MORE THAN A FEELING: WHY DIVERSIFICATION STILL MATTERS

American adults spend on average at least four hours on their phones every day. When including tablets and other mobile devices, that number climbs to roughly five hours per day. We are more "connected" now than ever before, as work, friends, news, and entertainment seem to constantly command our attention.

- *Data analytics firm Flurry reported that overall time spent on mobile devices increased 69% in 2016, while time spent on social media and messaging apps increased an incredible 394%.*
- *Influencer marketing firm MediaKix reported that we spend nearly two hours each day on the top five social media platforms: YouTube, Facebook, Snapchat, Instagram, and Twitter.*

Such compulsive behavior is most commonly attributed to a very simple and intuitive phenomenon: FOMO, or Fear of Missing Out. FOMO is a social anxiety that generates angst in people when they feel they aren't participating in a rewarding experience, and it is most apparent in individuals' sometimes pathological desire to stay connected with the experiences of their peers. FOMO has very important implications for investors, including its role in performance-chasing and under-diversification. In Part I of this *Insight*, we will examine the perils associated with FOMO and emotional investing, as well as the protections afforded by objective, data-driven frameworks for decision-making. Throughout this discussion, we will show that FOMO consistently works against investors' best interests by concentrating portfolios in yesterday's winners, and that maintaining a disciplined and diversified approach remains the best method for achieving long-term organizational goals.

FOMO AND THE FALLACY OF EMOTIONAL INVESTING

All investors, including deeply experienced professionals, must constantly contend with their own biases. These biases determine how investors process information and make decisions, ultimately impacting long-term investment returns. Indeed, the most damaging mistakes in a portfolio are usually the result of allowing emotions and "noise"—rather than objective analysis and pertinent information—to dictate decisions. If we don't understand our mistakes, we are likely doomed to repeat them.

FOMO is a great place to start. While the term was first coined by a Harvard Business School student in 2004, it is really a new name for a bias that has been prevalent throughout human history. Our very nature as human beings compels us to draw comparisons with others and to see how we measure up. If we find that we are lacking, our instinct is usually to imitate. This sort of behavior provides a level of comfort, as we seem to enjoy the perceived "safety in numbers" provided by joining the crowd. With respect to investments, however, this is a very dangerous game to

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play. At a theoretical level, investors should only be concerned with how their investments can help to achieve their goals; comparisons to an arbitrary benchmark or peer group will only detract from that emphasis and expose investors to FOMO and other emotional weaknesses.

*In our role as a trusted advisor, Highland's single most important responsibility is to leverage our investment knowledge to help you achieve **your** organization's mission. This is decidedly unlike general investing, which is focused solely on choosing specific investments to outperform an arbitrary benchmark or peer group.*

At a practical level, FOMO is typically the driving force behind manias and bubbles that ultimately wreak havoc on investors. Manias and bubbles always end, and they never end well.

FOMO is important to understand because it underscores the reality that investors are not consistently rational. If investors remained rational at all times, then there would never be bubbles or manias. But throughout history we have seen repeated patterns of irrationality and incompetence in the choices investors make when faced with the fear of missing out. ***Figure 1*** provides examples of a few bubbles.

FIGURE 1: HISTORICAL BUBBLES

Date	Event	Peak FOMO
1634-1637	The Dutch Tulip Bubble	Tulip bulbs commanded higher prices than luxury homes.
1720	The South Sea Bubble	Shipping company value rose 8x in six months.
1920-1926	The Florida Land Bubble	The ratio of homes to realtors reached 3:1.
1995-2000	The Dot-com Bubble	Nasdaq price-to-earnings ratio reached 175x.
2000-2008	U.S. Housing Bubble	Average loan-to-value ratio rose from 60% to 95% in under five years.

SOURCE: HIGHLAND ASSOCIATES; INVESTOPEDIA; ROBERT SHILLER; NASDAQ; BLOOMBERG; U.S. FEDERAL RESERVE

Most recently, we have seen a new generation of speculators drive hyperbolic returns in bitcoin and other cryptocurrencies. In 2017 alone, investors bid up the price of bitcoin by over 1,300%, while the total market capitalization for cryptocurrencies increased by roughly 3,300%. Today, everyone from Uber drivers to hairdressers to grandmothers is more than happy to explain why even bigger gains are still to come. They might use terms like “paradigm shift” and “disruption” to make their case. We think the explanation is much simpler: people can’t escape the constant reminders of other people’s success, and they don’t want to be the ones missing out.

FOMO hardly meets the definition of a sound or repeatable investment strategy, so why are we so susceptible? Beyond the aforementioned need to feel a connection to the crowd, FOMO is also related to our fears that similar opportunities won’t come again. This is certainly an understandable concern. After all, most investors would love to earn a 1,300% return in a single calendar year, especially when it seems that everyone else is already taking advantage. However, investors’ time is much better spent seeking to understand the future than trying to chase the past. One of the most enduring aspects of investment markets is their unrelenting resilience. There are always new opportunities to discover, and investors should focus on identifying those that support their return objectives without violating their risk constraints. Investors should always be looking forward, not backward.

Unfortunately, investors tend to have a very difficult time separating the past from the future. FOMO is closely tied to recency bias, which occurs when investors extrapolate the recent past to the future, assigning a false sustainability to the prevailing environment. In the current market context, many investors have found themselves questioning the benefit of investing in anything other than U.S. equities. This is understandable, given that the S&P 500 Index has generated a nine-year cumulative return of 259% through December 2017, compared to just 153% for emerging international markets and 114% for developed international markets. The performance differential relative to domestic fixed income is even more stark, as the nine-year cumulative return on the Bloomberg Barclays U.S. Aggregate Index registers just 41%. Traditional U.S. equities have also substantially outperformed hedge funds, as the HFRI Fund-Weighted Index returned 50% over the past nine years.

In times like these, it is difficult for investors to stay the course and remain diversified. The fear of missing out on future outperformance is nearly impossible to ignore, as ordinarily rational people begin to think they'll never have such a great opportunity again. At the same time, as investors look around and discover that their peers are increasing their concentrations in yesterday's winners, they may see comfort in joining the crowd. As ***Figure 2*** attests, investors should recognize that changes in market leadership can be swift and severe. The data also reiterate that investors are well served to remain diversified, as equity performance tends to cluster toward the extremes.

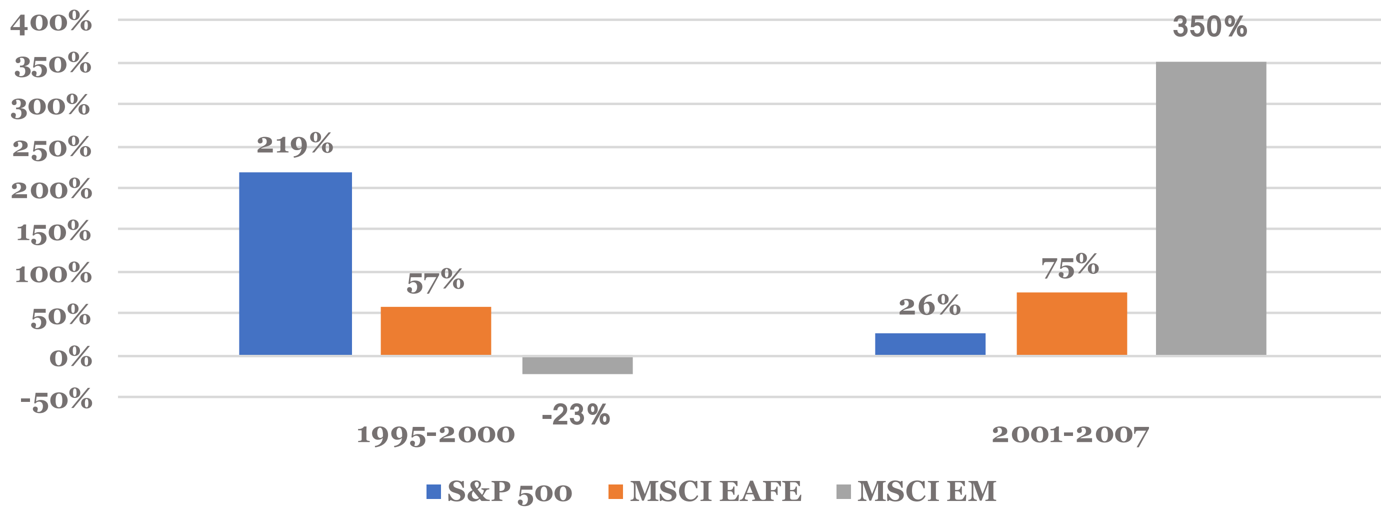
FIGURE 2: PAST PERFORMANCE IS NOT SUSTAINABLE

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
US Equity 37.6%	Commodities 23.2%	US Equity 33.4%	US Equity 28.6%	EM Equity 66.4%	Commodities 31.8%	Core Bond 8.4%	Commodities 25.9%	EM Equity 56.3%	EM Equity 26.0%	EM Equity 34.5%	EM Equity 32.1%	EM Equity 39.4%
Long Bond 30.9%	US Equity 23.0%	Hedge Funds 16.8%	Int'l Equity 20.3%	Hedge Funds 31.3%	Long Bond 31.3%	TIPS 7.9%	Long Bond 17.0%	Int'l Equity 39.2%	Int'l Equity 20.7%	Commodities 21.4%	Int'l Equity 26.3%	Private Equity 22.4%
Hedge Funds 21.5%	Hedge Funds 21.1%	Long Bond 15.1%	Long Bond 13.4%	Int'l Equity 27.3%	TIPS 13.2%	Hedge Funds 4.6%	TIPS 16.6%	US Equity 28.7%	Private Equity 19.0%	Private Equity 21.3%	Private Equity 23.5%	Commodities 16.2%
Core Bond 18.5%	Int'l Equity 6.4%	Core Bond 9.7%	Core Bond 8.7%	Commodities 24.3%	Core Bond 11.6%	Long Bond 4.3%	Core Bond 10.2%	Commodities 23.9%	US Equity 10.9%	Int'l Equity 14.0%	US Equity 15.8%	TIPS 11.6%
Commodities 15.2%	EM Equity 6.0%	Int'l Equity 2.1%	TIPS 4.0%	US Equity 21.0%	Hedge Funds 5.0%	EM Equity -2.4%	Hedge Funds -1.5%	Hedge Funds 19.6%	Commodities 9.2%	Hedge Funds 9.3%	Hedge Funds 12.9%	Int'l Equity 11.2%
Int'l Equity 11.6%	Core Bond 3.6%	Commodities -3.4%	Hedge Funds 2.6%	TIPS 2.4%	US Equity -9.1%	US Equity -11.9%	EM Equity -6.0%	Private Equity 14.3%	Hedge Funds 9.0%	Long Bond 6.6%	Core Bond 4.3%	Hedge Funds 10.0%
EM Equity -5.2%	Long Bond -0.8%	EM Equity -11.6%	EM Equity -25.3%	Core Bond -0.8%	Int'l Equity -14.0%	Private Equity -16.8%	Private Equity -12.6%	TIPS 8.4%	TIPS 8.5%	US Equity 4.9%	Commodities 2.1%	Long Bond 9.7%
			Commodities -27.0%	Long Bond -8.7%	EM Equity -30.6%	Commodities -19.5%	Int'l Equity -15.7%	Core Bond 4.1%	Long Bond 7.9%	TIPS 2.8%	Long Bond 2.1%	Core Bond 7.0%
						Int'l Equity -21.2%	US Equity -22.1%	Long Bond 2.6%	Core Bond 4.3%	Core Bond 2.4%	TIPS 0.4%	US Equity 5.5%

SOURCE: S&P, MSCI; BARCLAYS; BLOOMBERG; PREQIN; HFRI; HIGHLAND ASSOCIATES. THE ASSETS CLASSES DEPICTED ABOVE ARE REPRESENTED BY THE FOLLOWING INDICES: U.S. EQUITY (S&P 500), INTERNATIONAL EQUITY (MSCI EAFE); EM EQUITY (MSCI EMERGING MARKETS INDEX), CORE BOND (BLOOMBERG BARCLAYS U.S. AGGREGATE INDEX), LONG BOND (BLOOMBERG BARCLAYS U.S. LONG GOVERNMENT INDEX), TIPS (BARCLAYS U.S. TIPS INDEX); HEDGE FUND (HFRI FUND-WEIGHTED COMPOSITE INDEX), PRIVATE EQUITY (PREQIN INDEX), COMMODITIES (BLOOMBERG COMMODITY INDEX).

As shown above, U.S. equities handily outperformed their developed and emerging international market counterparts from 1995-2000. Importantly, it was price multiple expansion—not earnings or cash flow growth—that was the overwhelming driver of superior domestic equity returns during this period. At the extreme, investors continued to pay higher and higher prices for technology stocks until the price-to-earnings ratio on the Nasdaq rose to nearly 175x. These investors attempted to explain their reasoning in the context of a "new economy" in which earnings simply weren't important. FOMO led many investors to abandon their frameworks and buy into this story without properly assessing either fundamentals or risk dynamics. Ultimately, in the fallout from the dot-com bubble, investors shifted their attention overseas and U.S. stocks lagged considerably, as illustrated in ***Figure 3***.

FIGURE 3: CHANGES IN EQUITY LEADERSHIP



SOURCE: S&P, MSCI; HIGHLAND ASSOCIATES

The striking difference in returns over these two eras highlights the cyclical tendency of investment markets. Currently, U.S. equities are once again deep into a stretch of dominance relative to international stocks, as shown in ***Figure 4***. It is certainly tempting to assume such strength will continue to deliver world-beating returns, but investors should recalibrate their focus to their actual investment objectives. This approach may feel uncomfortable and even disconnected, but that is precisely the key to resisting FOMO and other emotional biases that undermine the path to success.

FIGURE 4: WHAT'S NEXT FOR GLOBAL EQUITIES

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EM Equity 18.9%	Long Bond 29.2%	EM Equity 18.2%	US Equity 32.4%	Long Bond 24.7%	Private Equity 10.5%	US Equity 12.0%	EM Equity 37.3%	???	???	???
Private Equity 18.2%	TIPS 13.6%	Int'l Equity 17.3%	Int'l Equity 22.8%	US Equity 13.7%	US Equity 1.4%	Commo-dities 11.8%	Int'l Equity 25.0%	???	???	???
Commo-dities 16.8%	Private Equity 8.4%	US Equity 16.0%	Private Equity 19.5%	Private Equity 11.8%	Core Bond 0.6%	EM Equity 11.2%	US Equity 21.8%	???	???	???
US Equity 15.1%	Core Bond 7.8%	Private Equity 13.1%	Hedge Funds 9.1%	Core Bond 6.0%	Int'l Equity -0.8%	Private Equity 10.6%	Private Equity 9.2% (est.)	???	???	???
Hedge Funds 10.3%	US Equity 2.1%	TIPS 7.0%	Core Bond -2.0%	TIPS 3.6%	Hedge Funds -1.1%	Hedge Funds 5.4%	Hedge Funds 8.9% (est.)	???	???	???
Long Bond 9.4%	Int'l Equity -12.1%	Hedge Funds 6.4%	EM Equity -2.6%	Hedge Funds 3.0%	Long Bond -1.2%	TIPS 4.7%	Long Bond 8.5%	???	???	???
Int'l Equity 7.8%	Hedge Funds -5.3%	Core Bond 4.2%	TIPS -8.6%	EM Equity -2.2%	TIPS -1.4%	Core Bond 2.7%	Core Bond 3.5%	???	???	???
Core Bond 6.5%	Commo-dities -13.3%	Long Bond 3.8%	Commo-dities -9.5%	Int'l Equity -4.9%	EM Equity -14.9%	Long Bond 1.4%	TIPS 3.0%	???	???	???
TIPS 6.3%	EM Equity -18.4%	Commo-dities -1.1%	Long Bond -12.5%	Commo-dities -17.0%	Commo-dities -24.7%	Int'l Equity 1.0%	Commo-dities 1.7%	???	???	???

SOURCE: S&P, MSCI; BARCLAYS; BLOOMBERG; PREQIN; HFRI; HIGHLAND ASSOCIATES.

Now more than ever, the constant flood of information makes investors increasingly susceptible to FOMO. On top of that, investors must also contend with several other emotional and cognitive biases, as noted in ***Figure 5***. It is virtually impossible to completely ignore these temptations, but benefits should certainly accrue to those who keep focused on their objective.

FIGURE 5: EMOTIONAL AND COGNITIVE BIASES

Name	Definition	Implications
Confirmation Bias	Overemphasizing information that supports our beliefs while ignoring information that challenges these beliefs.	Overly concentrated portfolios; poor risk control.
Hindsight Bias	Perceiving past events as having been predictable.	False sense of confidence; unfair assessment of fund manager selection and asset allocation decisions.
Mental Accounting Bias	Assigning different levels of importance to different pools of assets.	Failure to optimize risk; failure to properly diversify portfolios.
Availability Bias	Overestimating the probability of an occurrence based on how easily it comes to mind.	Under-diversification; choosing managers based on advertisements rather than on objective suitability.
Overconfidence Bias	Overestimating our knowledge, abilities or information, leading to over-reliance on our reasoning or judgment.	Underestimate potential risk; overestimate potential returns; over-trading.
Self-attribution Bias	Assigning successful outcomes to our own good decisions while blaming external factors for our own poor decisions.	Overly concentrated portfolios; poor risk control.
Self-control Bias	Allowing short-term behavior to compromise long-term objectives.	Insufficient saving; excessive risk-taking.
Status Quo Bias	Preferring not to make changes as a matter of comfort.	Under-diversification; failing to consider decisions or actions that would optimize outcomes.
Loss Aversion Bias	Making investment decisions designed to avoid losses rather than to seek gains.	Poor risk control, suboptimal portfolio construction.

SOURCE: HIGHLAND ASSOCIATES

FOMO NO MORE: REMOVING EMOTION FROM THE EQUATION

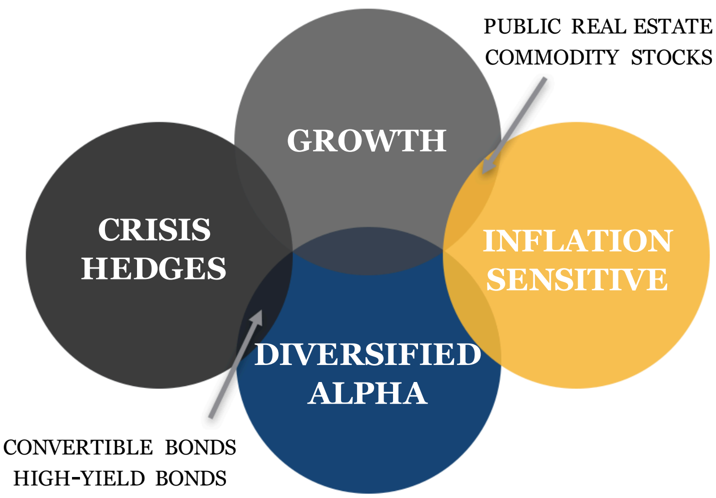
Understanding and setting aside our innate biases is only the first step in mastering emotions and building a strong investment foundation. Investors must also determine general portfolio construction methods based on their unique objectives and constraints. This is typically done with an Investment Policy Statement that outlines and quantifies organizational goals, risks, time horizon, liquidity, and other specific constraints. These guidelines exist to create a framework for decision-making and a mechanism for assessing success. They generally include target exposures for different asset classes, consistent with a goal of ensuring broad diversification that minimizes risk without compromising return.

FOMO has no place in an Investment Policy Statement, as comparisons to peers and beating the market simply aren't part of the process for determining an organization's mission or its investment goals. In reality, FOMO preys on our worst instincts as investors. FOMO narrows investors' margin for error by concentrating assets in a small number of higher risk assets, which is the exact opposite of what investors should be seeking to accomplish. Well-constructed portfolios won't rely on FOMO, but will instead seek to exploit different return drivers and a wider range of expected outcomes. By thinking long-term instead of succumbing to the short-termism of FOMO, investors can increase the probability of meeting their goals without taking risks at the wrong time.

Highland believes that strategic asset allocation is the most critical component in portfolio construction, as historical data overwhelmingly conclude that this is the primary determinant of long-term returns and risk. For each client, strategic asset allocation is based on the objectives (risk and return) and constraints (liquidity, time horizon, special circumstances) of the organization. Highland's goal is to build diversified portfolios that will achieve client objectives through market cycles; it is not our goal to simply chase current market leaders. In seeking a smoother ride, we hope to give clients fewer opportunities to succumb to the behavioral biases that have hurt so many investors over the years. Specifically, we build diversified portfolios through a combination of unique assets, including 1) Growth, 2) Diversified Alpha, 3) Inflation Sensitive, and 4) Crisis Hedges. Each of these pieces of the portfolio is intentionally linked to fundamental economic drivers rather than emotions (see ***Figure 6***).

FIGURE 6

RISK DRIVERS AND COMMONSENSE VIEW OF RISK = DIVERSIFICATION



SOURCE: SOURCE: HIGHLAND ASSOCIATES

LOOKING AHEAD

The pitfalls of emotional investing are as varied as they are constant. Markets have offered us many reminders over history, but our own biases often make it difficult to remain rational, and by extension, diversified. Still, the best investment decisions are guided by thoughtfully considered frameworks for decision-making rather than FOMO and other emotions. In short, ignore the crowd instead of following it. Focus only on your goals, not those of your peers. Expand your opportunity set, rather than contract it. Meet your mission.

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AUTHOR:

WILLIAM H. WYKLE, CFA
DIRECTOR

HIGHLAND

HIGHLAND ASSOCIATES
2545 HIGHLAND AVENUE SOUTH, SUITE 200
BIRMINGHAM, ALABAMA 35205
P. 1-800-405-7729 OR (205) 933-8664 F. (205) 933-7688