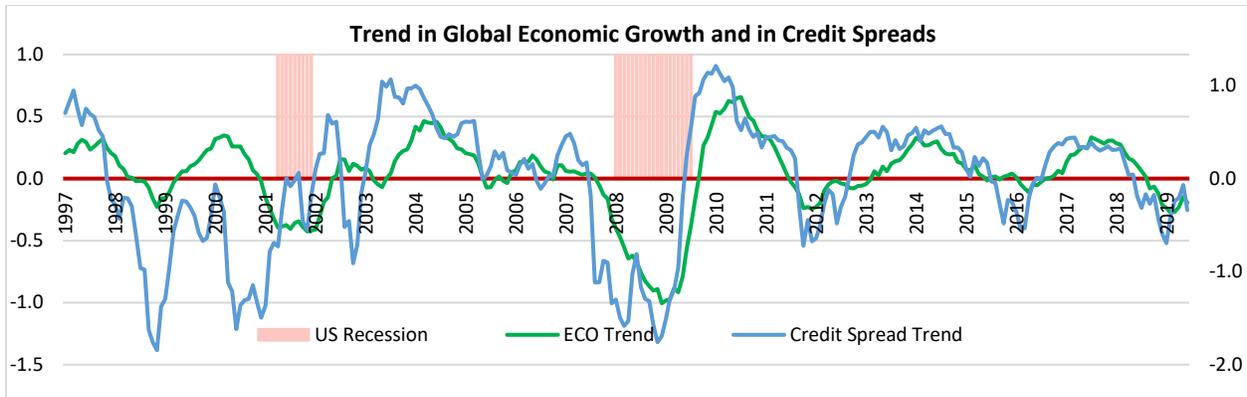
## The global economy and credit spreads

The next chart compares the trend in the global economy to the trend in credit spreads<sup>5</sup>. Here the blue line is below zero if credit spreads are widening. As shown above, if global growth is slowing, the growth in corporate results is slowing as well. The next logical step is that if profit growth is slipping, the ability of corporations to pay off debt declines and credit spreads should widen. The relationship between the credit cycle and the business cycle is well understood and is clearly evident on the following chart. The chart demonstrates that the trend of credit spreads, which is readily observable, often leads the trend of economic data. The contemporaneous correlation of the data series on the chart is 0.6, but the correlation of credit spread trend to the economic data trend *six months later* is 0.7. This makes the **trend in credit spreads** (rather than level of spreads “wide or narrow”) a very useful tool.

<sup>3</sup> Source: Bloomberg. Comprehensive composite of economic information from the 14 largest economies. Trend based on current level vs. prior year average, converted to Z-score relative to the prior trend history for that index. Composite weighted by GDP. Information used in this paper is the currently-available data history, which may have been revised from the data initially reported.

<sup>4</sup> Source: Bloomberg. Corporate growth composite based on historical data for S&P 500, MSCI World ex-US and MSCI ACWI, which in some cases was revised from initial data. Growth calculated based on current level vs. prior year average.

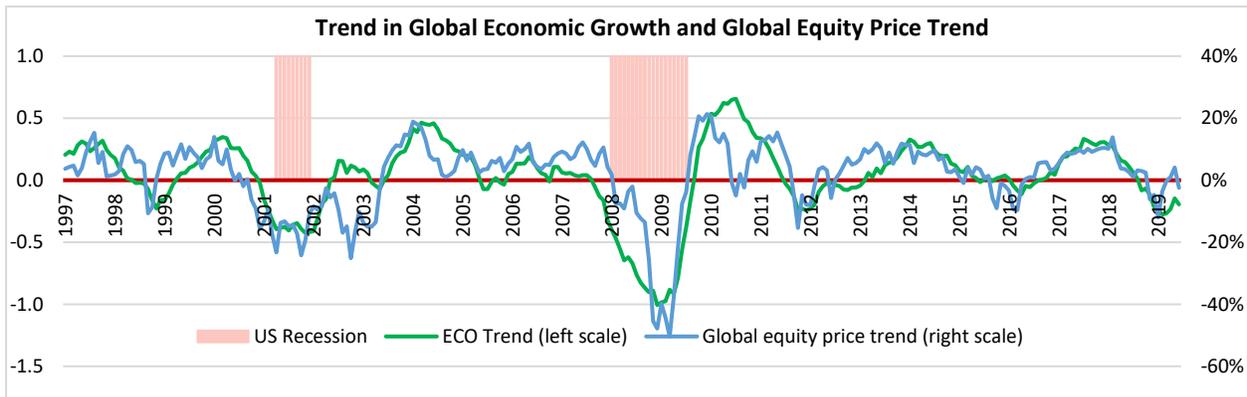
<sup>5</sup> Source: Bloomberg. Composite of 35 credit spread metrics including US and non-US investment grade, high yield, EM debt, CDS.



Source: Bloomberg, SECOR analysis as of May 31, 2019

### ***The global economy and equity price trend***

Equity price trend corresponds closely with the trend in global economic data<sup>6</sup>. Since 1996, the correlation between these series was 0.70. Due to the close linkage between the global economy and corporate results, it's easy to understand why equity prices would move up or down in alignment with changes in economic growth. Sometimes equity investors accurately anticipate the economy (blue line moves ahead of green line, as in 2000 or 2009) and sometimes they have been slow to react to economic changes, as in 2007. If these series diverge, eventually they move back into alignment.



Source: Bloomberg, SECOR analysis as of May 31, 2019

Some investors may regard equity price trend as a “technical” indicator, and not a “fundamental” one. However, the chart shows that equity price trend usually reflects the economic fundamentals accurately and is often better/faster at reflecting changes in the real economy as compared to the slow-to-arrive economic or earnings data. The starting month of any economic recession is officially determined after the fact – too late for investors to react in time to protect portfolios. Equity trend is quicker to indicate danger. For each of the eleven US recessions in the past 75 years, the S&P 500 had already started falling on the starting month of the recession, with an average drawdown of 12%<sup>7</sup>. The challenge is that

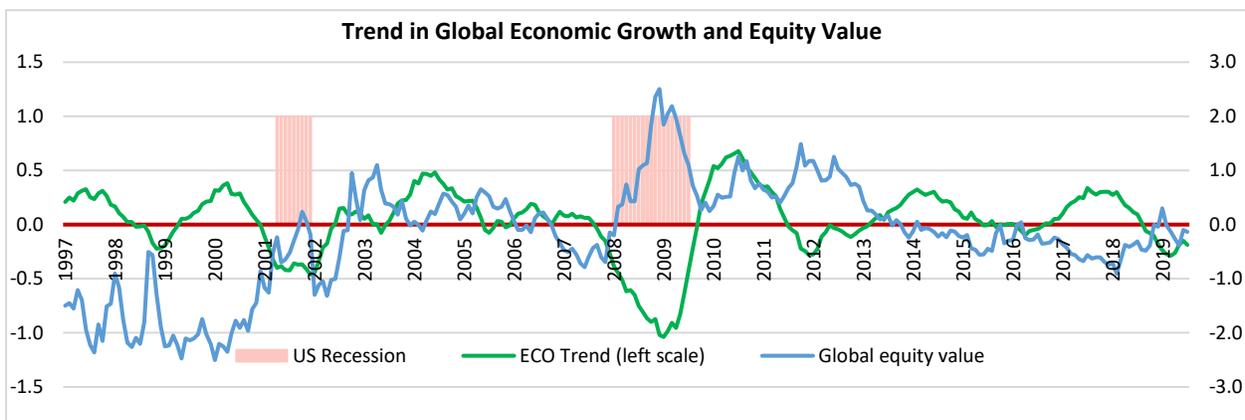
<sup>6</sup> MSCI ACWI price trend based on total return net of cash series, current level relative to prior year average.

<sup>7</sup> Source: Robert Shiller market data ([www.econ.yale.edu/~shiller/data.htm](http://www.econ.yale.edu/~shiller/data.htm)), NBER, SECOR analysis

we get negative equity price trends much more often than recessions – we need to combine price trend with other information!

### The global economy and Value

How about Value? The blue line below is a composite measure of global equity value<sup>8</sup>, combining the standard value metrics (price to “something”); above zero means value is favorable relative to history. While Value metrics revert to long-term norms eventually, they have a *negative correlation* to the trend in global economic growth (-0.30 correlation since 1996) which handicaps the usefulness as a defensive tool. “Bad value” can mean a strong economy with optimism about future earnings growth, and not that equity prices are due for a fall. Equity market history includes long stretches in which Value appeared to be poor but stock market returns were quite strong (1996 – 1999, 2016 - 2017). Value matters, but it is dangerous to use it as the only source of information for an equity defense decision.



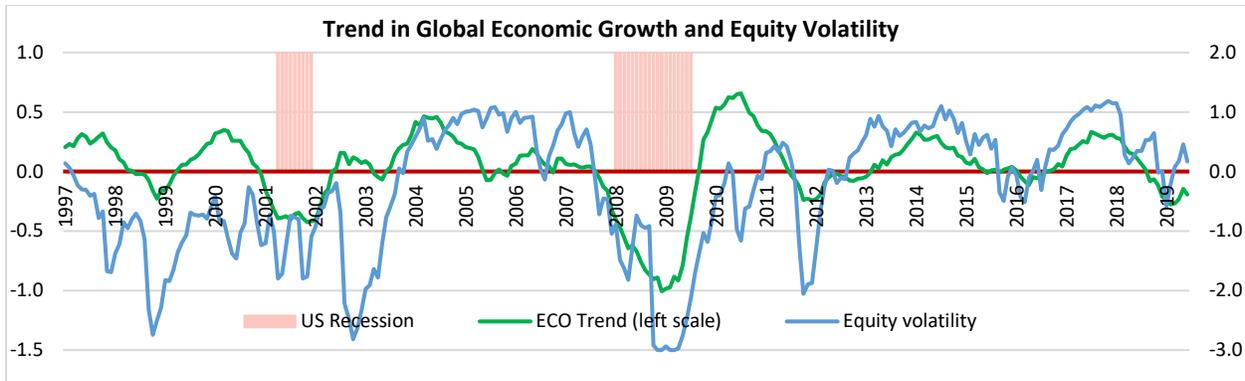
Source: Bloomberg, SECOR analysis as of May 31, 2019

### The global economy and Volatility

The last important metric on our list is Volatility. It is generally accepted that high volatility periods often coincide with a downturn; here, we look at the relationship between volatility and the underlying global economy. The blue line below uses a blend of the trailing volatility of global equity indices and the VIX index<sup>9</sup>. The blue line is below zero if volatility is high. There’s a reasonably high (0.5) correlation between the trend in global economic growth and the level of volatility. But this relationship is not as strong or stable as the relationship of economic growth to corporate profitability, credit spread trend or equity price trend.

<sup>8</sup> Source: Bloomberg. Value based on SPX, MXWOU, MXWD including price to book, price to earnings, price to cash flow, etc.

<sup>9</sup> Source: Bloomberg, SECOR analysis, uses VIX Index and trailing daily volatility of SPX, MXWOU, MXWD



Source: Bloomberg, SECOR analysis as of May 31, 2019

As with Value, we do not consider Volatility to be a very good defensive metric *on its own*. Volatility often briefly spikes and then settles back down, limiting its usefulness to investors. By far the most important problem with using volatility alone for defense is missing out on high volatility bull markets, such as in 1997 – 99 or 2009 – 10.

### How Would We Use Price Trend in a Defensive Framework?

In determining when to be defensive, we believe there are powerful advantages to *combining* equity price trend with the five other important metrics reviewed above. When the equity price trend is positive, it matters less whether the other indicators are good or bad. When the equity price trend is negative, the other metrics matter *much more*.

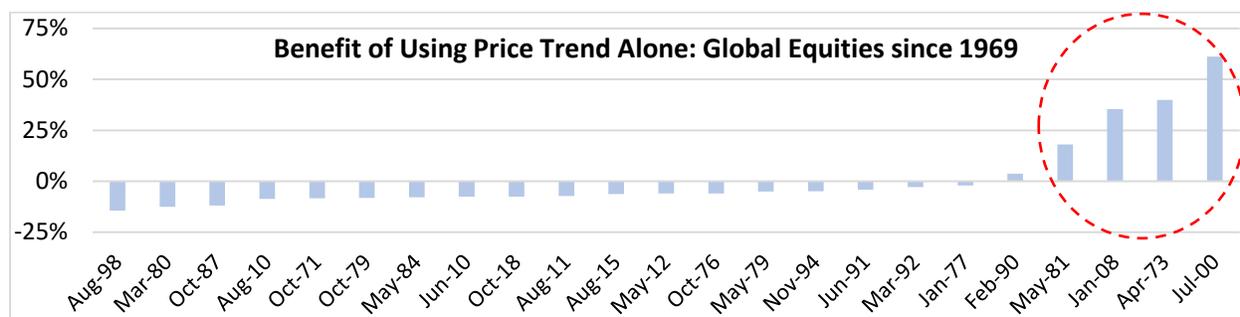
We used global equity data since 1969<sup>10</sup> for the table below. When the price trend was positive, annualized net of cash returns for global equities were mostly good regardless of whether these other metrics were positive or negative. However, when the price trend was negative, there was much greater influence from other indicators. If the equity price trend and the second metric were both negative, the subsequent equity price return was below cash, on average.

If Price Trend is:	Positive		Negative	
	Positive	Negative	Positive	Negative
And:				
Economic trend	7.2%	3.0%	7.3%	-2.6%
Earnings growth	5.9%	5.9%	1.8%	-0.9%
Credit spread trend	8.4%	-0.6%	11.9%	-5.1%
Value	5.2%	6.3%	4.0%	-3.9%
Volatility	7.4%	4.3%	7.9%	-1.8%

Source: Bloomberg, SECOR analysis as of May 31, 2019

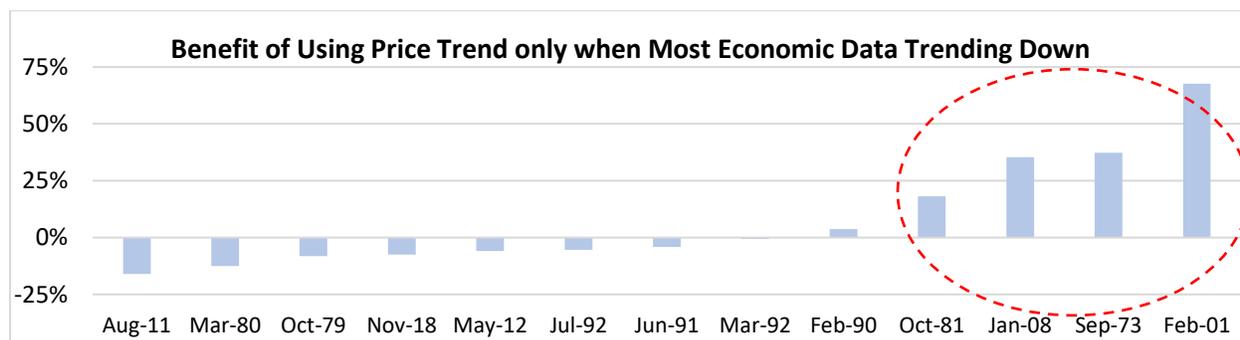
<sup>10</sup> Source: Bloomberg. Credit spread trend data since 1988, other composites since 1969. For credit spread trend “positive” means spreads are falling. For volatility, “positive” means volatility is low. Monthly observations and rebalancing.

Another way to demonstrate this relationship is to look at how the “other” fundamental information helps improve the profitability of the price trend signal. Below is the chart of the advantage of using a simple trend rule<sup>11</sup> investing in cash rather than equities when price trend is negative. For global equities since 1969, there would have been 23 instances in which the trend turned negative, but only a handful of instances with very positive outcomes.



Source: Bloomberg, SECOR analysis. Date indicated on chart is when negative trend began

Suppose we move from equities to cash if the price trend is negative *and* the majority of the economic indices in our composite have a negative trend. In that case, there would have been only 13 instances in the past 50 years of becoming defensive (vs 23 in the previous chart), yet we still defend each time it was most needed. By combining market information with economic fundamentals, we can see the improvement on the probability *and* profitability of Trend signal as a tool; it would have been in “defense mode” about half as often as with price trend alone, with a large improvement in the annualized impact of the defensive strategy. This observation aligns with our thesis that we only expect to have large/prolonged equity downturns if economic growth is declining. Of course, nothing in investments is perfect – for instance this combination would have triggered defense late last year in the most recent episode, missing some of the rebound in early 2019.



Source: Bloomberg, SECOR analysis. Date indicated on chart is when the defensive period began

**What Does this Framework Tell us about the Market Today?**

In the most recent cycle, the rate of growth for the world economy and corporate fundamentals peaked around the end of 2017 and has been declining since then, with most of the economic/fundamental

<sup>11</sup> Source: Bloomberg. Trend based on global equity total return net of cash, current price vs. prior year average, with more than +/- 1.5% trend required to change trend signal. Uses MSCI World from 1969 to 1987, then MSCI ACWI.

growth information in our composites having a negative trend by the fourth quarter of 2018. In the first quarter of 2019, there was hope and some evidence of conditions improving. However as of the end of May 2019, while value and volatility were close to neutral, the trends in economic growth, earnings growth and credit spreads remained unfavorable. The table below shows the percentile of the May 2019 reading relative to the long-term history, with a 50% median and 0%/100% being the historical low/high.

Equity price trend was neutral to slightly positive at the end of May. It is possible that the equity investors who bid up stock prices in the first half of 2019 will turn out to be correct in expecting the economy and corporate earnings to recover. The market is not always right about what comes next, but it's right often enough that we should respect the price action. However, we also would recommend that investors who have high downside vulnerability be ready with equity tail risk hedging strategies. As discussed in this paper, if the price trend were to become negative, there is heightened risk of large declines in equity prices given that most of the other indicators of economic growth are already negative.

	Global % ile
Price Trend	Neutral/+
<i>And:</i>	
Economic growth trend	20%
Earnings growth trend	24%
Credit spread trend	24%
Equity Value	55%
Equity Volatility	51%

Source: Bloomberg, SECOR analysis as of May 31, 2019

**Conclusion**

This paper provides a framework for determining when equity downside risk is highest. We believe the global economy matters most, and indicate here how the various types of market information are connected to the real economy. Downside risk is highest when the equity price trend is negative and the other relevant information discussed here is negative as well, because that is a strong indication that the global economy is getting worse. While this framework will not capture a “flash-crash” market meltdown, such as happened in 1987, we believe that it should provide a sufficient warning in a typical bear market scenario where the equity market is reacting to an economic slowdown.

Allocators with high sensitivity to downturns are in a tough situation – balancing the necessity to earn an adequate return against the need to limit downside risk. There always will be career risk in making a commitment to de-risk, because this framework and any others will not be correct every time. However, doing nothing is simply not an option for some investors. A data-driven, systematic approach such as this one could be very helpful to allocators as it provides the opportunity to seek governance and operational alignment in advance of market condition changes.

Of course, a framework is not a strategy – that would require an action plan, which would look different for different investors. Allocators need to consider the specific implementation approach, triggers to add defense and take it back off, cost of implementation, degree/certainty of protection, frequency of monitoring and rebalancing, among other implementation matters.

SECOR is a risk mitigation specialist – we have helped many clients from strategy formation to execution. We thank our clients for the open, strategic dialogue about their needs. As always, we appreciate your feedback and questions about this framework.

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