VOLUME 3 // ISSUE 7 APRIL 19, 2017

EYE ON THE MARKET

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COMMENTARY ON SPECIFIC MARKET ISSUES AND ACTIONABLE IDEAS TO CONSIDER

On March 28, 2017, *Bloomberg, LP* published an article titled, "BlackRock cuts dozens of jobs and fees in stock-picking unit." The article noted:

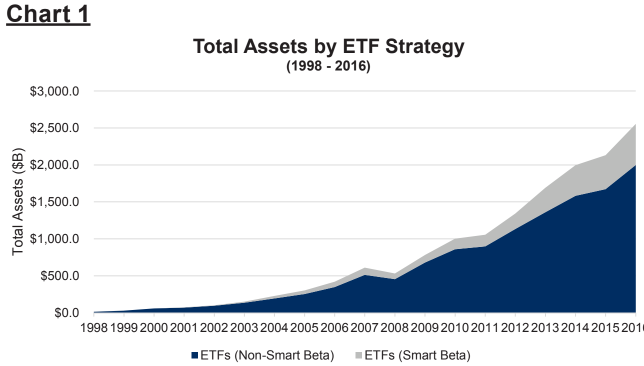
> *"The world's largest money manager is firing more than 30 people in its active-equities group, including five of its 53 fundamental portfolio managers, according to a person familiar with the matter. The revamp moves $6 billion of the $201 billion run by traditional stock pickers into cheaper funds where quants play a role, the person said."*

Is this the dawn of technology taking over investing on behalf of humans or just an extension of what has already been in place for some time? Eye on the Market ("EotM") will examine how we collectively arrived that this point, as well as what it means for the investor.

HAL 9000

When examining current industry trends, it becomes clear that market participants are utilizing passive and factor-based strategies in a meaningful way. As Chart 1 shows, since 1998 there has been a tremendous growth in the amount of assets invested in exchange-traded funds ("ETFs"). Over this period, assets invested in ETFs have grown from $13.7 billion to $2.5 trillion, as of yearend 2016. While many investors view ETFs as purely passive products, the ETF industry has grown to include strategy niches, such as factor-based investing. Both passive and factor-based ETFs have enjoyed meaningful growth over the last five years; factor-based assets grew at a compounded annual rate of 21.5%, while more passive-oriented ETF assets grew by 12.0%.

Chart 1



Source: Morningstar Direct and Raymond James.

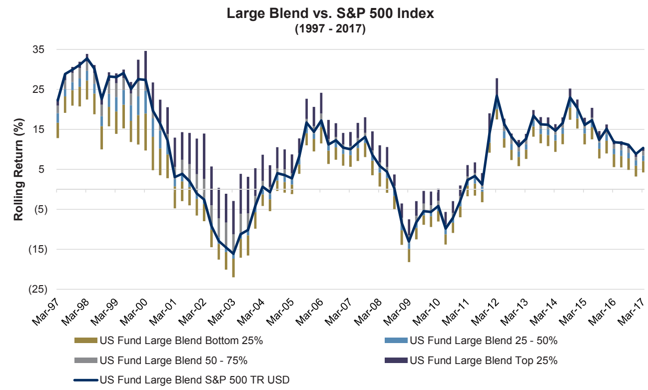
Many of the factor-based approaches utilize quantitative methods to evaluate large volumes of data via complex algorithms. This stands for both ETFs and mutual funds including BlackRock's Scientific Active Equity group which utilizes analytics that evaluate quantitative and qualitative variables. Many of the algorithms calculate a variety of metrics and determine whether a security is appropriate for a particular style of investing. EotM does believe that using technology to improve results is key to a successful strategy. At some point though, do investors rely on computers too much and forget about the basics of fundamental investing? This is similar to the challenges faced by the astronauts in 2001*: A Space Odyssey*, when HAL (**H**euristically programmed **AL**gorithmic computer), the onboard computer stopped responding to human inputs, ultimately harming the astronauts.

WOPR

In the 1983 film *WarGames*, Matthew Broderick's character hacks into the WOPR, a U.S. military supercomputer that is used to predict possible outcomes of war. While Broderick's character assumes he entered into a game with WOPR, the supercomputer cannot differentiate between a simulation and reality. EotM brings this last point up, as many factor-based models are tested using simulated results, based on past history. While many of these models have been heavily tested to ensure that they capture all relevant data, they are only as good as the inputs provided. Secondarily, investors should remember that different points in time will witness different periods of leadership in the market.

Taking this into account, Chart 2 shows that since March 2012, Morningstar's U.S. Large Blend category (vertical bars) has not outperformed the S&P 500 (blue line). It is instructive to look at the period of March 1997 through March 2000, when a similar trend took place. It was only during the market downturns in the wake of the dot.com bubble and during the financial crisis that active managers were able to outperform.

Chart 2



Source: Morningstar Direct and Raymond James.

For those factor-based portfolios that are not dynamic, in that they can shift between different approaches of investing, the outcomes may not be favorable. If the quantitative approach is too rigidly tied to a particular set of inputs then the investor could lag the market when that approach is out of favor, no different than if an actively-managed ("human") portfolio lags. In both cases, both the algorithm and the human portfolio manager are only as good as the inputs they use to make decisions. While investors have witnessed many active managers struggle, EotM wants to know whether the algorithms can adjust, just as WOPR did when it realized that there was no way to win tic-tac-toe.

JUDGEMENT DAY

While asset management companies can create new products using fundamental analysis, quantitative approaches, or a combination of each, it will be investors who determine which strategies are ultimately judged superior. Time will tell whether investors continue to gravitate towards these strategies, or if there is a regime change, and fundamentally-based investing comes back into favor. If the end result is that investors can obtain better outcomes coupled with lower expenses, then EotM believes it is a good thing and welcomes the rise of the machines.

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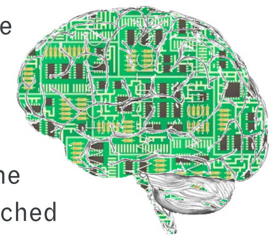
SIDE NOTE



Many movies and books have been made documenting the challenges of artificial intelligence ("AI"), often taking an apocalyptic stance. While there can be challenges to AI, it has been used in a wide range of applications from healthcare to the automotive industry. Currently, projects are ongoing to develop systems that can aid doctors in determining the most effective treatment plan for patients. Additionally, advances in driving assistance, from lane departure warnings to navigation and mapping, are all forms of AI initiatives being researched and developed.

Morningstar Large Blend Category - Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of U.S. industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index.

S&P 500 - is an unmanaged index of 500 widely held stocks that is generally considered representative of the U.S. stock market.