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Contraction, Recovery & Growth: How Factors Performed

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Factors historically have produced excess returns through the business cycle, even in the down times.

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With the U.S. economic expansion approaching 10 years, and volatility whipsawing the markets, investors can be excused for planning for a potential slowdown. Our view is the slow-growth expansion will continue for a while with low inflation and accommodative central banks, an environment which historically has produced excess returns for most factors. But what if things get more volatile than expected? That is when factors have historically had their best performance.

The 4 Stages of the Cycle

Utilising the cyclical trend* of the Conference Board Leading Economic Index, we studied how well-known equity factors—size, value, momentum, dividend yield, quality and low volatility—behaved under the 4 stages of the U.S. economic cycle:

Expansion: economy expands at an accelerated pace

Slowdown: economy expands at a deaccelerated pace

Contraction: economy contracts at an accelerated pace

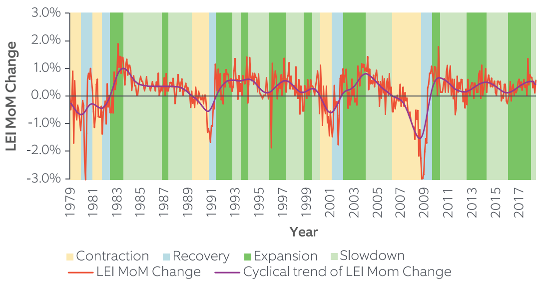
Recovery: economy contracts at a deaccelerated pace

Using this model, the U.S. economy experienced four major economic cycles during the analysis period with cycle lengths spanning 6 to 10 years. In the most recent cycle following the housing crisis, the U.S. economy went through three expansionary regimes (accelerated or decelerated growth), supported by accommodating monetary and fiscal policies.

Exhibit 1 indicates that, currently, the U.S. economy is in a slowdown period of positive but decelerating growth as indicated through slowing new durable goods orders, decreasing building permits and lower average consumer expectations. It is important to note that because this model uses leading indicators, it is better thought of as a predictor of economic conditions rather than a current barometer. Although this may produce different results than some of the standard literature we have seen on this topic, we find the forward looking nature of the results provide useful insights not gleaned from other approaches.

Exhibit 1: Breaking down the business cycles

We first have to define the business cycles before we evaluate how factors performed. We broke down the cycles from December 1978 to December 2018 using monthly changes in the Conference Board Leading Economic Indec (LEI) for the US.



Source: Northern Trust Asset Mangement, Conference Board. December 1978 to December 2018

How Have Factors Performed?

To evaluate factor performance, we formed a portfolio for each factor that measures the excess return of the top quintile of stocks within each factor over the Russell 1000, which we equal weighted. These hypothetical factor portfolios are equally weighted and rebalanced monthly.

Interestingly, we find that most factors perform favourably during contraction periods and we observe an asymmetry to returns if we take contraction and recovery together. In other words, it is not surprising that a factor would do well in one of these two environments and not the other. However, the stronger excess return from one regime tended to outweigh the weaker excess return from the other (cf exhibit 2).

A couple of outcomes should be highlighted. First, each factor exhibited positive excess returns over the full analysis period and supports our belief that factors should be strategic holdings held throughout the economic cycle. Second, factors were generally more potent during more volatile environments, taking contraction and recovery together. During periods of positive growth, most factors provided positive excess returns. Not surprisingly, during recovery and expansion, low volatility tended to lag.

Exhibit 2: Hypothetical average factor excess return across economic regimes[1]

Factors are more potent during contractionary periods (contraction and recovery) than expansionary period (expansion and slowdown) with the notable exception of momentum.

	ENTIRE PERIOD*	CONTRACTION	RECOVERY	EXPANSION	SLOWDOWN
Size	1.40%	1.55%	15.04%	4.29%	-2.06%
Value	3.20%	**6.14%**	6.50%	2.38%	1.32%
Momentum	2.20%	-2.45%	-5.39%	3.32%	**4.72%**
Low Volatility	1.10%	**7.84%**	-4.97%	-5.79%	**2.90%**
Dividend Yield	1.40%	**4.66%**	1.55%	-2.19%	1.50%
Quality	3.80%	**6.63%**	5.19%	1.83%	**2.67%**
No. of Observations	480	80	49	156	195

1. December 1978-December 2018
2. Geometric averages used for the entire period. For regime analysis, annual averages are displayed.

To further summarise and provide context for these results:

Size—which refers to the smallest 20% of companies in the Russell 1000—generally had a high-beta to the stock market and delivered higher excess returns in recovery and expansion regimes. However, periods of positive but declining growth that related to economic slowdowns were challenging environments.

Defensive factors such as **low volatility** and **quality** tended to deliver their best results during contraction periods and not surprisingly experienced lower returns when economy turned around.

Momentum appeared to be most geared to expansionary regimes but got caught off-sides during recovery periods and incurred meaningful drawdowns.

Value had its best performance during the contraction and recovery regimes.

In a slowdown regime—where the U.S. economy currently resides according to this model—**all factors had positive excess returns excluding size**.

Factors for All Seasons

Factors have historically added to risk-adjusted returns in a variety of macroeconomic environments. Our model currently places us in the slowdown regime which is in line with our 5-year outlook. We feel that factors may help add to modest return expectations if our base case holds, but may be particularly useful if the economy cools down, an environment that has been especially constructive to most factors.

We have strong conviction in the long-run efficacy of factors and the benefits of factor-based strategies, but investors that are concerned that the current macroeconomic environment may shift should consider results presented and how adding factor exposure can help achieve their investing goals.

*Business cycle indicator data from the Conference Board (CB) are the input for our economic regime model. The CB publishes three major business cycle indicators: leading, coincident, and lagging indicators, on a monthly basis. We chose Conference Board Leading Economic Index (LEI) for this study because investors tend to watch LEI more closely to gauge economic outlook and it has shown predictive power on economic turns (see Vaccara and Zarnowitz [1988] and Stock and Watson [1978]). Using a signal processing technique known as an HP-filter (see Prescott and Hodrick [1997]), we extracted the cyclical trend out of LEI MoM change. The cyclical trend was then classified into four different regimes based on simple rules related to the slope of the trendline.